PORTULANS INSTITUTE

UNIVERSITY OF OXFORD Saïd Business School

Network Readiness Index 2023

Trust in a Network Society: A crisis of the digital age?

Editors Soumitra Dutta and Bruno Lanvin

aws

CNI Confederação Nacional da Indústria PELO FUTURO DA INDÚSTRIA

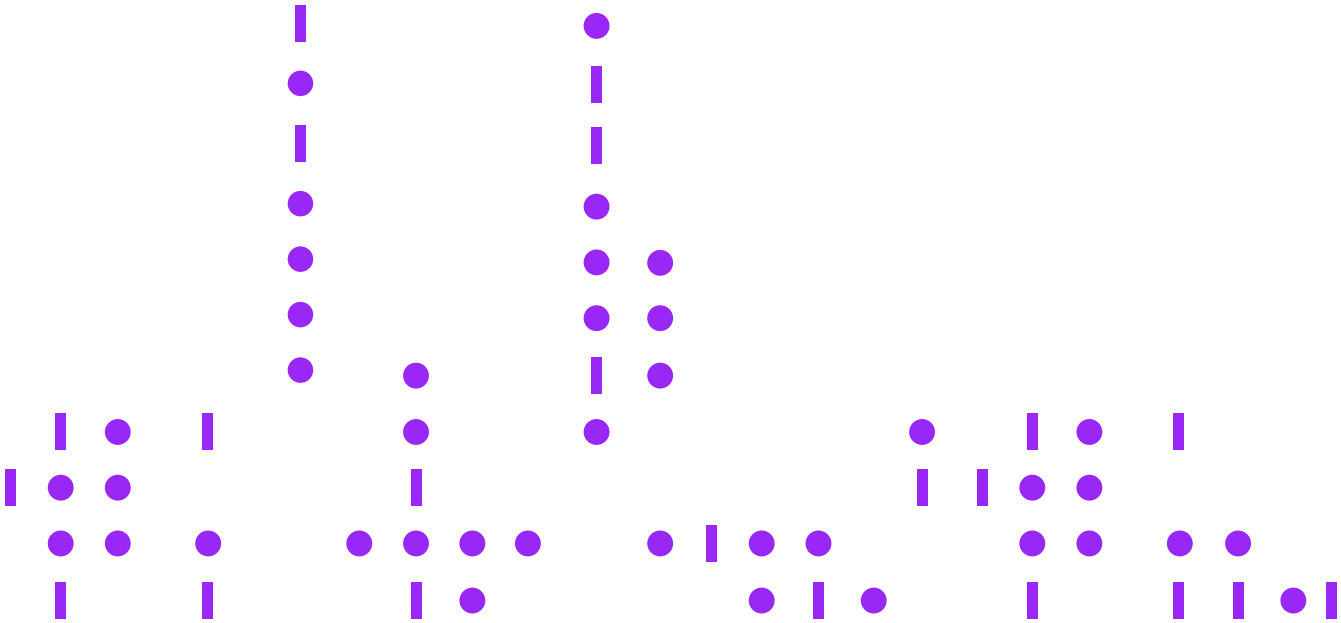
malomatia excel with IT

ISBN: 979-8-89238-367-7

This year's edition was designed by Mardiyah Miller, copy edited by Michael Stroup, and authored, edited, and printed by Portulans Institute, in partnership with Saïd Business School, University of Oxford.

Acknowledgements
The report and rankings are produced by a core team led by Rafael Escalona Reynoso, CEO of Portulans Institute, which consists of Mariam Chaduneli, Project Manager, Sylvie Antal, Digital Strategy Manager, Abdellah Bouhamidi, Data Scientist, and Shailja Bang, Research Analyst.

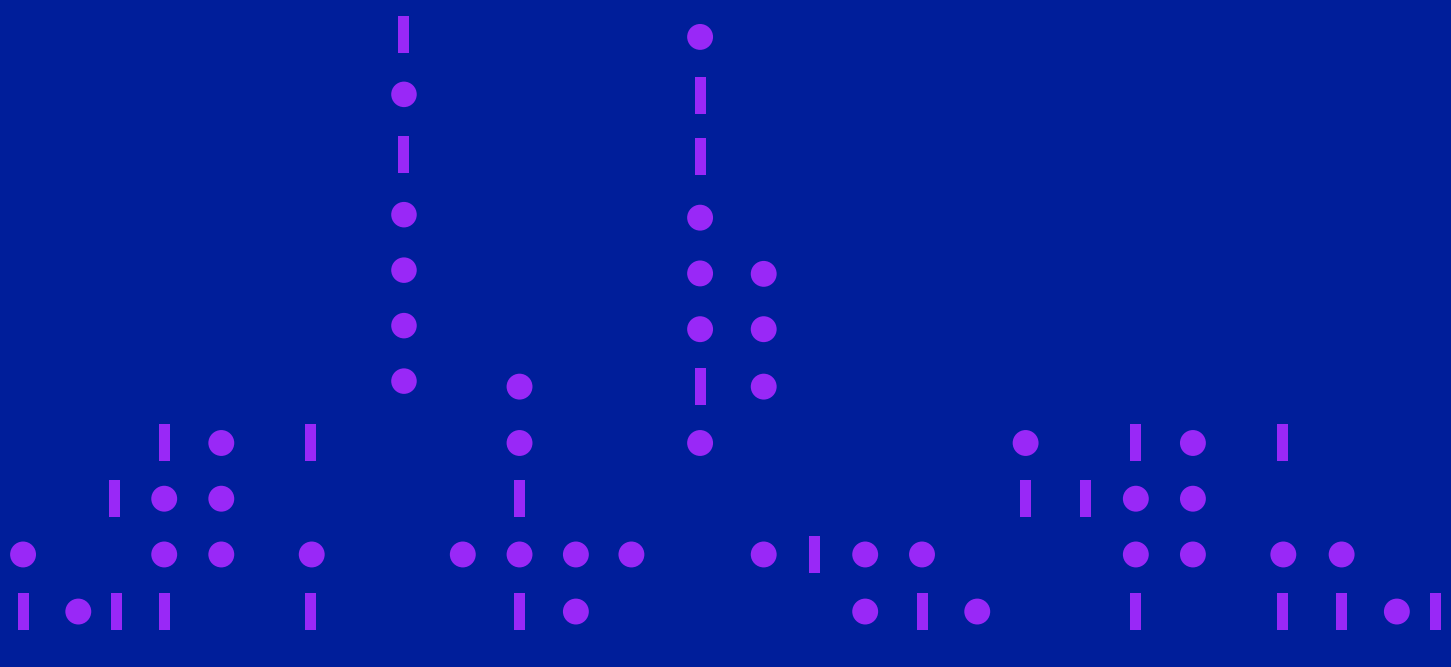
Cover image
Vecteezy.com



Network Readiness Index 2023

Trust in a Network Society: A crisis of the digital age?

Editors Soumitra Dutta and Bruno Lanvin



Contents

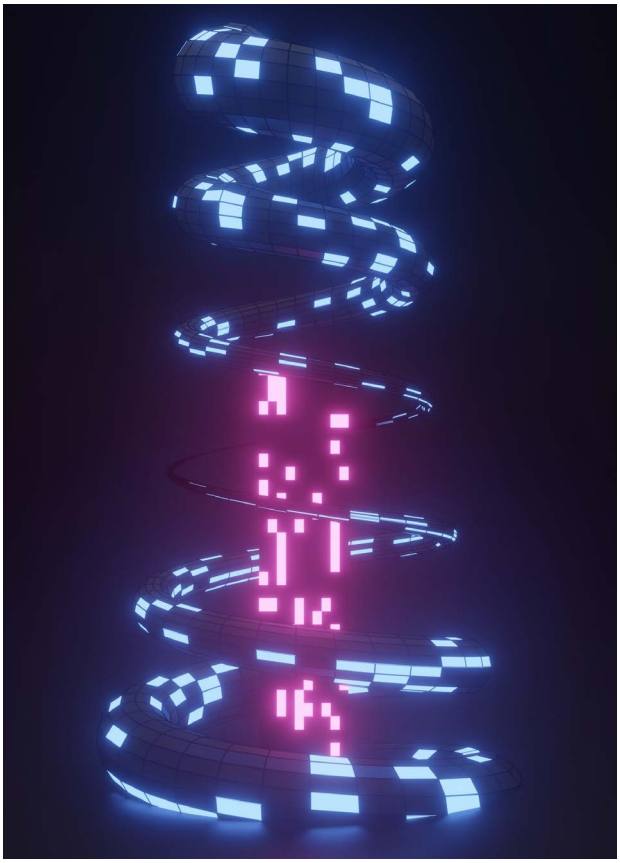


Photo by Shubham Dhage on Unsplash

Preface

Prof. Soumitra Dutta

Dr. Bruno Lanvin

Over the last few decades, societies have grown increasingly dependent on digital exchanges. Far from just being the 'new oil' of our economies, data has become our 'new air'. Without properly managed data flows, our world cannot breathe.

Trust cannot be delegated. But can it be re-built? We need better data governance and regulations to ensure healthy data flows.

In the physical world, when trust is lacking, most transactions remain feasible. They just become more costly, more cumbersome, and less enjoyable. In the digital realm, trust is often a precondition to the very existence of a transaction. In network societies, trust is the glue that holds the digital edifice together.

Over the last few decades, societies have grown increasingly dependent on digital exchanges. Far from just being the 'new oil' of our economies, data has become our 'new air'. Without properly managed data flows, our world cannot breathe. As COVID reminded us, neither air pollution nor airborne viruses can be defeated by filters and masks alone. We need better data governance and regulations to ensure healthy data flows and effective utilisation of available digital resources.

Those same two decades have amply demonstrated how creative our societies could be in their efforts (conscious or unconscious) to damage trust. Cybercrime became more diverse and widespread, fake news became an ordinary component of social networks, and multilateral norms cracked under the pressure from protectionist and nationalistic postures. The ubiquitous availability of technologies like artificial intelligence have accelerated this process.

Our societies have now reached a point where fundamental rights such as privacy and security are being challenged and threatened on a global scale. New governance principles and mechanisms are urgently needed to ensure the stability and integrity of our network societies.

Trust cannot be delegated. But can it be re-built? This is one of the questions that this edition of NRI attempts to explore. The NRI is a testament to our ongoing commitment to facilitate data-driven decision-making in the realm of Information and Communications Technologies (ICTs), with the ultimate goal of fostering economic growth and enhancing quality of life across the world. In this endeavour, we are immensely thankful to our partners at the Saïd Business School, University of Oxford, for co-publishing the report.

We would also like to thank our Knowledge Partners Amazon Web Services (AWS), malomatia and the Brazilian National Confederation of Industry (CNI), for supporting the 2023 edition of the NRI. We deeply appreciate the ongoing commitment and engagement of our partners, the Advisory Board, and the NRI Technical Advisory Group. Special acknowledgement goes to the Joint Research Centre (JRC) for ensuring the accuracy and relevance of our metrics and conclusions year after year.

Digital readiness is a moving target and we welcome your insights and suggestions in improving the NRI, to make sure it continues to take the pulse of the digital revolution happening across the world.

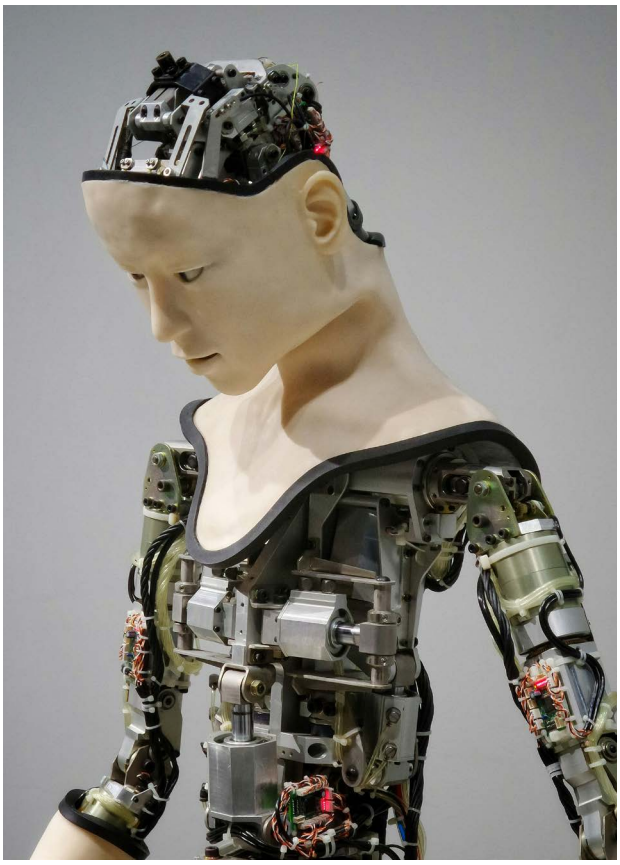
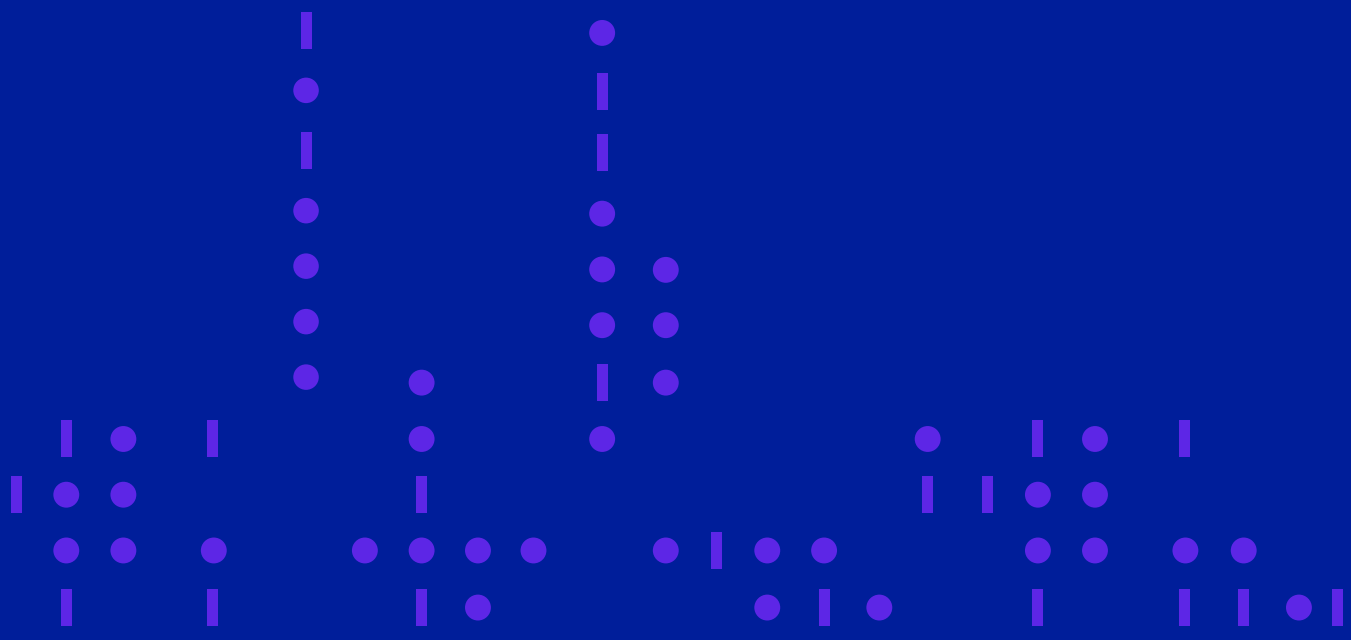


Photo by Possessed Photography on Unsplash

Prof. Soumitra Dutta **Dr. Bruno Lanvin**

"Our constant commitment to advancing digital readiness has sparked dynamic collaborations and transformative innovations that extend far beyond Qatar's borders. We have harnessed the boundless potential of technology to foster growth, enrich lives, and strengthen our shared future, paving the way for a knowledge-based economy."

Khalid M Al Kubaisi
Chief Executive Officer (CEO), malomatia



Foreword by malomatia

Khalid M Al Kubaisi
Chief Executive Officer (CEO), malomatia

I am delighted to extend a warm welcome to all readers of this year's NRI Report, a platform that unveils the dynamic intersection of technology and social progress. At malomatia, our mission is to be the driving force behind technology adoption in Qatar and beyond. As we navigate this transformative era, I'm proud to look back at our initiatives that have catalyzed digital readiness, propelling us toward an era of boundless possibilities.

Our constant commitment to advancing digital readiness has sparked dynamic collaborations and transformative innovations that extend far beyond Qatar's borders. We have harnessed the boundless potential of technology to foster growth, enrich lives, and strengthen our shared future, paving the way for a knowledge-based economy.

The theme of the 2023 NRI Report - ***"Is there a crisis of trust towards technology in the digital age"*** - is a significant question that demands our thoughtful consideration. Trust forms technology's core. It is a currency that shapes our interactions, transactions, and relationships in this digital realm. As we embrace the benefits of innovation, we must also acknowledge the associated concerns. Our reflections on this theme feature the complicated link between trust and technological advancement.

In today's landscape, trust in technology forms a dynamic pattern crafted from intricate elements. The rapid evolution of AI, data privacy concerns, cybersecurity breaches, and ethical considerations are shaping this narrative. Our responsibility as champions of innovation is to ensure that technology aligns with the values and aspirations of humanity. Only through fostering transparency, accountability, and collective responsibility can we solidify trust in technology's transformative potential.

Our collaboration with the Portulans Institute for the 2023 NRI Report is a testament to the power of collective wisdom. The Portulans Institute's insights and global perspectives harmonize seamlessly with our mission. Together, we aim to equip decision-makers with data-driven insights that steer our shared digital aspiration. This partnership amplifies our shared vision of fostering dialogue, shaping policies, and propelling technology as a force for inclusive progress.

As we delve into this year's NRI Report, I invite you to explore the contours of trust in the digital age, deciphering the trends that define it. Let us collectively uncover the pathways to reinforcing and strengthening this vital trust. As stakeholders in this transformative journey, the responsibility rests on us to co-create a digital world that thrives on trust, innovation, and shared prosperity.

Thank you for embarking on this enriching journey with us.

Foreword by AWS

Tanuja Randery
Managing Director AWS EMEA

Digital technology is one of the most important drivers of economic growth, higher living standards and increased sustainability. Since the 1980s, digital technology has been responsible for around a quarter of growth in advanced economies. [1] Successive technologies such as the personal computer, spreadsheet, internet, smartphone, artificial intelligence, and cloud computing have helped transform the way we live, work, learn, and communicate. The current rate of Artificial Intelligence (AI) technology adoption alone could deliver economic activity of around $13 trillion USD globally by 2030. [2] This represents about 1.2% GDP growth per year, which is greater than the economic productivity growth brought about by either the steam engine or the early IT boom of the 2000s. All countries, and all sectors, should benefit from this transformation.

At AWS, we believe multi-stakeholder cooperation is key to unlocking the ambitions of countries to meet their digital transformation goals. We share a mission to empower governments and organizations with insights to inform their digital strategies, and through our cooperation have included in this year's Network Readiness Index (NRI) additional assessments of how the successful adoption of cloud technology positively impacts innovation, digital readiness and the economy at large, utilizing our AWS Cloud Readiness Index models, methodology and research.

AWS has consistently partnered with businesses and governments with the core mission to put the power of the cloud and artificial intelligence in the hands of everyone and democratize access to innovation. Our vision for a digitally-empowered world is reflected in five commitments we made to Governments, customers, and partners:

1. **Earn Trust:** Countries around the world are trying to harness the opportunities of the twin digital and green transition. We will work every day to earn trust as a partner in this transformation.

2. **Invest in Skills:** We will continue to help economies address the digital, AI, and cloud skills shortage through education, training, and support.

3. **Accelerate Sustainability:** A digital future is a green future. As the world's largest buyer of renewable energy, we will continue to transform our infrastructure to meet our sustainability targets.

4. **Power Business:** AWS helps customers build tailored solutions that digitally transform businesses through the power of the cloud. AWS will support and help customers benefit from technology that will drive their businesses forward.

5. **Enable Innovation:** Innovation is the lifeblood of the digital economy. We will continue to reduce the cost of innovation, allowing for rapid iteration, rollout and scaling. We will help the best and brightest tackle the world's most pressing challenges.

While the benefits of digital transformation are already plain to see and improving the lives of billions of people around the world, unlocking its full potential requires building greater confidence in the use of technologies as these continue to evolve. That means earning public trust that these technologies will be used both securely and responsibly. At AWS, we are convinced that responsibility drives trust, trust drives adoption, and adoption drives innovation. We look forward to continuing to support countries, and organizations in their innovation journeys so they can all be best placed to unlock their full digital potential.

Foreword by CNI

Industry is at the heart of the intense digital transformation the world is undergoing today. Therefore, CNI has prioritized initiatives to support the digitalization of industrial companies and equipping professionals for the digital age.

Ricardo Alban
President, Brazilian National Confederation of Industry (CNI)

The industry plays a central role in the intense digital transformation the world is currently experiencing. Therefore, CNI has prioritized initiatives to support the digitalization of industrial companies and the training of professionals equipped for the digital age.

The Brazilian National Confederation of Industry (CNI) is the country's primary institution for representing and supporting the industrial sector in the country. CNI is responsible for communicating the challenges facing industrial companies in Brazil, sharing the industry perspective on the priorities for the country's economic and social development strategy. By articulating with the government, science, technology, and innovation institutions, as well as with civil society, CNI proposes initiatives to improve the competitiveness of industrial companies in Brazil. These initiatives include proposals for new public policies, financing instruments, and improvements to the business environment in the country.

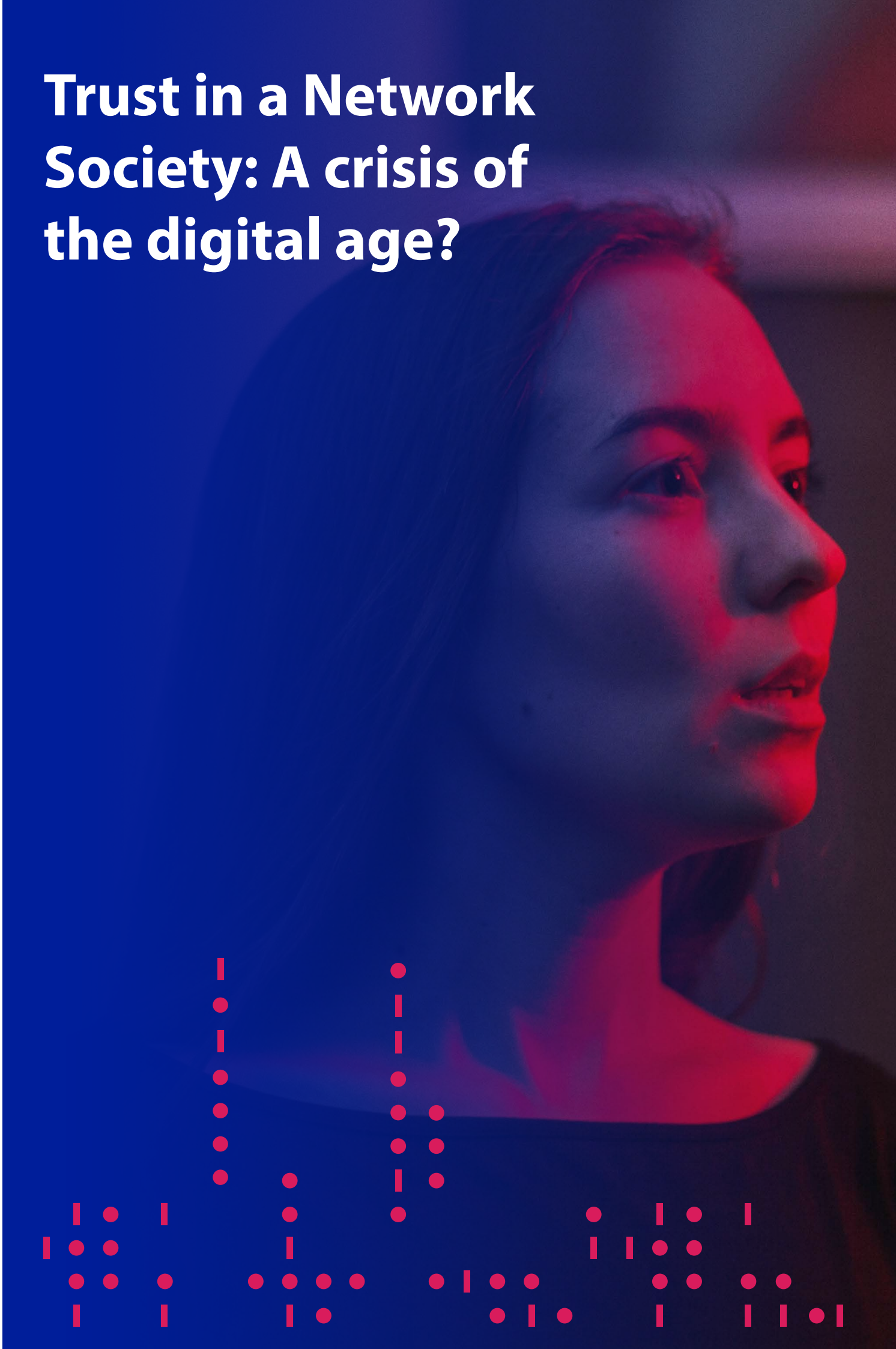
Industry is at the heart of the intense digital transformation the world is undergoing today. Therefore, CNI has prioritized initiatives to support the digitalization of industrial companies and equipping professionals for the digital age. CNI also manages the National Service of Industrial Training (SENAI) and its technology and innovation institutes, present across all regions of Brazil. SENAI increases industrial productivity by supporting companies' incorporating digital technologies in pursuit of increased industrial productivity.

SENAI is also responsible for vocational and technological education, for research and development of careers in strategic areas related to digital transformation, as well as skilling professionals in new technologies and digital processes.

Further, the Entrepreneurial Mobilization for Innovation (MEI), which is coordinated by CNI, brings together about 500 business leaders to share opportunities created and lessons learned. MEI has been working for 15 years in defense of the science, technology, and innovation agenda that is so important for developing the economy of Brazil. Articulating with government, academia and society, MEI debates and proposes priorities so that the country can be developed through innovation. The digitalization of industry and society is one of its priority themes, and is implemented by the Digital Transformation Working Group. This group promotes interaction between representatives of government, business and civil society for the identification of strategic actions to support digital transformation.

The digitalization of the economy and the broader society will be a fast and unstoppable process. Both companies and citizens must collaborate to create new technologies that reflect their values and improve the lives of their families and their communities. Collaborating with the NRI is one way to contribute to this important process. Trustworthy information is key to fostering innovation.

Trust in a Network Society: A crisis of the digital age?



William Dutton
Oxford Internet Institute,
University of Oxford and Portulans Institute

Soumitra Dutta
Saïd Business School,
University of Oxford and Portulans Institute

Bruno Lanvin
Institut Européen d'Administration des Affaires (INSEAD),
Descartes Institute for the Future and Portulans Institute

Rafael Escalona Reyonoso, Mariam Chaduneli, Sylvie Antal, Shaijla Bang and **Abdellah Bouhamidi,**
Portulans Institute

Note: This chapter draws significantly on the book 'The Fifth Estate: The Power Shift of the Digital Age', recently published by William Dutton (Director of Portulans Institute).

Photo by Stella Jacob on Unsplash.jpeg

Introduction

Is there a crisis of trust in our digital age? In network societies, trust is a basic foundation to our use of media, communication tools, and related digital information systems. Trust is largely based on levels of exposure and familiarity - experience. As innovations driving our network societies became more widespread, the trustworthiness of technology underpinning this new age has been taken for granted. No more. As the United Nation's incoming President of the General Assembly, Csaba Kőrösi, said in September of 2023: "Our world is suffering from a bad case of 'Trust Deficit Syndrome'."

While the General-Secretary referred to trust in how the world is dealing with crises ranging from climate change to wars across the globe, he captured a crucial concern for businesses, governments, and the public that could be a crisis for our network society. The changing ways in which we acquire information, communicate, use services, and engage with technology have presented challenges for everyone, especially those who are digitally inexperienced or unconnected, and least trusting in technology. However, taken-for-grantedness has shifted to increased skepticism towards the internet and digital technologies like artificial intelligence (AI) not only among the digitally disconnected but also among the general public, intellectuals, business elites, politicians, and even computer scientists and engineers driving the forefronts of change.

The past decade has witnessed an erosion of trust in digital technologies, exemplified by worries over social media and more recently by the step-change in the power of artificial intelligence, so-called generative AI. There is clearly an element of collective skepticism. However, various factors have fed prevailing negative scenarios, from concerns over fake news on social media and the undermining of privacy in harvesting data generated by living in the digital age. All are stoking greater concerns over how and by whom data is being collected, stored, shared, and processed for various purposes.

New approaches to artificial intelligence, driven by machine learning and large language models (LLMs), further complicates this landscape. AI promises major benefits to the efficiency and ease of searching and virtually reading the web. Yet it also raises concerns over the ability of bad actors to generate fake news, images, and voices, while undermining your privacy. The opportunities of AI are great, but enabling malicious actors to create content that blurs narrowing lines between reality and fabrication could further undermine trust in online content.

There are growing fears over new technologies, questions over appropriate forms of digital governance and regulation, and concerns over the growing power of monopolies by major 'big tech' companies. There are anxieties over state interference, disinformation campaigns, and advances in surveillance technologies. More recently, there is increased apprehension over the rapid growth of AI and large language models (LLMs) like ChatGPT. This all culminates in a growing crisis of trust in the network society of our digital age.

As larger portions of the world continue to grow more dependent on technology and the internet, it is ever more crucial to ensure a learned level of trust exists across the digital engines of our networked society. Any factor that might prevent society from more fully leveraging digital technologies for the public good needs critical scrutiny.

The Network Readiness Index (NRI) stands out as a pivotal metric for assessing digital trends and understanding the evolution of online trust in this networked era. The NRI seeks to identify and analyze major trends, identify the driving forces behind developments in media, information, and communication technologies and their societal implications, and offer actionable recommendations for policy and practice. The aim is to assist policymakers, the industry, and academia in establishing measures that amplify the positive effects of technology on society and the economy, while promoting positive relationships between individuals and digital technologies.

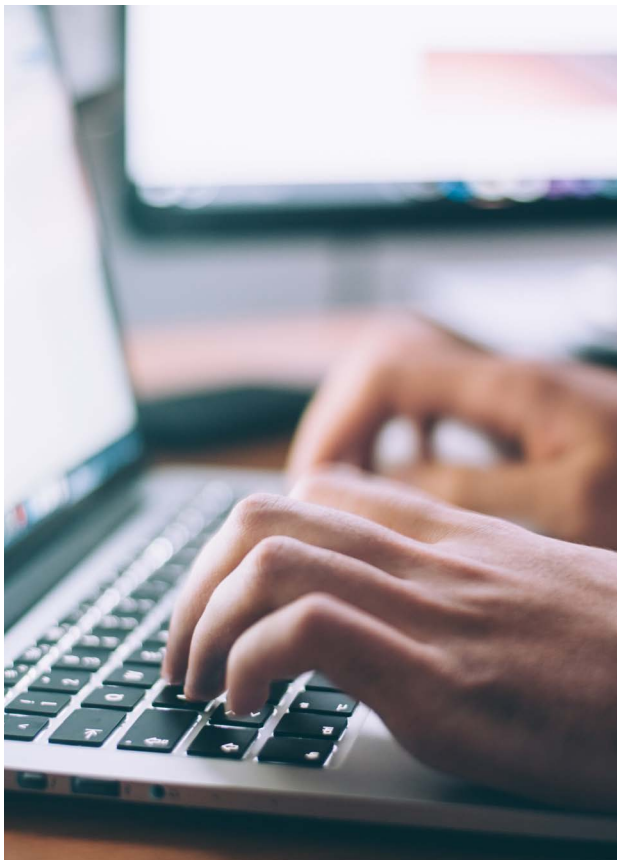


Photo by Glenn Carstens-Peters on Unsplash

Evolving Digital Landscapes: Tracing the Evolution of the Internet and Its Societal Roles

The social and political roles of the Internet and related digital media have changed dramatically over the years (Dutton, 2023, p. xi).[3] Initially, the Internet was largely an interesting innovation in academia, enabling researchers to share information and computational resources. But with a small proportion of people online, it was not initially viewed to have a broad significance to politics or the wider society. However, as the Internet diffused more widely, the growing trust in the Internet relative to other media became one of the most remarkable developments over the first decade of this century. The value of being online became an accepted fact of life, particularly among high income countries, and was increasingly taken for granted. Internet use, and the resulting vast amounts of data that this created, became a new form of capital. Public policy and regulation sought to diffuse this capital worldwide to reduce digital divides which threatened to increase socioeconomic inequalities.

However, over the next few decades, concerns over the misuse of the Internet and personal data online, as well as many new threats to privacy and surveillance, began to grow. With the advent of social media and the growing reach of global platforms, concerns arose over the 'platformization' of the Internet and social media, along with a growing litany of harms, such as misinformation and the misuse of personal data. In parallel, as billions of individuals moved online, new cybersecurity threats emerged over cases of disinformation and data breaches and leaks that could affect households and children, as well as business, industries, and the public sector. Increasingly serious questions were raised about the unintended consequences of opening the Internet for individuals, the media, and cybersecurity. In this context, deterministic concerns over harms overcame previous conceptions about the Internet's ability to close geopolitical and hierarchical divides and democratize the world (Dutton, Law, Bolsover, & Dutta, 2013).[4]

In a dystopian context defined by a focus on cyber-harms, the experiences of the COVID-19 pandemic brought a sobering reminder that the internet had become a critical resource. It provided a lifeline for individuals and communities around the world during periods of limited travel and social interaction, such as by enabling remote working. Nevertheless, in the aftermath of the pandemic, the dystopian agenda that was created around Internet-related harms was quickly revived, and expanded. This was in response to the information, communication, and security issues driven by panics over such issues as election interference and the Russo-Ukraine War, which created a context for bad actors to exploit the Internet for propaganda and sow disinformation.

Despite these panics, a more realistic, empirically grounded understanding of the social and political dynamics of networks of the digital age would show how trust has been earned over decades by policies and practices across an increasingly varied ecology of actors. This ecology has enabled over 5 billion people, nearly two-thirds of the world, to use the Internet in their daily life and work (Statista, 2023).[5] Will this diffusion of access continue to diminish global digital divides, or will use of the Internet and related digital resources decline and digital divides increase in the face of growing distrust?

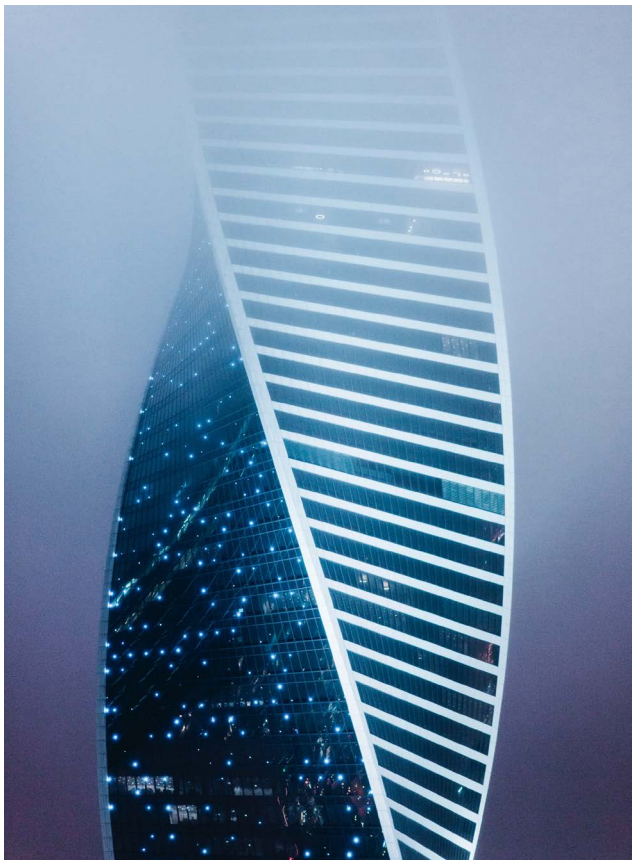


Photo by: aleksandr-popov-eXoXJrOGqG4-unsplash

Factors Shaping Trust

Trust Across Dimensions of Internet Access and Use

Trust in the Internet and related digital media masks a more textured basis of trust anchored in the functions for which people use the internet (Dutton, 1999).[6] As Table 1 illustrates, people use the Internet and social media in ways that enable access to information (that they read, hear, see, or create), people (who they communicate with), services (that they use, consume, pay for), and technologies (such as various information and communication equipment, techniques, and know-how) they access. In doing so, the Internet can reshape what they know (information), who they know (communication), who pays what to whom (services), and what know-how they require (technologies) (Dutton, 1999).[7]

With respect to trust, individuals are often asked if they "trust the Internet" or "feel safe going online", but with networked individuals doing almost anything online and in relation to a broad ecology of actors across the world, we need to be more precise. For example, it might be more useful albeit still very general to ask whether they have confidence in information they can find online and the people they meet or communicate with online (Table 1). For instance, networked individuals can find information through search or on social media. Generally, individuals tend to trust search as a means to find information more than they trust information they find on social media, which is more often from friends and family. In 2019, a survey by the Oxford Internet Institute asked respondents to rate the reliability of various information sources (Bland and Dutton, 2023).[8] Social media was deemed the least reliable, with 25% labeling it as "totally unreliable."

Notably, no medium was viewed as "totally reliable" by over 10% of participants, indicating a broad public skepticism towards all media platforms, including search engines (Table 2). Ironically, it is a good thing that most people have some reservations about what they can read or see online. Most individuals with experience online do not have blind faith in the Internet or any other media.

For such reasons, people often look at multiple sources of information online and offline, especially when an issue is important to them. Experience – whether buying a book, banking, or meeting a person online – often nurtures a learned level of trust and skepticism. This is a positive outcome as it reinforces a propensity to put effort into finding multiple sources of information, to check the identity of people they connect with, and the authenticity of sites for providing services online.

More concretely, it is also important to ask about the nature of the activities individuals engage in online. Digital transformation, further accelerated by the COVID-19 pandemic, has increased the prevalence of digital solutions for many routine tasks, such as accessing news and information, shopping, socializing and connecting with friends and family, receiving medical treatment, attending school, using financial services, and even working remotely and from home. While contingent on other factors such as digital access and skill level, indicators measuring the use of virtual social networks, internet shopping, and online financial accounts within an economy can provide insight into which functions users trust on the Internet and related digital technologies to carry out. For example, it is clear from the rise of online shopping and digital banking that these services are increasingly trusted by a larger proportion of the public.

Table 1 How Digital Media Reconfigure Access and Reshape Trust

Access to:	Reshaping:	Trust in:
Information	what you watch, read, see, hear; ultimately what you know	Sources of information you access online, such as a podcast, news, or discussion on social media
People	Who you meet, who you know, who you keep in touch with, whom you communicate with	Individuals, influencers, experts, neighbors you communicate with
Services	How and from whom you obtain services	The providers of different services, from banks and bookstores to dating sites, and healthcare providers
Technology	Producing, using, and consuming equipment, devices, hardware & software to access ICTs	Your knowledge of how to safely use the Internet, AI, and other online resources as a producer, consumer or citizen

N=1,818 2019 OxIS

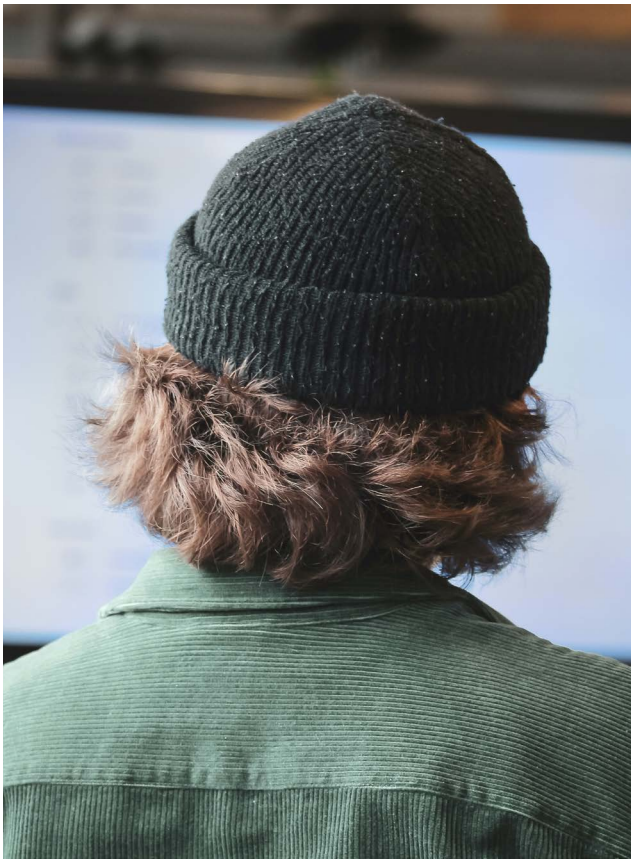


Photo by Sigmund on Unsplash

Shaping an Individuals' Trust: The Internet as an Experience Technology

Trust in digital technologies, particularly the internet, is significantly shaped by personal experiences. The Internet is an "experience technology": as individuals gain experience with the Internet, they not only gain a learned level of trust, but also a personal sense of how it empowers them. Above all, it is their own personal experience that is critical in building trust while avoiding blind faith in the online world.

This hands-on engagement is vital in molding an individual's perspective. Age and familiarity with technology are key determinants of this trust. Older generations who did not grow up in the digital age often have lower confidence in these platforms due to their limited exposure. This can lead to heightened skepticism. Likewise, any individual, irrespective of age, who hasn't engaged much with digital tools can feel apprehensive.

This helps explain why many politicians, government agencies, business organizations, and other institutions can lag behind the public in their use of the Internet and related digital media. Institutions are made up of individuals. Yet, those senior leaders at the top are older and not always the most experienced online. They are therefore more likely to be more skeptical of doing business online. As an increasing proportion of leaders and managers in government, business, and industry are likely to have grown up with the internet, they will have more online experience. If so, over time, institutions might well be less likely to lag behind the public and better able to be more innovative in their use of digital technologies.

Those who regularly use the Internet and possess the necessary skills to navigate it can gain an informational advantage, further empowering them - becoming part of the Fifth Estate. However, it's essential to recognize that not all online experiences are positive. Bad encounters with issues like security breaches, fake news, self-proclaimed expertise, 'influencing/flock/herd behaviors', and offensive content can all tarnish the many good experiences. Such negative interactions can counterbalance the positive ones, leading to a diminished overall trust in the digital realm.

Table 2 Percentage Rating How Reliable and Accurate Information is from Different Sources

	Television	Radio	Online News	Social Media	Search engine results
1 Totally unreliable	3	5	7	25	5
2	12	13	18	31	18
3	38	38	47	27	53
4	36	36	22	13	38
5 Totally Reliable	7	7	5	4	10

N=1,818 2019 OxIS

However, experiencing problems online very rarely leads people to drop out and refuse to use the Internet or social media. Experience online most often fosters trust online, even when a person experiences problems. When these problems are factored into the analysis, they remain more trusting than those without experience (Dutton & Shepherd, 2006; Blank & Dutton, 2011.[9] Problems are often more likely to play a positive role in raising awareness of risks and fostering more caution in living and working in the online world, such as in not immediately opening a suspicious email attachment.


vecteezy

The Rise of Generative AI

More recently, press and media coverage of the likely emergence of generative artificial intelligence (Gen AI) has intensified feelings of distrust and unease among many individuals towards technology. New technologies normally generate a mix of reactions. As Emmanuel G. Mesthene put it in the 1960s, new technologies often elicit one of three reactions: as an unalloyed blessing, an unmitigated curse, or not worthy of special notice (Mesthene, 1981).[10] Reactions to emerging AI chatbots, for example, have been largely positive, positioning AI as the 'new, new thing', but also feared by some of its creators as an existential threat in the foreseeable future of a God-like generative AI.

One of the significant causes for concern is its potential economic impact, as many fear that Gen AI might replace rather than augment human intelligence, making certain jobs redundant (Engelbart, 1970).[11] But beyond economic anxieties, there's a deeper technological skepticism. Many believe that AI, with its inherent biases and potential to "hallucinate" or misinterpret information, can be fundamentally unreliable and error-prone. These biases, often a result of flawed training data or methods, can lead to skewed outcomes, further fueling the perception that AI may not be used in our best interest. The combination of job insecurity and the unpredictability of AI's societal implications crafts a narrative where Gen AI is seen not just as a disruptive force, but also as a potentially untrustworthy one.

The rise of generative AI associated with large language models has also reignited efforts to restrict access to copyrighted material online. While motivated by efforts to protect the financial viability of authors, artists, and publishers, these restrictions can dumb-down the content on which LLMs are based – making everyone the poorer.

Box 1

Understanding Public Perception: Generative AI and Its Regulatory Considerations

Global Counsel

Methodological note: Global Counsel conducted a research study into attitudes to generative AI and implications for its likely regulation. Alongside interviews with key experts and opinion formers, GC conducted a nationally-representative online survey of the public in the US, UK, and Germany (n=1,000 in each nation), and compiled a qualitative Citizens' Jury with members of the public in the UK. Fieldwork was conducted in July - September 2023.

Global Counsel's surveys found public awareness of generative AI to be strikingly high for a novel technology, with around 9 in 10 people in the UK, US, and Germany claiming to have heard of it. This awareness is largely due to media coverage of dramatic forecasts of its risks. Public familiarity was still nascent, where older adults were found to be much less likely to have used the technology (with 14% of German adults aged 55+ having used ChatGPT, as compared to 57% of 18-24 year olds). Further, there were significant levels of misunderstanding about its functionality and a conflation with other technologies. Most of the public were yet to form strong views about generative AI and tended to have mixed feelings, recognising both opportunities and risks. The most compelling benefits were its potential to save consumers time, increasing business productivity, and resolving customer service complaints more responsively. The most prominent concerns included increasing unemployment, spreading misinformation and infringing people's privacy. Across all markets, people who felt more familiar with the technology (esp. younger adults and men) tended to be more favourable than those less familiar, e.g. 41% of US men felt favourable compared to only 27% of US women.

Mixed overall attitudes toward generative AI are reflected in views towards different use cases in healthcare, financial services, and elsewhere. Attitudes to different use cases were influenced by a number of factors, including the extent of human oversight, how novel the application was perceived to be, and whether or not there was a clear benefit to consumers. For example, the public tended to favour restrictions on generative AI making automatic investment decisions for consumers but were more relaxed about it being used to generate diagnostic reports for doctors to inform patient treatment.

Despite support for oversight and regulation, trust in institutions in relation to generative AI was limited. Trust was generally highest in Germany, while it was lowest in the UK. Yet the survey results broadly suggested an overall favourability toward generative AI and reflected a clear link between trust in institutions and trust in the technology. While the UK and German public typically trusted regulators more than businesses when developing or using generative AI technology, the reverse was true in the US, where businesses were more widely trusted than regulators. Friends and family were among the more trusted sources of information in all three markets, demonstrating how important direct experience and word-of-mouth are likely to be in shaping people's attitudes to generative AI.

Public trust in relation to generative AI

% of adults in each market saying they trust each institution at least moderately

	US (%)	UK (%)	DE (%)
Friends and family	49	43	65
A relevant charity, consumer group or campaigner	34	39	41
Universities, academics and other researchers	38	33	51
An independent regulator	26	29	39
A relevant government department	30	27	34
Public bodies using generative AI technology	30	22	43
Businesses using generative AI technology	30	20	32
Businesses developing generative AI technology	34	20	38
The government	21	16	27
Other consumers using generative AI technology	27	15	29

The Role of Media in Framing Perceptions

Another important set of threats exist around a range of restrictions on an open and global Internet. They include greater copyright restrictions, and the movement of increasing proportions of content behind paywalls, such as in the news industry. While driven by incentives to maintain the financial viability of the press and other content producers, they are placing professional content beyond the reach of many ordinary internet users, leaving them more exposed and vulnerable to misinformation - less empowered.

Media narratives play a vital role in shaping public perception of emerging technologies, including AI. The media serves as a primary source of information for the general public, and the angle or tone they adopt can significantly influence collective sentiment—whether optimistic, apprehensive, or neutral.

Overall, 52% of Americans say they feel more concerned than excited about the increased use of artificial intelligence (Pew Research Center, 2023).[12] Indeed, 53% of Americans say AI is doing more to hurt than help people keep their personal information private. However, there are several uses of AI where the public sees a more positive than negative impact. For instance, 49% say AI helps more than hurts when people want to find products and services they are interested in online.

This perception can be attributed in part to media coverage on topics such as deep fakes and misinformation campaigns. Conversely, positive media portrayals showcasing AI's potential benefits in sectors like healthcare or education can bolster public optimism. Thus, the media's portrayal of digital technologies not only informs but can also drive societal acceptance, inform the design of regulations, and influence the trajectory of these technologies.

Concerns of data privacy and security

Living and working in an online world generates huge amounts of data, such as through the creation of content, the use of search terms, liking of social media posts, and more. In the early years of the Internet, the manufacturing of data was viewed as a problem, which was called a 'data deluge'. As the Internet and digital media industries discovered value in this data, such as in determining the most trusted web sites and in personalizing search results, the data deluge problems evolved into 'big data' opportunities to be mined for a growing range of purposes. In mining these opportunities, leading critics saw this change as undermining personal privacy in ways that amounted to 'surveillance capitalism' (Zuboff, 2019). [13] Clearly, progress in exploiting big data, along with advances in surveillance technologies like face recognition, has resurfaced decades old issues concerning how best to protect personal privacy issues and prevent the misuse of personal data.

The rapid advancements in surveillance, biometric, and generative technologies have brought about significant challenges concerning trust in technology. Today's data flows are characterized by three alarming traits: they are unprecedented in volume, increasingly sensitive, and more robust. With a surge in the amount of data being collected, combined with the intimate nature of biometric information and the integration of data from diverse sources, individuals are becoming distinctly identifiable from their online traces.

Photo by NordWood Themes on Unsplash

This vast and intricate web of personal data, while potentially transformative for many sectors, presents serious concerns. The very technologies that promise enhanced security and personalization simultaneously raise fears of privacy invasion and misuse. As surveillance tools become more sophisticated, biometrics more revealing, and generative technologies more manipulative, there's a growing apprehension that personal data could be exploited in ways previously unimagined, undermining trust in the digital landscape.

Furthermore, forecasts of the rise of 'surveillance capitalism' envision big data analytics tied to personal data becoming a new gold that leads to greater breaches of personal privacy than ever before imaginable.[14] While surveillance capitalism is a possible future, breaches in cyber-security and unauthorized access to personal data is an increasingly greater problem. With billions of internet users, privacy and security are no longer a problem for IT experts in institutions and large organizations, but remain an issue for billions of ordinary networked individuals.

Experience and the Certainty Trough

You might be thinking: Wait a minute. Some of those who have contributed to the development of Gen AI are the most concerned about its societal, even existential, threats. You are right, but there are likely to be two different problems at each end of the experience continuum. (MacKenzie, 1993). At one end of the continuum, those without experience using a particular digital technology have been found to be more alienated and distrustful - they have no personal experience and are more likely to adopt dystopian perspectives in conversations and in the press. At the other end are those who actually design and develop technologies. They are most focused on the technical features and more likely to extrapolate the social implications from what the technology is designed to do - being more technologically deterministic.

An example can be found in a once dominant discussion of information search creating a filter bubble, leading networked individuals to only see what they have expressed interest in. If a person searches for information about left-wing or right-wing politics, then search will tend to be biased to prioritising left- or right-wing results in their search results. It is arguably helpful for you to allow a search engine to know where you live and that you are interested in particular candidates. So, if you look for a pizza restaurant, for example, search might prioritize one in your neighborhood. If you look for the latest news about an election, it could prioritize information about the elections and candidates you have been following. Does this create a filter bubble?

A seven-nation study of how people find political information found that those who are interested in politics tend to look for information, on an average, in four different places, one of them being online (Dutton, Reisdorf, Dubois, & Blank, 2017).[15] And when they go online, they tend to look at an average of four different sites for information about politics. For most internet users, therefore, the technical dynamics of a filter bubble are unlikely to be shaping a person's searches across all media and all sites. The diversity of information people can have at their fingertips through the use of Internet search and other sources is far broader from the narrow technical logic of the filter bubble.

However, the other end of this continuum, the technically-high sophisticated end of the continuum, is too small to be seen in sample surveys - we've tried. An incredibly small percentage of the public are doing things like designing Gen AI. But anecdotally, they seem to follow a pattern found in more qualitative studies of a 'certainty trough' (Mckenzie, 2019).[16] At one extreme, the least informed are most alienated from a technology, and at the other extreme, are scientists who are the most informed about the technology but also uncertain about its overall efficacy. Uncertainty is common among both groups. Those in between, most of us, are more certain, less distrustful, and more anchored in our experiences, rather than beholding to dystopian press accounts or technologically deterministic forecasts.

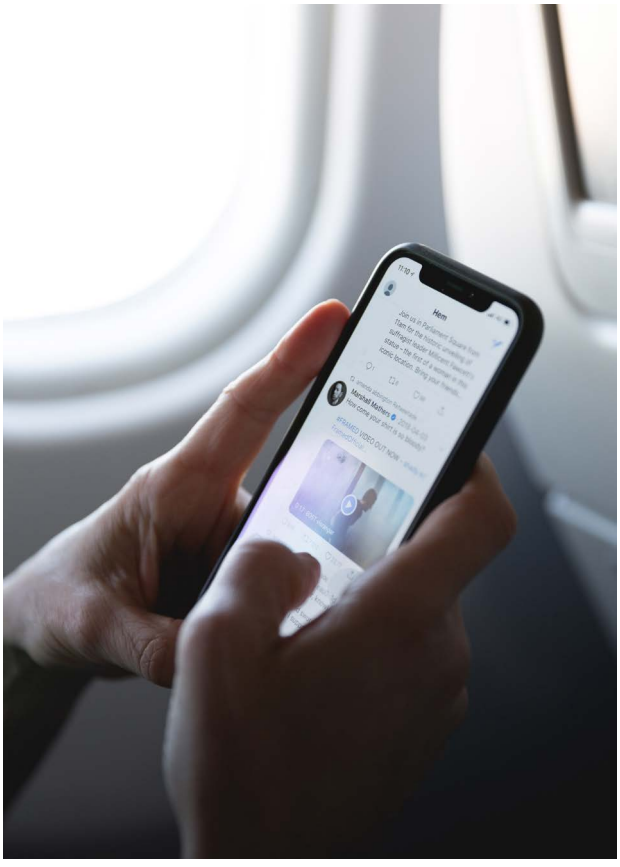


Photo by Marten Bjork on Unsplash

Moving Forward

Avoiding Deterministic Perspectives: Balancing Risks and Rewards

There are bad actors online, and although only a relatively small proportion of internet users are bad or malicious actors, they can cause problems far greater than their number would suggest. However, instead of government regulation being overly focused on censoring what networked individuals can read or view, it should be increasingly possible to focus more on identifying and regulating the bad actors. For instance, a troll farm, or a site using software to automatically generate malicious posts, can be identified and then better regulated or even blocked by a platform or regulator.

While it is crucial to recognize the problems and potential risks of digital technologies, an overemphasis on harms that is not tempered by the benefits can skew perceptions. Analyzing the true implications of the internet requires a balanced understanding that is rooted in facts, data, and real-world examples. Such an approach can counteract uninformed, overly simplistic, or complex but technologically deterministic viewpoints.

While certain concerns, like child protection, have prompted organizations and governments to take action, it's essential to balance caution with constructive solutions. Instead of succumbing to fear-based narratives, especially concerning platforms like social media which offer invaluable global connections, we should emphasize education and empowerment. Cyberbullying, for instance, is a genuine issue, but the solution isn't to avoid social media entirely. A fear of bullies should not keep a person locked in their home, afraid to go out. Nor should it keep them offline, afraid to use the Internet.

Instead, teaching individuals how to safely interact online, identify potential threats, and practice good cyber hygiene can mitigate such risks. Riding a bicycle, swimming, walking across a street, and many everyday activities carry risks, yet children are taught to be careful and how to navigate through the world in a safe manner.

Most importantly, by highlighting both the benefits and risks, we empower users to make informed decisions. The media and education sectors are instrumental in shaping public perception and knowledge. While the media disseminates information and frames narratives, education equips individuals with the tools to critically analyze and engage with this information, fostering a well-informed and discerning society. By focusing on skill-building and proper online conduct, we can harness the benefits of the digital age without unnecessarily limiting its vast potential.

While certain concerns, like child protection, have prompted organizations and governments to take action, it's essential to balance caution with constructive solutions. Instead of succumbing to fear-based narratives, especially concerning platforms like social media which offer invaluable global connections, we should emphasize education and empowerment.

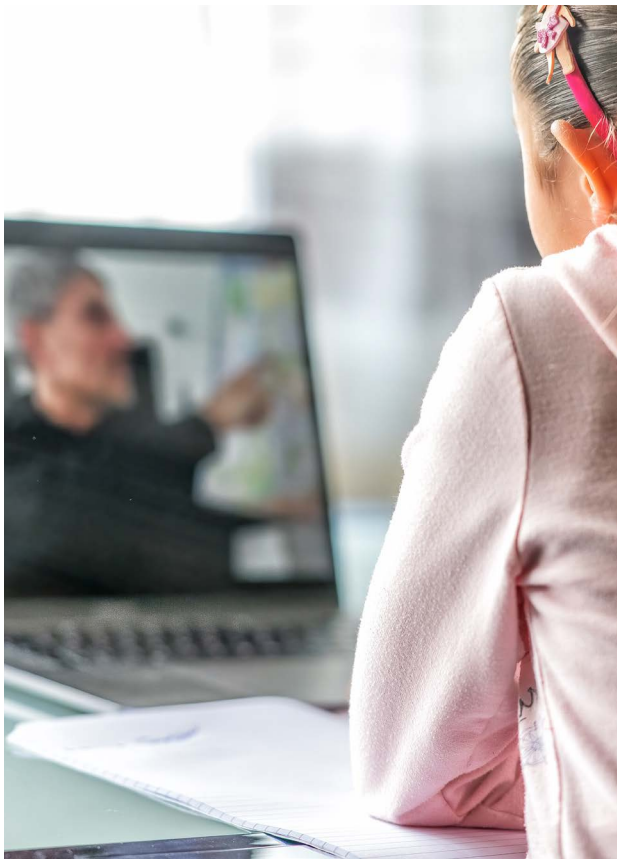


Photo by Giovanni Gagliardi on Unsplash.

De-Mystifying Technologies

The mystification of tech is another threat as it undermines a user's sense of personal efficacy. Developments in big data analytics, AI, and social and ethical issues of personal data may seem complicated, but in many cases, they can be presented in ways that make them more comprehensible to networked individuals. Efforts toward demystifying technologies and equipping users with the competencies to protect themselves and their assets in the digital realm are important factors in developing a learned level of trust.

In this respect, states hold a pivotal role of enhancing transparency in the technological sphere, especially regarding algorithms and data handling. It's imperative for policy makers to ensure that tech companies are more transparent about the mechanics of their algorithms and explicitly detail data usage, storage, and distribution practices. Such transparency not only protects users but also helps support trust within the digital domain. Moreover, consumers equipped with this knowledge can make informed decisions that resonate with their individual values. This does not mean that every networked individual researches the algorithms of a search engine. However, more transparency enables flawed or biased algorithms to be discovered by an individual or civil society organization that cares about this issue.

In that same vein, there's an urgent need to instate ethical standards, particularly for AI and machine learning innovations. Setting these benchmarks will ensure technologies evolve within a responsible framework. One way to support this is by the establishment of an oversight body, which can monitor tech advancements, ensuring societal interests are upheld, and potential risks are mitigated.

Additionally, private initiatives like "Better Images for AI" strive to enhance public comprehension of transformative technologies, especially Gen AI. The current trend of using abstract or sci-fi-inspired AI visuals often obscures the technology's tangible societal and environmental effects. Such visuals, which likening generative AI to human cognition, foster misconceptions about its actual capabilities. Moreover, representing AI as autonomous robots diminishes the vital role of its human developers and might falsely hint at robots where none exist. Such imagery might also carry biases related to gender, ethnicity, and even religion, further perpetuating undue fears. Understanding the difficulty in obtaining unbiased and accurate visuals, Better Images for AI can offer a more comprehensive, realistic image library of AI for both individuals and the broader media community.

Box 2

The Importance of Ongoing Skill Support for Achieving Digital Participation

Good Things Foundation

The Good Things Foundation supports people in the UK with overcoming three critical barriers to digital participation: access, skills, and support. The foundation provides wrap-around support and online courses that cover a range of skills such as how to switch on a device, connect to a network, make an appointment with a doctor, make an online video call and avoid online scams.

The research shows that supporting individuals in becoming digitally included not only helps bridge the existing digital divide but also has broader impacts such as:

- **Increased Happiness** - 81% feel more connected with family and friends and 74% feel less lonely
- **Overall Health** - 63% reported their mental health improved, 48% their physical health improved, 60% reported they were better able to manage their health or their illness
- **Better Off** - two thirds wanted to continue learning or felt they had better job prospects and 37% of the network felt that the National databank had helped to ease the financial burden of accessing the internet for the people they support

However, research showed that once someone has access to the online world and a base amount of knowledge, their worries around online safety more than double. According to the Impact Survey conducted on June 23, 2023, before receiving initial skills support, only 15% reported that they had worries about staying safe online. However, after receiving the skills training, the number reached 37%.

Online safety is central to what being 'digitally included' means. It is especially important for people with limited exposure to the Internet (often older people, and working-age adults with low educational attainment and low incomes) and those in vulnerable situations. Around 6 in 10 UK adults report having had at least one potentially harmful experience online in the past year (Ofcom/ICO, 2020). Hence, continued support through online safety courses is key to building confidence throughout the journey to becoming digitally included.

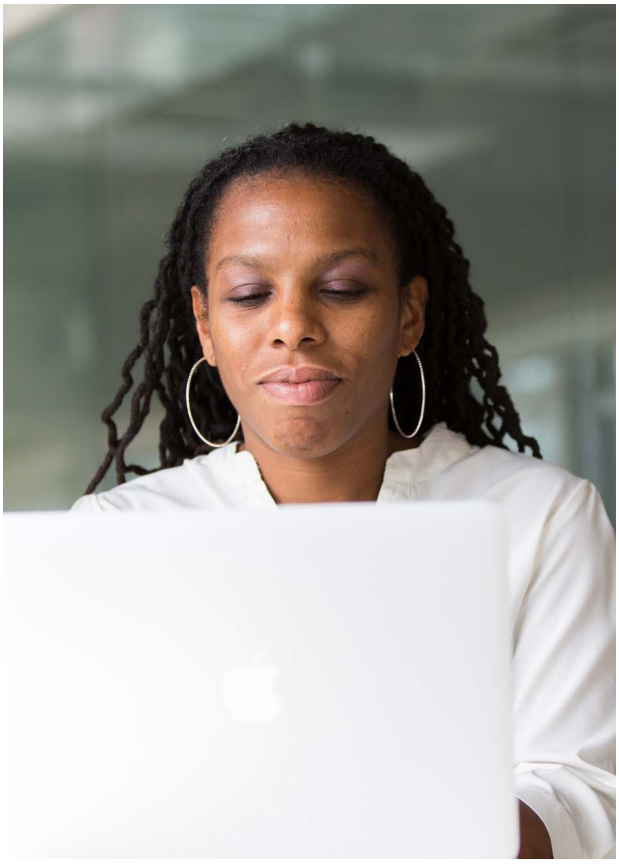


Photo by Christina @ wocintechchat.com on Unsplash

Protecting privacy and cybersecurity is a critical responsibility of individuals, but also of both states and organizations. On the state level, proper governance becomes paramount.

Protecting Personal Privacy and Security

Many have argued for efforts to create a new 'cybersecurity mindset'(Dutton, 2017)[17] that enables ordinary internet users to be as aware of the security of their data and personal information as they are of their physical possessions. While all institutions and organizations need to enhance their cybersecurity, ordinary networked individuals can help protect their own privacy and security, as many did when shifting to work from home during the COVID-19 pandemic (Esteve-González, Dutton, Creese, & Agrafiotis, 2023).[18]

Protecting privacy and cybersecurity is a critical responsibility of individuals, but also of both states and organizations. On the state level, proper governance becomes paramount. Whether you agree or disagree with the introduction of regulations like the General Data Protection Regulation (GDPR) in the European Union, this regulation underscores a mission to protect personal privacy. By setting stringent standards for data protection and privacy, the GDPR has been designed to reshape public perception, make individuals more aware of their digital rights and raise the bar for data-handling practices worldwide. Such regulations also seek to incentivise tech companies to maintain robust cybersecurity measures, promote the use of end-to-end encryption and other secure methods of data transmission and exercise better accountability such as by notifying users immediately of breaches. Critics of the GDPR have identified weaknesses, such as the additional burdens placed on users, and the blocking of access to information on sites in other nations that do not recognize the EU's regulations. But initiatives to better protect privacy will continue to evolve.

On the organizational front, companies also play an essential role in safeguarding data. For example, most organizations and institutions help protect the security of their personnel and provide assistance to those working remotely or at home. It is in the interest of service providers to offer secure services if they wish to build their clientele. Online banking has to be safe. Online shopping needs to be safe, providing a good experience to online shoppers. (See Box 3).

Arguably the most trusted and popular online shopping service in the US and Europe has been Amazon. Founded in 1994 by Jeff Bezos in a garage in the US state of Washington, Amazon began as a humble online bookstore. It has since evolved with the rise of the internet into a multinational 'everything' store providing: e-commerce, such as online shopping; cloud computing services, through Amazon Web Services (AWS); online advertising; digital streaming services; and AI, such as in smart speaker services. Its growth has been largely credited with it being trusted by its customers - exemplifying the significance of trust in the networked society.

Box 3

Bridging the Trust Gap: Amazon Web Services' Role in Ensuring Digital Assurance Globally

Amazon Web Services (AWS)[19]

In the digital era, trust is hard earned and easily lost, particularly when using emerging technologies. Companies can often build and maintain that trust through their investments in local communities, which helps create jobs, infrastructure, and education and training opportunities for the people who live and work in those communities. Amazon Web Services' (AWS) investment in data centers across Ireland serves as a good example: it has boosted economic output in Ireland by over €11.4 billion since 2012, contributing nearly €2.4 billion in additional economic output in 2022 alone. [20]

Similarly, in Germany, a substantial number of businesses across various locales have integrated AWS's cloud solutions into their operations, resulting in a 16.9% surge in employment growth within two years and solidifying trust in digital technologies as catalysts for innovation. [21] In the Middle East and North Africa (MENA) region, the anticipated addition of $733.1 billion to the economy over the next decade is closely tied to the expansion of cloud adoption, with AWS at the forefront of this digital transformation.[22]

In the realm of artificial intelligence (AI), AWS actively participates in Amazon's commitment to responsible AI. Amazon is engaged with organizations and standard bodies focused on the responsible development of next-generation AI systems including NIST, ISO, the Responsible AI Institute, and the Partnership on AI. Earlier this year, at the White House, Amazon signed voluntary commitments to foster the safe, responsible, and effective development of AI technology. This commitment is consistent with AWS' approach of ensuring responsible AI is an integral part of the entire AI lifecycle - including design and development, deployment, and ongoing use. To help customers transform responsible AI from theory into practice, AWS gives them tools, guidance, and resources to get them started. This includes AWS AI Service Cards which documents the intended use cases and fairness considerations of AWS AI Services, and Amazon SageMaker Clarify which customers can use to detect potential bias in data and models.

This is reflective of the AWS approach to building products and services across the organization. Customers say they use AWS to lower costs, increase security, and accelerate innovation, all of which helps to build trust in digital technologies.

Photo by Christian Wiediger on Unsplash

Concurrently, AWS's commitment to data security, adaptability, and consistent performance fosters an environment where businesses and communities alike can operate with heightened confidence.

Promoting a Plurality of Platforms and Sources

Over the past decade, the rise of big tech firms has dramatically transformed the architecture of the internet and driven forward the phenomenon of platformisation of the Internet, leading to concerns over the extent to which a small number of large platforms can exert control over our online experience. Amazon, for example, is one of the big five tech giants, along with Google, Apple, Meta, and Microsoft. While it may appear that the big tech companies control a majority of our online activity, such as searching or networking, they are networking a dynamically changing array of many more content and service providers and users, and have many contenders in the wings. This makes it possible for companies to lose their favored positions through the choices of networked individuals.

The idea that search engines and social networks are systematically biased in ways that prevent users from gaining access to the most relevant and accurate information has led to concerns over information integrity. As discussed above, many pundits and technologists alike have warned networked individuals that advances in algorithmic personalization have placed them in a filter bubble or an echo chamber. However, individuals who are online have access to a more diverse range of information sources than ever possible in an earlier era.

As noted above, research from the Quello Center on the use of internet search for information about politics demonstrated that most networked individuals go to four or more sources of information about politics, with only one of them being online. Once online, they tend to look at four or more sources. It is highly unlikely that they are trapped in a filter bubble orchestrated by one online platform (Dutton, Reisdorf, Dubois, & Blank, 2017).[23] However, many individuals have psychological propensity to confirm their existing biases - what is called a confirmation bias. If people choose to only read or view content they agree with, then they lose the benefit of being on the most diverse source of information across the world.

The freedom provided by the Internet and social media to networked individuals includes the freedom to create their own echo chamber by following their own confirmation bias – such as only reading opinions they agree with, only following their favorite politician, or only networking with people who agree with them. If they do so, it is a response to a psychological propensity rather than a closure determined by technology. While individuals can find some imagined comfort in a self-constructed echo chamber, there are other features enabled by the internet that can counter this tendency (Dutton, 2023).[24]

Dominant search engines are being challenged by the rise of AI and large language models, potentially shifting the positions of different companies. This competition may lead to the democratization of AI and large language models to empower information search on the part of networked individuals. Not only have advances placed powerful computing devices in the hands of ordinary people, but they are also putting advances in AI within reach of everyone with a mobile smartphone.

Of course, the value of platforms depends on the validity and efficiency of their services. If they use their dominant positions to undermine competing services, then there are reasons for concern, which are the subject of governmental regulatory reviews, such as by the US Federal Trade Commission.

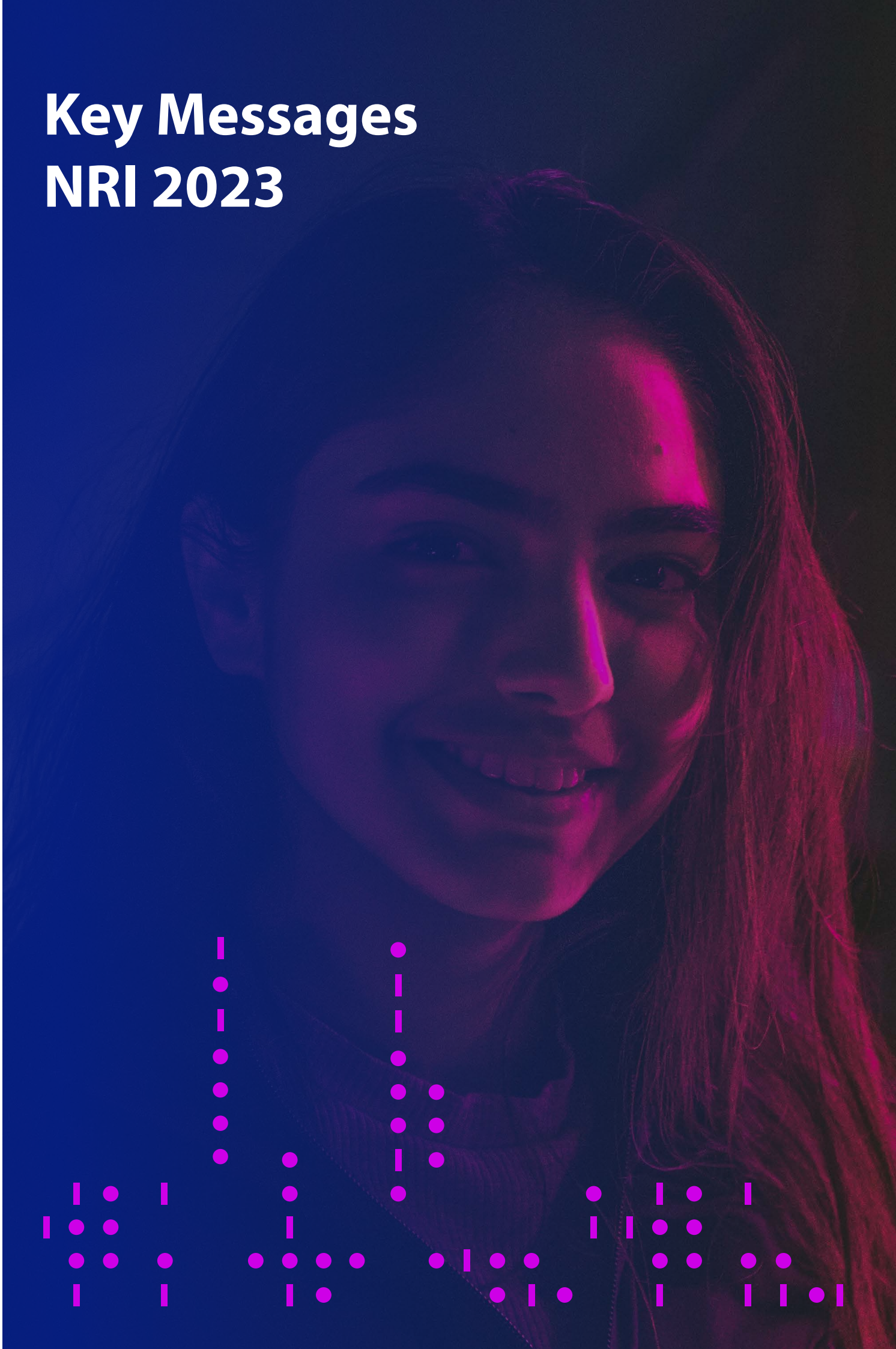
Navigating the Uncharted Tomorrow

A decade ago, in a piece for the World Economic Forum, experts warned that the world may be in an "internet trust bubble" highlighting global confidence challenges in emerging online technologies (World Economic Forum, 2023). [25] Today, while that bubble might have burst, there's still a chance to rebuild trust. Addressing trust in digital technologies is paramount; failure to do so risks deepening digital divides and making the vision of an open global internet elusive. Despite the hurdles, numerous initiatives can help foster trust globally. The internet, as a pivotal innovation of the digital age, offers immense benefits, yet it's worth noting that over a third of the global population lacks usable internet access, as per ITU 2022.

Many nations remain sidelined from the digital revolution due to developmental hurdles, infrastructural deficits, and diverse regulatory landscapes. Ensuring global digital inclusion in the future hinges on addressing these trust issues. In conclusion, this report aims to shed light on upcoming challenges and, through anticipatory governance, calls for proactive, appropriate, and informed strategies. In this vein, it seeks to equip decision-makers with the foresight to discern and address the extensive ramifications of their decisions and actions on the digital trust ecosystem.

A decade ago, in a piece for the World Economic Forum, experts warned that the world may be in an "internet trust bubble" highlighting global confidence challenges in emerging online technologies (World Economic Forum, 2023). Today, while that bubble might have burst, there's still a chance to rebuild trust. Addressing trust in digital technologies is paramount; failure to do so risks deepening digital divides and making the vision of an open global internet elusive. Despite the hurdles, numerous initiatives can help foster trust globally. The internet, as a pivotal innovation of the digital age, offers immense benefits, yet it's worth noting that over a third of the global population lacks usable internet access, as per ITU 2022.

Key Messages NRI 2023



1 Trust is the glue for our interconnected world

Trust is the glue that binds our interconnected world. Over the past few decades, however, that trust has progressively eroded. More importantly, mis-trust has changed in nature: from being directed mostly at content (fake news, propaganda, advertising claims) it has now morphed into systemic mis-trust, whereby entire sets of tools, architectures and systems are subject to lower level of acceptance and credibility. This includes tools (cloud computing, AI, blockchain and cryptocurrencies, quantum computing), the media in general, large enterprises, and even institutions or economic and political systems (capitalism, representative democracy). Without trust, the fabric of our global society would unravel, causing not only uncertainty and inefficiency in our digital interactions but breaking many of the connections that empower our daily lives. Whether it's searching for information online, connecting with loved ones, making new contacts across borders, or conducting business, trust is a critical backbone that upholds the integrity and functionality of our digital age.

2 There are reasons for collective skepticism

Arguably, over the past decade, there has been a decline in trust towards digital technologies, which have dramatically exceeded expectations time and again. Many thought the internet would fail. However, a decline in trust can be attributed to a range of factors, including the explosion of social media, advancements in generative AI, the rise of cryptocurrencies, blockchain technology, and developments in quantum computing. Many people are skeptical due to issues like the spread of fake news and potential privacy breaches resulting from the extensive data collection that characterizes the digital age. These concerns are further exacerbated when one considers how this data is almost magically managed: the ways it is gathered, stored, disseminated, and used by billions of individuals. As technology continues to rapidly evolve, it's vital for society to strike a balance between harnessing its benefits, managing risks, and safeguarding individual rights.

3 We need to move past a perspective centered on harms

In an era often characterized by heightened attention to cyber-harms, the COVID-19 pandemic underscored the indispensable role of the internet – literally as a lifeline. During times of restricted movement and physical interaction, it emerged as a vital conduit, facilitating remote work and maintaining connections for global communities. While the digital realm is not without its challenges, it's essential to ensure our perspective isn't solely centered on potential dangers. Like everyday activities such as cycling, swimming, or crossing a street, online interactions come with inherent risks. Rather than magnifying these threats, it's more productive to equip individuals with the skills and mindset to navigate the digital space safely, emphasizing the importance of discerning potential hazards and practicing robust cyber hygiene.

4 Access, Exposure and Skills Development are crucial to building trust

Trust in digital technologies, especially the internet, is built largely through personal experience. The more individuals interact with these platforms, the better they understand and appreciate their value. It's this hands-on interaction over time that anchors our trust. However, one's age and prior exposure to technology can affect this trust. Older individuals, often isolated and not having grown up with these tools, might be overly cautious due to unfamiliarity or lack of support. Similarly, anyone with limited experience, regardless of age, may feel hesitant. Therefore, expanding access to digital technologies, coupled with comprehensive skills training, is crucial to ensure that everyone can confidently and effectively engage in the digital world.

5 We need to demystify technology

Demystifying technology is a critical aspect of fostering trust in the digital age. Complex concepts like big data analytics, artificial intelligence, and the ethical dimensions of personal data should not remain enigmatic. Media, serving as a primary source of information for many, can heavily influence public perceptions of emerging technologies like AI. Their role shapes the collective sentiment, guiding whether it leans towards optimism, caution, or neutrality. States can play a pivotal role in promoting transparency, especially in the realms of algorithms and data management. Policymakers must press tech companies to make the dynamics of their algorithms and the specifics of data usage, storage, and sharing, more transparent. By simplifying these topics and prioritizing transparency, we can empower individuals to better understand and protect their digital assets, and increase their personal sense of efficacy.

6 Appropriate data governance is required

Concerns keep growing (among decision makers as well as ordinary citizens) about the ways in which data is collected, managed, stored, shared, and used. As technology continues to evolve, it is now vital for society to identify and guarantee the right balance between digitalization on one hand, and fundamental human rights and aspirations on the other. Regulation, particularly regarding privacy and cybersecurity, plays a pivotal role in building trust in the digital age. States and organizations must prioritize. Early regulatory initiatives like the EU's General Data Protection Regulation (GDPR) need to be continually reassessed to evolve with social and technical change. Regulation should encourage tech companies to implement robust cybersecurity, use secure data transmission methods like end-to-end encryption, and ensure prompt notifications of breaches. Barriers between media regulators and cybersecurity experts need to be bridged. As digital technologies and regulations continue to evolve at an ever-increasing pace, the metrics provided by the NRI will seek to equip decision-makers with the foresight to develop proactive, appropriate, and informed strategies, as well as discern the ramifications of their decisions and actions on the digital trust ecosystem.

7 Trust and Inclusion are interconnected

Trust and inclusion can be seen as mutually reinforcing aspects of a country's technology landscape. When digital inclusion is promoted, it ensures that technology is accessible to all, and used in ways that foster a learned level of trust in digital technologies. This, in turn, can support higher levels of technology adoption, innovation, and overall technology readiness. This year's findings show that Trust and Inclusion are interconnected elements of technology readiness. Economies and societies with high levels of digital inclusion demonstrate the value of building Trust toward digital technologies.

Key Results of NRI 2023

The Top 10

The United States retains its top position in the NRI for the second consecutive year, closely followed by Singapore. Finland has climbed to the third spot, displacing Sweden to fifth place, while the United Kingdom reenters the top 10. Historically, the Top 10 performers in the NRI exhibit three prominent trends: they consistently belong to high-income economies, demonstrating robust network readiness across all dimensions, and European countries continue to dominate the list. These trends continue in the NRI 2023, with each of the top 10 countries achieving a top 25 ranking across all four primary pillars (Technology, People, Governance, Impact). As for regional distribution, Singapore and Korea remain the only top 10 countries located in Asia and the Pacific, while the United States is the only economy located in the Americas. The rest of the top 10 rankings consist of European countries.

Photo by Joshua Hoehne on Unsplash

Table A Top 10 performers in NRI 2023

			Pillars			
Country	NRI rank	NRI score	Technology	People	Governance	Impact
United States of America	1	76.91	1	4	7	23
Singapore	2	76.81	5	6	10	1
Finland	3	76.19	10	7	1	2
Netherlands	4	76.04	4	15	2	5
Sweden	5	75.68	9	9	5	4
Switzerland	6	74.76	2	14	13	6
Republic of Korea	7	74.48	17	1	18	11
Denmark	8	74.06	11	11	3	8
Germany	9	74.00	6	8	14	10
United Kingdom	10	72.75	8	10	16	9

Source: Network Readiness Index Database, Portulans Institute, 2023.

Regional Leaders

The performance distribution across regions in the NRI 2023 follows an established pattern. Europe dominates those economies in the top ten rankings for digital readiness. Asia follows with Singapore and the Republic of Korea both securing a position among the top 10 positions. The United States is the sole representative from the Americas. Africa, the CIS, and the Arab States fail to appear in the top ten rankings. There are some changes in the top three economies from each region this year. Kenya surpasses South Africa to claim the top position in the African region. Finland joins the top three in Europe, also claiming the top position. Chile replaces Brazil in the Americas.

The regional leaders for NRI 2023 include Kenya, United Arab Emirates, Singapore, the Russian Federation, Finland, and the United States. Overall, these regional trends in the NRI 2023 highlight the varying levels of progress and challenges faced by economies across the different parts of the world as their journey towards digital readiness and network capabilities continues. Europe stands out as a strong leader in the NRI while The Americas and the Asia & Pacific display a diverse spectrum of digital competencies. The CIS showcases the smallest variation in scores among its member nations. These regional trends shed light on the fact that the pace of advancement in digital technology and network infrastructure varies significantly from one region to another. The relative standings of individual counties in their respective regional rankings reflect the importance of creating and pursuing tailored strategies and policies to address the specific and unique digital needs and challenges faced by each region.

Photo by Lucas George Wendt on Unsplash

Table B Top 3 countries by region

Africa	Arab States	Asia & Pacific	CIS	Europe	The Americas
Kenya (70)	United Arab Emirates (30)	Singapore (2)	Russian Federation (38)	Finland (3)	United States of America (1)
South Africa (74)	Saudi Arabia (41)	Republic of Korea (7)	Kazakhstan (58)	Netherlands (4)	Canada (11)
Mauritius (76)	Qatar (46)	Japan (13)	Armenia (63)	Sweden (5)	Brazil (44)

Note: Global ranks in parentheses. CIS = Commonwealth of Independent States.
Source: Network Readiness Index Database, Portulans Institute, 2023.

Income group leaders

While the data produce a strong positive link between income and digital success, a closer look at the group leaders in each income bracket reveals standout countries within their peer group. This closer look showcases the rising stars in network readiness. This positive correlation reveals the importance of ongoing investments in digital infrastructure and policies for nations aiming to enhance their digital capabilities and drive economic growth in the digital era. The United States, Singapore, and Finland all exemplify this pattern. China, an upper-middle-income economy, defies tradition by securing a spot in the NRI's Top 20 due to its formidable technological prowess. Notably, Ukraine remains the sole lower-middle-income economy to claim a spot in the NRI's top 50. While the link between income and digital success remains strong, the emergence of these standout countries within their income groups highlights the potential for rapid advancements in network readiness through strategic investments and policy initiatives, regardless of a nation's income level.

Outstanding pillar performance among middle- and low-income economies

Middle- and low-income economies, especially China, India, and Rwanda, have notably surpassed expectations in digital readiness. An economy is recognized as outstanding when its pillar score exceeds the trendline by at least 10%, derived from modeling the relationship between pillar scores and GDP per capita. Regionally, Africa and Asia & Pacific stand out, with nations like Brazil and Ukraine also making significant strides. The lower-middle-income group is particularly dominant in this digital evolution. For a detailed view, refer to Table 5 in Detailed results of NRI 2023.

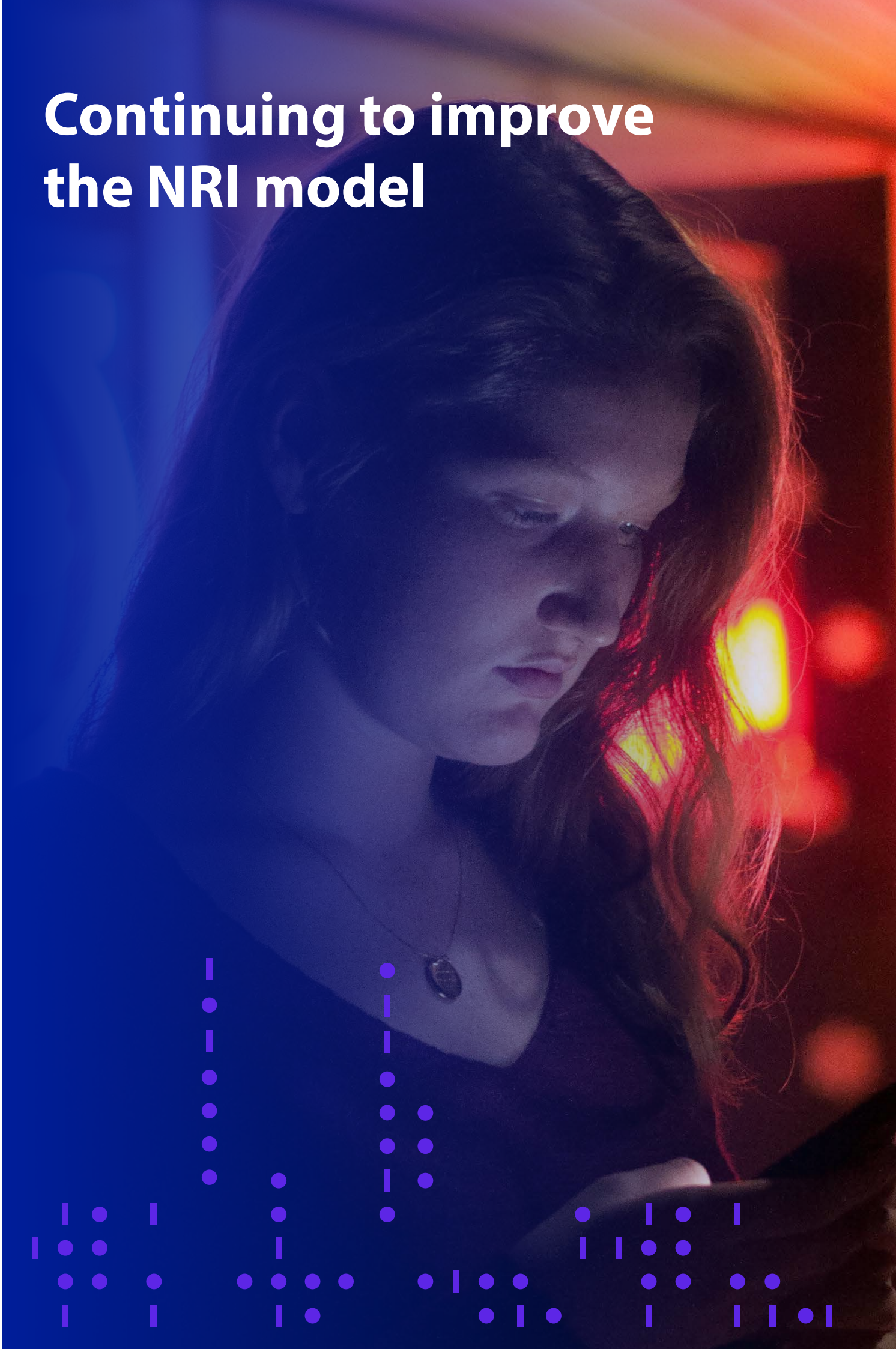
Photo by Muhammad-taha Ibrahim on Unsplash

Table C Top 3 countries by income group

High-income economies	Upper middle-income economies	Lower middle-income economies	Low-income economies
United States of America (1)	China (20)	Ukraine (43)	Rwanda (99)
Singapore (2)	Russian Federation (38)	Viet Nam (56)	Uganda (117)
Finland (3)	Malaysia (40)	India (60)	Gambia (120)

Note: Global ranks in parentheses.
Source: Network Readiness Index Database, Portulans Institute, 2023.

Continuing to improve the NRI model



Digital transformation necessitates a constant review of the data that powers the NRI model. Annually, the NRI team scours a variety of general and tech-specific sources, pinpointing new indicators that can effectively gauge the ever-shifting terrain of digital evolution and network readiness.

Stability is paramount; while evolving the model is crucial, ensuring its stability is equally essential for maintaining its validity. The refinement of the NRI stems from the introduction, evolution, or integration of relevant metrics. However, at the heart of the NRI model remains the belief that our shared future hinges on a seamless fusion of People and Technology.

As technology progresses, its interplay with people will intensify. Both entities will work hand in hand, forming a symbiotic relationship in both social and business realms. To bolster this alliance, it's imperative to institute governance structures addressing trust, security, and inclusivity. Our ultimate goal is to enhance the ways people can harness technology to its full potential, a measure that is reflected in three pivotal domains of societal wellbeing.

- To have a positive impact on the economy
- To have a positive impact on a country's quality of life
- To help a country achieve all Sustainable Development Goals (SDGs)

Each of these objectives aligns with the United Nations' vision for a brighter and more sustainable future.

Photo by Jayana Rashintha on Unsplash

As technology progresses, its interplay with people will intensify. Both entities will work hand in hand, forming a symbiotic relationship in both social and business realms. To bolster this alliance, it's imperative to institute governance structures addressing trust, security, and inclusivity.

The Network Readiness Index

The 2023 NRI Report is anchored in the three core principles outlined by the NRI Technical Advisory Group in 2019, ensuring the NRI model remains future-ready.

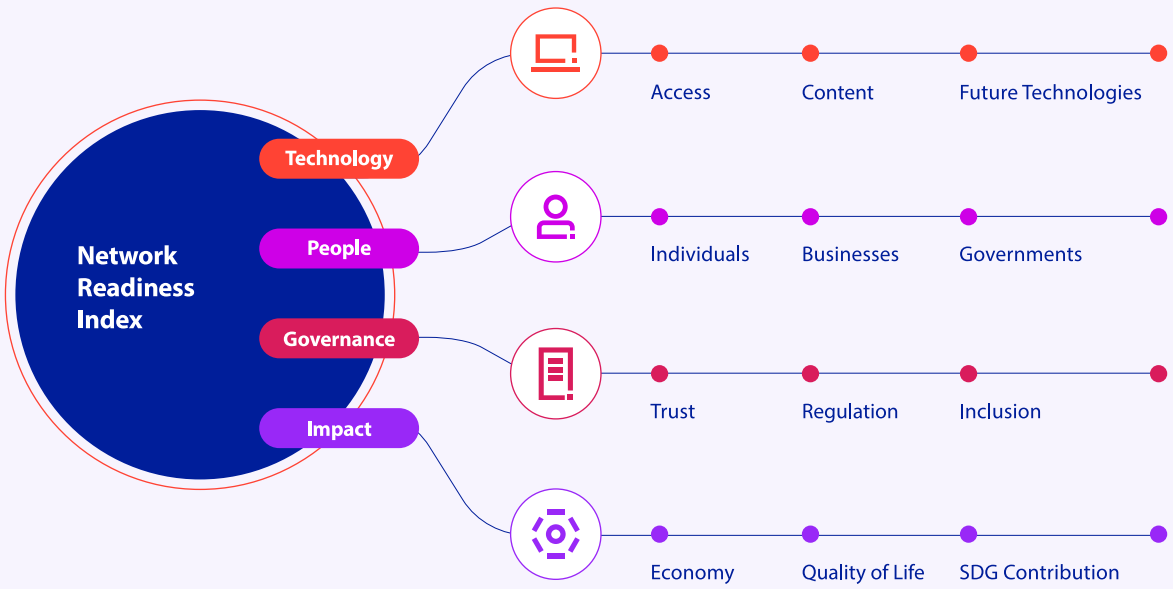
1. To maintain continuity with the major components of the NRI from previous years.
2. To reflect the current issues concerning ICT deployment that the previous NRI models may not have adequately captured.
3. To future-proof the NRI model regardless of developing future technology trends.

The NRI 2023 model maintains its foundational four-pillar structure: Technology, People, Governance, and Impact. Each pillar is further divided into three sub-pillars, as illustrated in Figure A.

Primary technical updates to the NRI 2023 apply to four indicators across three sub-pillars: Content, Individuals, and Economy. Additionally, two indicators within the Access sub-pillar underwent a nomenclature revision. A sum of 58 indicators span across the 12 sub-pillars in the NRI. For detailed insights into enhancements within the full set of indicators, refer to Appendix I: Technical Notes and Appendix II: Sources and Definitions. The organization of the NRI model's pillars and sub-pillars is outlined as follows:

Photo by Keith Fox on Unsplash

Figure A NRI 2023 model



Technology

Central to the networked economy is technology. As a foundational component of the NRI, the Technology pillar aims to evaluate the technological infrastructure crucial for a country's engagement in the global economy. The Technology pillar's objectives are addressed through three sub-pillars:

- **Access:** This examines the basic level of ICT accessibility for individuals in countries, delving into facets such as communication infrastructure and cost-effectiveness.
- **Content:** Focuses on the nature of digital technologies generated within countries and the local deployable content/applications. It encompasses data derived from scientific articles, expenditure on software, GitHub commits, and the development and use of mobile applications.
- **Future Technologies:** Gauges a country's readiness towards the impending trends in the networked economy and novel technological paradigms. It encapsulates the adoption of Artificial Intelligence (AI), the Internet of Things (IoT), and investments in budding technologies.

People

The technological landscape mirrors the proficiency, inclusivity, and adeptness of the populace and entities of a nation in harnessing technological assets. The People pillar, therefore, assesses the application of ICT across three facets: individuals, enterprises, and public sectors.

- **Individuals:** Analyzes individual technological utilization and their capacity to engage in the networked economy.
- **Businesses:** Evaluates the way enterprises integrate ICT and their involvement in the networked economy, inclusive of R&D expenditures.
- **Governments:** Probes into government ICT investments and deployments to cater to the wider populace.

Governance

Governance epitomizes the frameworks that fortify a holistic network, ensuring its users' safety. The Governance pillar emphasizes the creation and reachability of structures that invigorate the networked economy across a triad of dimensions:

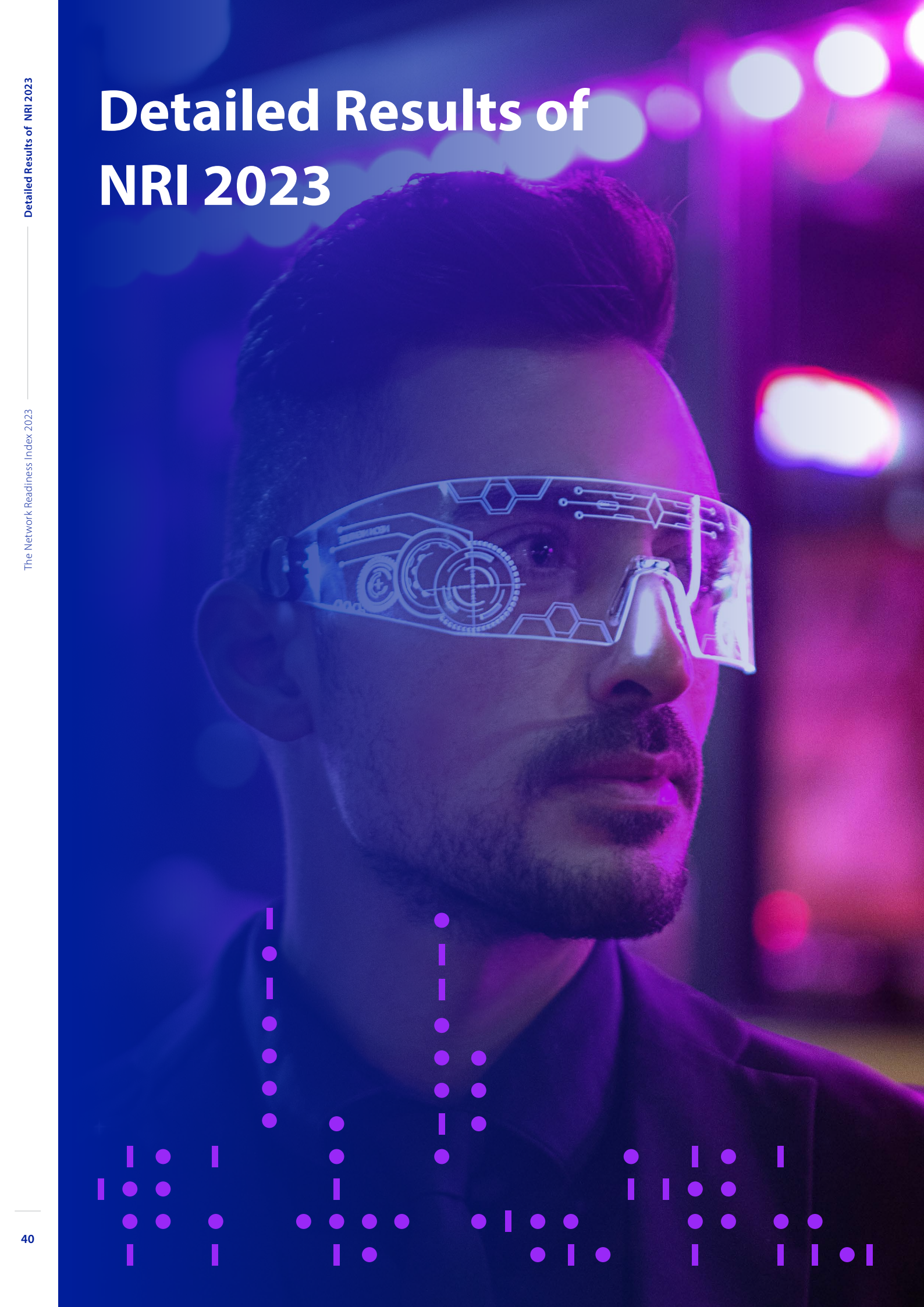
- **Trust:** Assesses the security landscape for both individuals and corporations within the networked economy, highlighting a trust-conducive environment and its consequent behavior among citizens.
- **Regulation:** Surveys the government's role in fostering networked economy participation via regulatory measures, strategies, and foresight.
- **Inclusion:** Identifies digital disparities within nations, where governance can mitigate discrepancies stemming from gender, disabilities, and economic backgrounds.

Impact

A nation's readiness in the networked economy translates into holistic growth and societal enhancement. The Impact pillar endeavors to gauge the diverse ramifications of engagement in the networked economy across a trio of arenas:

- **Economy:** Delves into the economic repercussions of integration into the networked economy, incorporating aspects like the magnitude of the domestic market.
- **Quality of Life:** Chronicles the societal implications derived from participation in the networked economy.
- **SDG Contribution:** Analyzes the influence of networked economy engagement in the purview of the Sustainable Development Goals (SDGs). In this context, ICT emerges as pivotal, with specific indicators weaving through health, education, gender parity, and environmental concerns.

Detailed Results of NRI 2023



"The Network Readiness Index 2023 evaluates 134 economies based on a wide range of factors related to their readiness to harness the benefits of the digital revolution. In the latest rankings, the United States and Singapore have retained their top positions as Rank 1 and 2, respectively, from the previous year."

Overall rankings

The Network Readiness Index 2023 evaluates 134 economies based on a wide range of factors related to their readiness to harness the benefits of the digital revolution. In the latest rankings, the United States and Singapore have retained their top positions as Rank 1 and 2, respectively, from the previous year. A notable advancement is Finland, which has surged by 4 places to secure 3rd place from its 7th position last year. Following closely are the Netherlands and Sweden, now ranking 4th and 5th, respectively.

Completing the top 10 are Switzerland (6th, down from 5th in NRI 2022), Republic of Korea (7th, up from 9th), Denmark (8th, down from 6th), Germany (9th, down from 8th), and the United Kingdom (10th, up from 12th). China has ascended to the 20th position, marking the only upper-middle-income country in the top 20. Conversely, Norway has experienced a significant decline, now standing at 16th place, down from 10th in 2022.

The top 10 performers in NRI 2023 underscore that advanced economies in Europe, the Americas, Asia, and the Pacific are leading the way in terms of network readiness. Specifically, among the top 25 countries, 16 are from Europe (primarily Northern and Western Europe), five hail from Eastern and Southeastern Asia (including Singapore, the Republic of Korea, China, Hong Kong, and Japan), two come from Oceania (Australia and New Zealand), and two are from North America (Canada and the United States).

Overall, the NRI 2023 covers 134 economies, which is an increase from 131 in the previous year. This year's report includesMauritania, Nicaragua, The Bolivarian Republic of Venezuela, and Uzbekistan as new members, but drops Trinidad and Tobago. Among these 134 countries, 48 are considered high-income economies, 34 fall into the upper middle-income category, 40 belong to lower middle-income economies, and 12 are classified as low-income countries. Regionally, there are 31 African countries, 13 Arab States, 21 economies from Asia and the Pacific, seven from the Commonwealth of Independent States (CIS), 41 European countries, and 21 countries from the Americas. It's important to acknowledge that year-to-year comparisons of NRI rankings can be influenced by data availability and changes in the NRI model framework.

Note: Countries are grouped according to the World Bank Income Classifications (1 July 2023).

Table 1 NRI 2023 rankings

Rank	Economy	Score	Income	Region
1	United States of America	76.91	High income	The Americas
2	Singapore	76.81	High income	Asia & Pacific
3	Finland	76.19	High income	Europe
4	Netherlands	76.04	High income	Europe
5	Sweden	75.68	High income	Europe
6	Switzerland	74.76	High income	Europe
7	Republic of Korea	74.48	High income	Asia & Pacific
8	Denmark	74.06	High income	Europe
9	Germany	74.00	High income	Europe
10	United Kingdom	72.75	High income	Europe
11	Canada	71.99	High income	The Americas
12	Israel	71.82	High income	Europe
13	Japan	71.06	High income	Asia & Pacific
14	Australia	70.36	High income	Asia & Pacific
15	France	70.17	High income	Europe
16	Norway	69.70	High income	Europe
17	Austria	69.13	High income	Europe
18	Luxembourg	67.84	High income	Europe
19	Ireland	67.51	High income	Europe
20	China	67.31	Upper middle income	Asia & Pacific
21	Belgium	67.02	High income	Europe
22	Estonia	66.11	High income	Europe
23	New Zealand	65.96	High income	Asia & Pacific
24	Iceland	65.70	High income	Europe
25	Hong Kong, China	65.01	High income	Asia & Pacific
26	Spain	64.77	High income	Europe
27	Czechia	63.20	High income	Europe
28	Portugal	63.08	High income	Europe
29	Slovenia	62.57	High income	Europe
30	United Arab Emirates	62.43	High income	Arab States
31	Italy	62.20	High income	Europe
32	Malta	61.94	High income	Europe
33	Lithuania	60.41	High income	Europe
34	Poland	60.20	High income	Europe
35	Cyprus	58.43	High income	Europe
36	Hungary	58.21	High income	Europe
37	Latvia	57.77	High income	Europe
38	Russian Federation	57.27	Upper middle income	CIS
39	Slovakia	57.08	High income	Europe
40	Malaysia	56.72	Upper middle income	Asia & Pacific
41	Saudi Arabia	56.14	High income	Arab States
42	Thailand	55.73	Upper middle income	Asia & Pacific
43	Ukraine	55.16	Lower middle income	Europe
44	Brazil	54.67	Upper middle income	The Americas
45	Uruguay	54.50	High income	The Americas
46	Qatar	54.15	High income	Arab States
47	Turkiye	53.22	Upper middle income	Europe

Rank	Economy	Score	Income	Region
48	Chile	53.18	High income	The Americas
49	Greece	53.02	High income	Europe
50	Croatia	52.75	High income	Europe
51	Bahrain	52.48	High income	Arab States
52	Romania	52.41	High income	Europe
53	Bulgaria	52.18	Upper middle income	Europe
54	Oman	52.10	High income	Arab States
55	Serbia	51.68	Upper middle income	Europe
56	Viet Nam	51.19	Lower middle income	Asia & Pacific
57	Costa Rica	50.99	Upper middle income	The Americas
58	Kazakhstan	50.97	Upper middle income	CIS
59	Indonesia	50.26	Upper middle income	Asia & Pacific
60	India	49.93	Lower middle income	Asia & Pacific
61	Argentina	49.78	Upper middle income	The Americas
62	Mexico	49.59	Upper middle income	The Americas
63	Armenia	49.36	Upper middle income	CIS
64	Kuwait	48.36	High income	Arab States
65	Colombia	48.28	Upper middle income	The Americas
66	Montenegro	48.14	Upper middle income	Europe
67	Republic of Moldova	47.69	Upper middle income	Europe
68	Jordan	47.29	Lower middle income	Arab States
69	Philippines	47.24	Lower middle income	Asia & Pacific
70	Kenya	46.86	Lower middle income	Africa
71	North Macedonia	46.26	Upper middle income	Europe
72	Jamaica	46.11	Upper middle income	The Americas
73	Peru	45.89	Upper middle income	The Americas
74	South Africa	45.85	Upper middle income	Africa
75	Azerbaijan	45.57	Upper middle income	CIS
76	Mauritius	45.56	Upper middle income	Africa
77	Morocco	45.43	Lower middle income	Arab States
78	Georgia	45.25	Upper middle income	Europe
79	Albania	44.98	Upper middle income	Europe
80	Sri Lanka	44.14	Lower middle income	Asia & Pacific
81	Egypt	44.07	Lower middle income	Arab States
82	Uzbekistan	43.94	Lower middle income	CIS
83	Mongolia	43.52	Lower middle income	Asia & Pacific
84	Dominican Republic	43.49	Upper middle income	The Americas
85	Ecuador	43.05	Upper middle income	The Americas
86	Panama	43.03	High income	The Americas
87	Iran (Islamic Republic of)	42.83	Lower middle income	Asia & Pacific
88	Tunisia	42.25	Lower middle income	Arab States
89	Paraguay	41.91	Upper middle income	The Americas
90	Pakistan	41.26	Lower middle income	Asia & Pacific
91	Bangladesh	41.04	Lower middle income	Asia & Pacific
92	Bosnia and Herzegovina	40.06	Upper middle income	Europe
93	Venezuela (Bolivarian Republic of)	39.98	Upper middle income	The Americas
94	Kyrgyzstan	39.80	Lower middle income	CIS

Rank	Economy	Score	Income	Region
95	Cabo Verde	39.70	Lower middle income	Africa
96	Lebanon	39.70	Lower middle income	Arab States
97	Bolivia (Plurinational State of)	39.35	Lower middle income	The Americas
98	Ghana	38.83	Lower middle income	Africa
99	Rwanda	38.26	Low income	Africa
100	El Salvador	38.07	Upper middle income	The Americas
101	Cote d'Ivoire	37.89	Lower middle income	Africa
102	Senegal	37.66	Lower middle income	Africa
103	Algeria	37.52	Lower middle income	Arab States
104	United Republic of Tanzania	36.31	Lower middle income	Africa
105	Guatemala	35.84	Upper middle income	The Americas
106	Nigeria	35.73	Lower middle income	Africa
107	Honduras	35.70	Lower middle income	The Americas
108	Cambodia	35.64	Lower middle income	Asia & Pacific
109	Lao People's Democratic Republic	34.72	Lower middle income	Asia & Pacific
110	Botswana	34.38	Upper middle income	Africa
111	Benin	33.87	Lower middle income	Africa
112	Namibia	33.87	Upper middle income	Africa
113	Tajikistan	33.75	Lower middle income	CIS
114	Nepal	33.73	Lower middle income	Asia & Pacific
115	Nicaragua	33.32	Lower middle income	The Americas
116	Zambia	32.11	Lower middle income	Africa
117	Uganda	31.33	Low income	Africa
118	Cameroon	31.09	Lower middle income	Africa
119	Zimbabwe	30.05	Lower middle income	Africa
120	Gambia	29.76	Low income	Africa
121	Malawi	29.39	Low income	Africa
122	Guinea	28.77	Lower middle income	Africa
123	Mali	28.27	Low income	Africa
124	Madagascar	27.64	Low income	Africa
125	Eswatini	27.50	Lower middle income	Africa
126	Ethiopia	27.36	Low income	Africa
127	Angola	27.20	Lower middle income	Africa
128	Lesotho	26.74	Lower middle income	Africa
129	Burkina Faso	26.63	Low income	Africa
130	Mozambique	25.07	Low income	Africa
131	Mauritania	23.73	Lower middle income	Arab States
132	Democratic Republic of the Congo	21.09	Low income	Africa
133	Chad	20.82	Low income	Africa
134	Burundi	20.62	Low income	Africa

Note: CIS = Commonwealth of Independent States.
Source: Network Readiness Index Database, Portulans Institute, 2023.

Pillar-level performances

The top-performing economies in the NRI typically exhibit excellence across all facets of digital readiness, as reflected in the four pillars of the index: Technology, People, Governance, and Impact. This means, respectively, that they possess cutting-edge technological infrastructure, a highly skilled and adaptable workforce, efficient governance structures capable of managing digital transformations, and the ability to harness digital technologies for positive societal impact. In essence, these economies excel in every aspect necessary for thriving in the digital age. Notably, seven of the top 10 economies secure positions within the NRI's top 10 rankings in at least three pillars. Conversely, among the 10 economies with the lowest performance, five prominently feature in the lowest rankings for a minimum of three areas, while eight exhibit weakness in at least two areas.

This discovery underscores the importance of adopting a comprehensive approach to enhance digital readiness, a critical factor in achieving favorable NRI rankings. It also highlights the wide array of strategies that economies can employ to fortify their digital initiatives and formulate policies that accelerate digital progress. The sub-pillars of Access, Governance, Trust, and Inclusion are closely tied to the overall NRI ranking.

Technology: The United States stands as the top-ranking economy in the Technology pillar, solidifying its position with impressive performance in sub-pillars like high-quality digital Content (2nd) and stable investments in Future Technologies (1st). Switzerland (2nd) also showcases a commendable performance by excelling in the production of digital Content (3rd). Hong Kong, securing the 3rd position, makes a noteworthy entrance among the leading economies in this pillar, establishing itself as a global leader in Content (1st). Meanwhile, China, a standout performer in the upper middle-income economies category, maintains its leadership in Access to digital technologies (1st).

People: The Republic of Korea continues to maintain its top position in the People category (1st), which is underpinned by its remarkable levels of digital technology adoption among Individuals (1st), Businesses (1st), and Governments (1st). Israel, on the other hand, has made significant progress, advancing from 10th place in the previous year to 2nd place. This jump can be attributed to a substantial improvement in the Government sub-pillar (2nd, up from 21st), driven by increased expenditure in research and development by government and education (1st), and a robust digital technology adoption among Individuals (4th). Japan secures the 3rd spot, demonstrating strength in both Individuals (5th) and Government (4th). The United States, positioned at 4th place, ranks 3rd in having both digitally engaged Businesses and Governments. China has made remarkable strides this year, climbing to the 5th position, with notable strengths in Individuals (6th) and Business (6th). These shifts and standings underscore the varying strengths and accomplishments of these economies in digital technology adoption by people, businesses, and governments.

Governance: The Governance pillar remains dominated by Northern European countries, with four of the top 5 leaders from this region. Finland secures the top position (1st), followed by the Netherlands (2nd), Denmark (3rd), Norway (4th), and Sweden (5th). This European dominance within the Governance pillar underscores the region's outstanding performance in the sub-pillar areas ofTrust, Regulation, and Inclusion. Specifically, Finland claims the top spot in this pillar due to its robust digital security and Trust (6th), strong digital Regulations (2nd), and commitment to digital inclusion (6th). The Netherlands similarly exhibits notable strengths in Trust (3rd), Regulations (5th), and Inclusion (2nd). Denmark follows closely in the rankings, characterized by a high level of security and Trust (1st) in its digital capabilities. It retains its global leadership in the number of Secure Internet Servers (1st) and excels in Online Access to Financial Accounts (2nd) and the popularity of Online shopping (2nd). Norway maintains its strong performance in Trust (2nd) and Regulation (3rd) concerning digital technologies. Additionally, Singapore and Luxembourg continue to be global leaders in Inclusion (1st) and Regulation (1st), respectively.

Impact: Singapore leads the Impact pillar, securing the 1st position globally. It excels in various aspects, particularly in the Economy sub-pillar (1st) and demonstrates leadership in high-tech and medium-high-tech manufacturing (1st) and high-tech exports (1st). Following closely behind Singapore are Finland, Ireland, Sweden, and the Netherlands. Finland also claims the top spot in the Quality of Life sub-pillar. It ranks first in the Happiness of its citizens and exhibits a high degree of Freedom to make life choices (3rd). Ireland maintains its position as the global leader in SDG Contribution, demonstrating a robust performance in various Sustainable Development Goals (SDGs). Notably, it secures the top rank in SDG 5: Women's economic opportunity (1st), SDG 7: Affordable and Clean Energy (5th), and holds the 4th position in SDG 11: Sustainable Cities and Communities. This consistent commitment to sustainability and achievement in multiple SDGs reinforces Ireland's pivotal role in promoting women's economic empowerment, clean energy access, and sustainable urban development on a global scale. These accomplishments underscore these countries' significant contributions to global sustainability, economic impact, and overall quality of life.

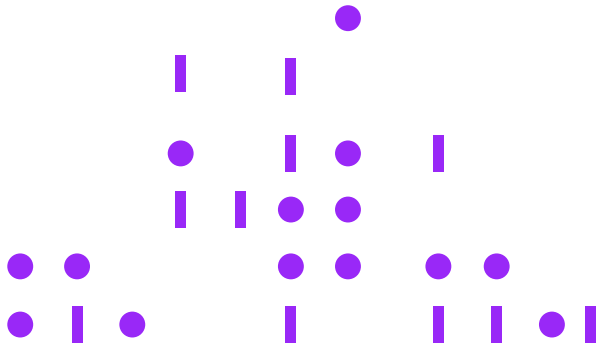


Table 2: Rankings by pillar

Economy	NRI ranking	Technology	People	Governance	Impact
United States of America	1	1	4	7	23
Singapore	2	5	6	10	1
Finland	3	10	7	1	2
Netherlands	4	4	15	2	5
Sweden	5	9	9	5	4
Switzerland	6	2	14	13	6
Republic of Korea	7	17	1	18	11
Denmark	8	11	11	3	8
Germany	9	6	8	14	10
United Kingdom	10	8	10	16	9
Canada	11	7	17	9	15
Israel	12	19	2	27	7
Japan	13	15	3	24	14
Australia	14	18	13	8	19
France	15	12	12	21	12
Norway	16	14	24	4	16
Austria	17	16	16	15	18
Luxembourg	18	13	33	12	17
Ireland	19	23	30	25	3
China	20	20	5	35	21
Belgium	21	21	20	23	13
Estonia	22	31	22	6	25
New Zealand	23	27	23	11	24
Iceland	24	24	27	17	22
Hong Kong, China	25	3	35	38	34
Spain	26	25	21	26	27
Czechia	27	28	40	22	20
Portugal	28	26	32	29	29
Slovenia	29	32	29	30	26
United Arab Emirates	30	22	18	47	31
Italy	31	29	28	32	30
Malta	32	33	26	33	28
Lithuania	33	35	36	19	44
Poland	34	39	37	31	33
Cyprus	35	46	39	34	32
Hungary	36	30	42	37	37
Latvia	37	51	54	20	39
Russian Federation	38	40	19	49	57
Slovakia	39	42	74	28	35
Malaysia	40	38	48	39	41
Saudi Arabia	41	36	31	50	62
Thailand	42	50	34	46	45
Ukraine	43	43	25	58	54
Brazil	44	45	41	42	72
Uruguay	45	44	50	55	38
Qatar	46	34	68	40	63
Turkiye	47	48	38	51	80
Chile	48	60	52	43	52

Economy	NRI ranking	Technology	People	Governance	Impact
Greece	49	64	47	41	60
Croatia	50	74	57	36	59
Bahrain	51	54	62	53	47
Romania	52	57	66	52	42
Bulgaria	53	58	55	45	71
Oman	54	63	53	44	67
Serbia	55	83	58	48	46
Viet Nam	56	55	56	74	36
Costa Rica	57	52	81	57	40
Kazakhstan	58	79	49	54	55
Indonesia	59	37	73	64	75
India	60	41	51	83	56
Argentina	61	71	64	59	53
Mexico	62	70	63	68	43
Armenia	63	53	61	77	51
Kuwait	64	56	71	72	65
Colombia	65	66	60	70	73
Montenegro	66	47	76	69	81
Republic of Moldova	67	75	80	63	61
Jordan	68	68	44	67	99
Philippines	69	84	59	85	48
Kenya	70	65	69	61	96
North Macedonia	71	89	84	62	58
Jamaica	72	85	85	71	50
Peru	73	92	45	80	77
South Africa	74	59	77	60	105
Azerbaijan	75	62	72	88	84
Mauritius	76	80	106	56	66
Morocco	77	72	75	81	83
Georgia	78	81	70	66	98
Albania	79	94	43	86	86
Sri Lanka	80	61	86	97	79
Egypt	81	69	93	82	78
Uzbekistan	82	67	88	98	76
Mongolia	83	86	92	65	89
Dominican Republic	84	95	65	75	97
Ecuador	85	87	87	96	68
Panama	86	77	94	89	85
Iran (Islamic Republic of)	87	73	78	78	108
Tunisia	88	76	79	87	106
Paraguay	89	114	82	84	70
Pakistan	90	49	89	117	93
Bangladesh	91	78	90	100	101
Bosnia and Herzegovina	92	104	97	73	95
Venezuela (Bolivarian Republic of)	93	96	100	104	64
Kyrgyzstan	94	111	101	95	69
Cabo Verde	95	116	83	91	91
Lebanon	96	82	46	116	120

Economy	NRI ranking	Technology	People	Governance	Impact
Bolivia (Plurinational State of)	97	105	67	120	82
Ghana	98	102	95	76	109
Rwanda	99	101	107	79	104
El Salvador	100	108	105	111	49
Cote d'Ivoire	101	100	102	94	103
Senegal	102	91	116	93	102
Algeria	103	97	91	106	107
United Republic of Tanzania	104	93	112	101	110
Guatemala	105	113	111	108	88
Nigeria	106	88	96	114	116
Honduras	107	109	114	107	92
Cambodia	108	98	104	122	94
Lao People's Democratic Republic	109	99	98	130	87
Botswana	110	115	108	92	124
Benin	111	121	113	90	117
Namibia	112	90	115	115	115
Tajikistan	113	107	119	123	90
Nepal	114	112	122	110	100
Nicaragua	115	129	103	125	74
Zambia	116	124	99	105	125
Uganda	117	110	131	99	119
Cameroon	118	119	109	119	118
Zimbabwe	119	118	110	109	131
Gambia	120	120	130	102	121
Malawi	121	131	121	112	114
Guinea	122	122	118	128	113
Mali	123	125	126	118	112
Madagascar	124	128	124	113	126
Eswatini	125	103	117	126	134
Ethiopia	126	106	127	132	111
Angola	127	123	120	127	127
Lesotho	128	126	129	103	132
Burkina Faso	129	134	123	121	122
Mozambique	130	127	132	124	129
Mauritania	131	117	134	131	123
Democratic Republic of the Congo	132	132	125	133	133
Chad	133	133	133	129	130
Burundi	134	130	128	134	128

Source: Network Readiness Index Database, Portulans Institute, 2023.

Top 10 NRI performers

The United States retains its top position in the NRI for the second consecutive year, closely followed by Singapore. Finland moves up to 3rd place replacing Sweden which is now 5th. The United Kingdom enters the top 10 replacing Norway which is now at 16th.

It is noteworthy that the top 10 performers are all high-income economies and do well across most of the pillar dimensions comprising the NRI. Each of the top 10 countries achieves top 25 rankings across all four primary pillars (Technology, People, Governance, Impact). As for regional distribution, Singapore and Korea remain the only top 10 countries located in Asia and the Pacific, and the United States is the only economy located in the Americas. The rest of the top 10 rankings consist of European countries.

A closer examination of the top ten performers provides valuable insights into the comparative strengths of each country's network readiness. What distinguishes these highest-ranked economies is their consistent excellence across a wide range of network readiness dimensions and their remarkable dedication to making technology tangible, accessible, and advantageous for both their economies and societies. These nations are actively engaged in enhancing their digital ecosystems, infrastructure, and policy frameworks to maximize the benefits of technology for economic growth and societal advancement. This collective commitment underscores the worldwide significance of digitalization and its far-reaching impact on various facets of contemporary life.

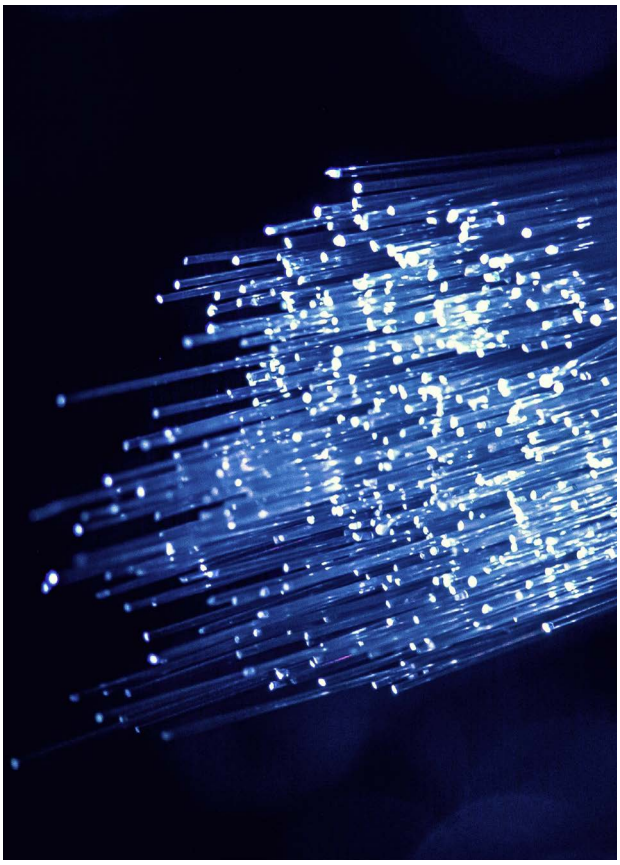


Photo by Denny Müller on Unsplash

These nations are actively engaged in enhancing their digital ecosystems, infrastructure, and policy frameworks to maximize the benefits of technology for economic growth and societal advancement. This collective commitment underscores the worldwide significance of digitalization and its far-reaching impact on various facets of contemporary life.

Photo by Derick Anies on Unsplash.

The United States stands as a global leader in computer software spending (1st) and investments in emerging technologies (1st) and annual investment in telecommunication services (1st), cementing its position as the foremost leader in future technologies (1st) and digital content (2nd).

1

The United States continues to demonstrate its leadership as the most network-ready country by leading the NRI for the second consecutive year. Additionally, it continues its longstanding dominance in Technology (1st). The United States stands as a global leader in computer software spending (1st) and investments in emerging technologies (1st) and annual investment in telecommunication services (1st), cementing its position as the foremost leader in future technologies (1st) and digital content (2nd). The United States exhibits remarkable resilience in the people category, securing the 4th position. Its consistent presence in the Top 5 is a testament to its strong performance in the digital ready businesses (3rd) and governments (3rd) sectors. For the third consecutive year, the United States holds the 7th position in digital governance, while in the Impact pillar, it stands at the 23rd position. There lies the possibility for further enhancement in areas like quality of life (66th), including factors such as the freedom to make life choices, reducing income inequality, and increasing healthy life expectancy at birth.

2

Singapore maintains its 2nd-place ranking in NRI 2023, demonstrating excellence in creating an Impact (1st) through digital technologies, benefiting both the economy (1st) and society. This achievement is further accentuated by its leadership in high-tech and medium-high-tech manufacturing (1st) as well as high-tech exports (1st). Singapore's high performance across various dimensions of digital readiness reflects its comprehensive technological development in Technology (5th) and its increasing adoption by its People (6th), coupled with strong Governance (10th). Further, the country's top ranking in digital inclusion (1st) highlights its well-rounded digital ecosystem. To further enhance Singapore's digital landscape and foster economic growth, addressing income inequality (116th), narrowing the gender gap in Internet use (56th), and strengthening privacy protection through law content (93rd) are key areas of opportunity which could contribute to the nation's continued digital advancement.

3

Finland has made an impressive leap, climbing 4 places to secure the 3rd position in NRI 2023, rejoining the Top 5. The country has firmly established itself as a leader in Governance (1st), reinforced by its strong digital Regulations (2nd). Continuously demonstrating its prowess, Finland excels in creating Impact (2nd) through its digital capabilities, resulting in a top-ranking quality of life (1st) and an exceptional degree of happiness (1st). Finland's leadership extends across various domains, boasting extensive Internet access in schools, a high level of ICT skills within its education system, holding the highest numbers of firms with websites and leading in ICT services exports. All of these achievements underscore its robust digital capabilities. However, there is an opportunity for further improvement by ensuring greater public access to technological services, reflected in lower levels of FTTH/building Internet subscriptions (59th) and international Internet bandwidth (86th). Such measures could further increase access to digital technology within the country.

4

The Netherlands secures an impressive 4th position in the NRI 2023, reaffirming its strong digital standing. Notably, the country excels in the domain of digital Governance (2nd) and has a strong digital Technology (4th) ecosystem, while also creating Impact (5th) through its network capabilities. Its dedication to digital Inclusion (2nd) stands out highlighting the country's efforts to bridge digital divides and ensure that a broad spectrum of its population has access to and can benefit from digital technologies, promoting equality and inclusivity. In matters of digital security and trust, The Netherlands ranks 3rd, indicating a high level of confidence in its digital systems and robust cybersecurity measures, fostering a safe and trustworthy digital environment. This achievement underscores its' commitment to creating an environment conducive to digital innovation, supported by clear regulations and policies that foster responsible technology use. Furthermore, The Netherlands distinguishes itself as a global leader in the adoption of emerging technologies, ranking 1st in this category. In the realm of digital content, The Netherlands performs admirably, ranking 4th overall. The nation boasts the highest number of Internet domain registrations (1st) and provides excellent Internet access in schools (1st), reflecting a thriving digital presence and accessibility to online resources and information. There exists potential for growth in encouraging Individual (57th) usage of digital technologies suggesting an opportunity to enhance digital literacy, promote the adoption of digital tools in daily life, and ensure that the benefits of digitalization are widely distributed among citizens.

Photo by Sincerely Media on Unsplash

Photo by Raychan on Unsplash

The Republic of Korea attains the 7th position, distinguishing itself as the second Asian nation to secure a spot within the Top 10 performers.

5

Sweden sums up the Top 5 performing economies in the NRI 2023, showcasing exceptional strength in Future Technologies (3rd) which is a testament to its digital Technology (9th) capabilities. Notably, Sweden boasts a high degree of technological adoption within both its Businesses (2nd) and Governments (9th). In the Governance dimension (5th), the country excels particularly in digital security and Trust (5th), and it maintains a strong regulatory environment (6th). Sweden's greatest asset lies in its ability to create Impact (4th) through its digital capabilities, contributing consistently to the Economy (7th), elevating the quality of life (4th), and actively focusing on SDG Contributions (4th). However, despite Sweden's extensive coverage of its population with at least a 3G mobile network (1st), areas of opportunity exist in terms of Access (35th) to digital technologies, including competitive handset prices, expanding fiber-to-the-Home (FTTH) and building Internet subscriptions, bolstering international Internet bandwidth, and enhancing Internet access in schools could help address this challenge. Additionally, there's potential for Sweden to encourage greater individual (57th) usage of digital technologies, further enhancing its well-rounded performance across all facets of network readiness.

6

Switzerland secures the 6th position in the NRI 2023, closely trailing the United States in digital Technology (2nd) capabilities. This achievement is underpinned by widespread Access (6th) to digital resources within the country, competitive digital content (3rd) offerings, and notable strength in future technologies (5th). Switzerland consistently demonstrates its ability to create an Impact through its digital capabilities, maintaining the 6th position. Furthermore, Switzerland has solidified its position as a trailblazer in several aspects of network readiness. It boasts the most competitive mobile tariffs, ensures that the maximum population is covered by at least a 3G mobile network, actively promotes internet access in schools, showcases a strong presence in GitHub commits, and has successfully reduced the socioeconomic gap in the utilization of digital payments. There are possibilities for further enhancement in certain areas, including fostering Internet shopping (38th), bolstering cybersecurity (50th) measures, and promoting digital adoption among Individuals (26th) by increasing active mobile broadband subscriptions (41st) and government (20th) entities by enhancing government online services (49th). These are tools which could contribute significantly to Switzerland's network readiness and digital capabilities.

7

The Republic of Korea attains the 7th position, distinguishing itself as the second Asian nation to secure a spot within the Top 10 performers. The Republic of Korea shines particularly in the People pillar, where it stands as the global frontrunner. Notably, the Republic of Korea's digital prowess is exemplified by its 1st place rankings across all components of digital technology adoption by its individuals, businesses, and government. This remarkable achievement underscores the Republic of Korea's holistic and multifaceted approach to digitalization. It signifies active participation and commitment from individuals, businesses, and government entities in harnessing digital technologies to propel economic growth and advance societal well-being. The country's impressive statistics include the highest density of robots, a notable concentration of AI talent, and substantial gross expenditure on research and development (GERD) performed by business enterprises on a global scale. Amidst its successes, there are areas of opportunity which include addressing challenges related to high mobile tariffs (71st), improving the ICT regulatory environment (105th), promoting freedom in life choices (100th), and advancing access to affordable and clean energy (101st). Targeted efforts towards these areas can further enhance the Republic of Korea's digital readiness and contribute to its overall progress in the digital landscape.

8

Denmark secures the 8th position in the NRI rankings for the current year. This marks Denmark as the third Northern European nation to prominently feature in the Top 10, reaffirming the region's continued dominance in the realm of digital readiness and technology adoption. Denmark's digital Governance prowess remains a standout, with the country securing the 3rd position in this category. This governance excellence is further underscored by Denmark's exceptional digital security and trust, where it claims the 1st rank. Denmark's unrivaled confidence and security within the digital landscape can be attributed to its distinction as the global leader in secure Internet servers (1st). Denmark's leadership extends into the area of Impact (8th). The nation ranks 3rd in both quality of life and SDG Contributions. Denmark's happiness score (3rd) is noteworthy and it emerges as the world leader in promoting Women's economic opportunity. Denmark has potential to further enhance its Technological (11th) capabilities by strengthening FTTH and building Internet subscriptions (66th) and enhancing international Internet bandwidth (80th) and improve access (17th) to digital technologies, elevating Denmark's position to even greater heights in the digital readiness landscape.

9

Germany maintains its position as a global leader, securing the 9th rank in the NRI, showcasing a robust performance across various NRI pillars. Technology (6th) remains Germany's strongest area of network readiness. The country continues to exhibit significant strength in future technologies (4th) and the quality of digital content (7th). Businesses (5th) and governments (12th) in Germany actively engage in the digital landscape, but there's room for increased Individual participation (22nd). Opportunities for improvement exist in several key areas, including mobile app development (49th), exports of ICT services (56th), and reducing the gender gap in Internet use (63rd). Notably, Germany has made substantial progress in enhancing government online services (44th, up from 58th in 2022) and has implemented structures for ICT skills development within its education system (38th, up from 64th in 2022). These achievements underscore Germany's commitment to continued growth and innovation in the digital arena.

10

The United Kingdom makes a noteworthy return to the Top 10, securing the 10th position in the NRI 2023 rankings. Its strength in Technology (8th) and its ability to create Impact (9th) in the digital landscape contribute significantly to this achievement. In the Technology category, the United Kingdom demonstrates notable prowess in various areas, including computer software spending (2nd), international Internet bandwidth (7th), and AI scientific publications (7th). The country also excels in SDG Contributions (2nd), emphasizing its commitment to sustainable development goals. The UK's digital ecosystem comprises several key factors that bolster its competitive edge. These include its leadership in Digital Publication and the utilization of open data (1st), robust E-commerce legislation (1st), strong Cybersecurity practices (2nd), a high standard of good health and well-being within its society (2nd), and a prevalent and resilient gig economy (4th). There are opportunities for further enhancement in areas of Robot density (24th), concentrating AI talent (26th), strengthening fiber-to-the-home (FTTH) and building Internet subscriptions (45th), and improving privacy protection through legal content (85th). These opportunities are tools to further solidify the United Kingdom's position as a global digital leader and foster continued growth and innovation in the digital sphere.

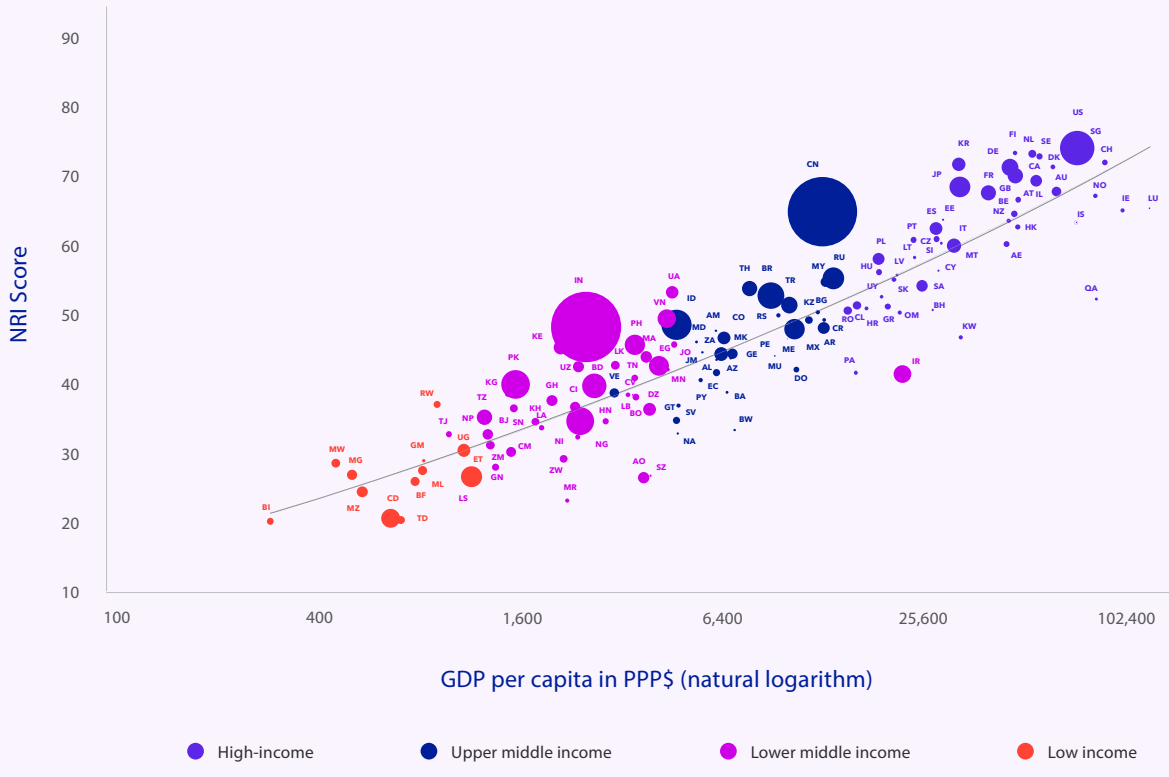
NRI Performances by Income Group

More developed economies typically exhibit greater levels of digital readiness. This trend is evident in Figure 1, which plots the relationship between NRI scores and GDP per capita. While wealthier nations generally align with higher technological preparedness, the graph reveals intriguing exceptions. Many low- and middle-income economies surpass expectations in terms of network readiness.

China has made notable strides this year, securing the 20th position in the global rankings. Other upper middle-income countries like Thailand (42nd), Brazil (44th), and Indonesia (59th) also join this outperforming cluster. An outstanding example is Ukraine, achieving the 43rd position, although it's important to note that data might be lagging for this particular case. In the lower middle-income category, India (60th), Vietnam (56th), and the Philippines (69th) showcase commendable digital adaptability. Within the low-income bracket, Rwanda (99th) and Malawi (121st) stand out, highlighting that even economies with limited financial resources can achieve significant digital readiness.

It's particularly noteworthy that many of the economies exceeding digital readiness expectations predominantly hail from the lower middle-income group. Geographically, these overperformers are concentrated in the Asia & Pacific and Africa regions, underscoring the rapid technological advancements and digital adoption occurring in these parts of the world.

Figure 1 NRI scores and GDP per capita in PPP$ NRI 2023 (bubble size: population)



Notes:

1. GDP per capita is in PPP$ (natural logarithms). Both GDP per capita and population data (represented by the size of the bubbles) are for 2022 or the latest year available. The data are drawn from the World Bank's World Development Indicators database. The general trend line is a polynomial of degree two (R2 = 0.8375).

2. Countries are grouped according to the World Bank Income Classifications (1 July 2022) with the exception of Venezuela (1 July 2020).

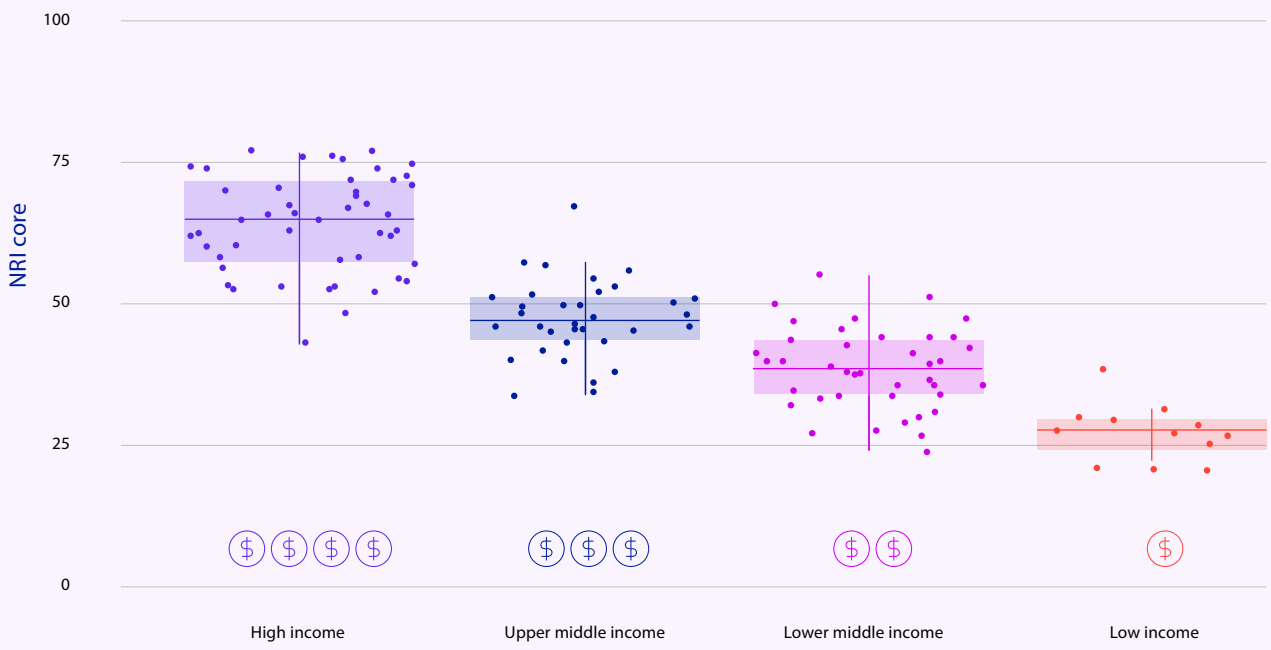
Country/Economy codes for the chart

Code	Economy
AL	Albania
DZ	Algeria
AO	Angola
AR	Argentina
AM	Armenia
AU	Australia
AT	Austria
AZ	Azerbaijan
BH	Bahrain
BD	Bangladesh
BE	Belgium
BJ	Benin
BO	Bolivia (Plurinational State of)
BA	Bosnia and Herzegovina
BW	Botswana
BR	Brazil
BG	Bulgaria
BF	Burkina Faso
BI	Burundi
CV	Cabo Verde
KH	Cambodia
CM	Cameroon
CA	Canada
TD	Chad
CL	Chile
CN	China
CO	Colombia
CR	Costa Rica
CI	Cote d'Ivoire
HR	Croatia
CY	Cyprus
CZ	Czechia
CD	Democratic Republic of the Congo
DK	Denmark
DO	Dominican Republic
EC	Ecuador
EG	Egypt
SV	El Salvador
EE	Estonia
SZ	Eswatini
ET	Ethiopia
FI	Finland
FR	France
GM	Gambia
GE	Georgia
DE	Germany
GH	Ghana
GR	Greece
GT	Guatemala
GN	Guinea
HN	Honduras
HK	Hong Kong, China
HU	Hungary
IS	Iceland
IN	India
ID	Indonesia
IR	Iran (Islamic Republic of)
IE	Ireland
IL	Israel
IT	Italy
JM	Jamaica
JP	Japan
JO	Jordan
KZ	Kazakhstan
KE	Kenya
KW	Kuwait
KG	Kyrgyzstan
LA	Lao People's Democratic Republic
LV	Latvia
LB	Lebanon
LS	Lesotho
LT	Lithuania
LU	Luxembourg
MG	Madagascar
MW	Malawi
MY	Malaysia
ML	Mali
MT	Malta
MR	Mauritania
MU	Mauritius
MX	Mexico
MN	Mongolia
ME	Montenegro
MA	Morocco
MZ	Mozambique
NA	Namibia
NP	Nepal
NL	Netherlands
NZ	New Zealand
NI	Nicaragua
NG	Nigeria
MK	North Macedonia
NO	Norway
OM	Oman
PK	Pakistan
PA	Panama
PY	Paraguay
PE	Peru
PH	Philippines
PL	Poland
PT	Portugal
QA	Qatar
KR	Republic of Korea
MD	Republic of Moldova
RO	Romania
RU	Russian Federation
RW	Rwanda
SA	Saudi Arabia
SN	Senegal
RS	Serbia
SG	Singapore
SK	Slovakia
SI	Slovenia
ZA	South Africa
ES	Spain
LK	Sri Lanka
SE	Sweden
CH	Switzerland
TJ	Tajikistan
TH	Thailand
TN	Tunisia
TR	Turkiye
UG	Uganda
UA	Ukraine
AE	United Arab Emirates
GB	United Kingdom
TZ	United Republic of Tanzania
US	United States of America
UY	Uruguay
UZ	Uzbekistan
VE	Venezuela (Bolivarian Republic of)
VN	Viet Nam
ZM	Zambia
ZW	Zimbabwe

Figure 2 further illustrates the existing gap in NRI scores between high-income economies and the other income groups, with noticeable distinctions among upper middle-income, lower middle-income, and low-income groups. In NRI 2023, high-income economies at the 25th percentile achieve a score of 57.59, surpassing the 50.98 score of upper middle-income economies at the 75th percentile. Similarly, lower middle-income economies at the 25th percentile record a score of 33.74, above the 29.47 score of low-income economies at the 75th percentile. Notably, as we move within the middle-income category, the gap between upper middle-income and lower middle-income economies narrows, as upper middle-income economies at the 25th percentile attain a score of 43.86, just slightly above the 43.62 score of lower middle-income economies at the 75th percentile. This indicates a convergence in their digital readiness and capabilities over time.

The network readiness capabilities of a nation have shown a strong historical correlation with the country's income level. Typically, high-income nations consistently dominate the top positions in NRI. Table 3 outlines the top-performing economies within various income groups. Among high-income economies, the United States (1st), Singapore (2nd), and Finland (3rd) lead the way. In the upper-middle-income category, China (20th) retains its top position, with Russia (38th) now in second place, moving Malaysia (40th) to third place. Ukraine (43rd) continues to lead the lower-middle-income economies, followed by Viet Nam (56th), while India (60th) maintains its third position. For low-income economies, Rwanda (99th), Uganda (117th), and Gambia (120th) earn top performance scores. These variations in performance across different pillars offer valuable insights into the relationship between network readiness and income levels.

Figure 2 Box plot by income group



Notes:

1. Countries are grouped according to the World Bank country classifications by income level (July 2022). GDP per capita and population data (represented by the size of the bubbles) are for 2021 or the latest year available. This data is respectively drawn from the International Monetary Fund's World Economic Outlook (October 2021) and from the 2022 Revision of World Population Prospects prepared by the Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat.

2. The general trend line is a polynomial of degree two (R2 = 0.8376).

Table 3 Top 3 countries by income group

High-income economies	Upper middle-income economies	Lower middle-income economies	Low-income economies
1. United States of America (1)	1. China (20)	1. Ukraine (43)	1. Rwanda (99)
2. Singapore (2)	2. Russian Federation (38)	2. Viet Nam (56)	2. Uganda (117)
3. Finland (3)	3. Malaysia (40)	3. India (60)	3. Gambia (120)

Note: Global ranks in parentheses.
Source: Network Readiness Index Database, Portulans Institute, 2023.

Within the upper middle-income group of countries, China (20th), Russia (38th) and Malaysia (40th) lead the NRI 2023.

China stands out as the only economy not classified as high-income to secure a place in the top quartile, ranking among the Top 20 overall in the NRI 2023. This achievement underscores its remarkable strength and ability to outperform both high-income and upper-middle-income nations in various aspects. China's digital excellence is particularly evident in the People (5th) category, indicating widespread adoption of digitization within its society. Additionally, it leads globally in digital Access (1st) to technology, with extensive internet coverage across buildings and society. Noteworthy achievements also include its supremacy in AI scientific publications, government support for investment in emerging technologies, robust e-commerce legislation, high mobile broadband internet traffic, a strong domestic market, a thriving gig economy, and a commitment to quality education. However, there exist areas where opportunities for improvement with respect to GitHub commits (106th), the ICT regulatory environment (120th), and Privacy protection by law content (123rd) including building Sustainable cities and communities (120th) and increase the use of Affordable and clean energy (109th).

The Russian Federation's notable strengths lie in the People dimension (19th), where it excels in the Individuals sub-pillar, securing the 3rd position. This achievement is underpinned by high adult literacy rates (10th) and robust tertiary enrollment (16th). The widespread adoption and use of mobile broadband internet (3rd) also contribute to this strong performance. However, much potential remains in the Impact (57th) dimension, which could further bolster its digital readiness, as well as the lack of progress towards improving the Quality of Life (70th), as well as SDG goals (77th). For example, SDG 5: Women's economic opportunity (107th) and SDG 7: Affordable and Clean Energy (125th) could both be key tools to enhance its overall digital impact.

Malaysia's performance in network readiness is characterized by a well-rounded approach across all aspects of network readiness: Technology (38th), People (48th), Governance (39th) and Impact (41st). Notably, Malaysia has effectively leveraged its robust digital ecosystem to make a significant impact on the Economy (15th). This achievement includes leadership in high-tech exports (4th) and a strong presence of a gig economy (6th).Relative to its peers in the same income group, Malaysia stands out with high rankings in areas such as E-commerce legislation (1st), Cybersecurity (8th), mobile broadband internet traffic within the country (9th), and government support for investment in emerging technologies (11th). However, opportunities for improvement exist in the areas of Businesses' adoption of digital solutions (62nd), Quality of Life (60th), and contributions toward SDG Goals (89th). All such categories could further enhance Malaysia's overall network readiness and digital impact.

The group of lower middle-income economies is led by Ukraine (43rd), Viet Nam (56th), and India (60th).

Ukraine's network readiness profile showcases significant strengths. This is evidenced by its rank in the People category, where it continues to make notable progress, now ranking 25th. This high performance reveals that Ukraine excels in the adoption of digital technologies by Individuals (2nd), high rates of adult literacy (1st), the integration of ICT skills into the education system (16th), and strong tertiary education enrollment (21st). Ukraine also leads the way in areas such as Internet access in schools (1st), low Income inequality (3rd), and substantial computer software spending (4th). Additionally, Ukraine demonstrates digital prowess in various other areas, including ICT services exports (6th), FTTH/building Internet subscriptions (11th), and mobile app development (14th). There lies potential in the dimensions related to Governance (58th) and the Impact of digital technologies (54th). Strength in these aspects could pave the way for further enhancements in its digital capabilities and overall network readiness.

Vietnam's noteworthy achievement lies in its ability to generate a Significant Impact (36th) through its robust digital capabilities, which sets it apart from its peer group. Its primary strength is its capacity to leverage digital capabilities to create impact in its Economy (27th), particularly through high-tech exports (5th). Additionally, Vietnam excels in affording its citizens the Freedom to make life choices (1st), contributing to a high Quality of Life (36th) within its borders. While Vietnam maintains relatively strong performance in the

Technology (55th) and People (56th) dimensions compared to its peers, there is room for improvement in digital Governance (74th), including digital Regulation (94th) and digital Inclusion (92nd). These are tools to bolster its overall digital and network capabilities.

India's network readiness profile showcases notable strengths, primarily in its Technological (41st) capabilities. It exhibits prowess in Digital Content creation (29th) and stands out with exceptional performance in scientific publications in AI (2nd), widespread Internet Subscriptions (2nd), and International Internet bandwidth (2nd). India also excels in AI talent Concentration (1st) and ICT services exports (1st). Additionally, its substantial annual investment in Telecommunication Services (3rd) results in a high level of mobile broadband Internet traffic (2nd) and a large domestic market size (3rd). Opportunities for improvement remain in the Governance dimension (83rd), with Gender gap in Internet use (104th), and its ranking in access to online financial accounts (119th) is relatively low . Improvements in these areas would contribute towards further strengthening India's overall network readiness and digital capabilities.

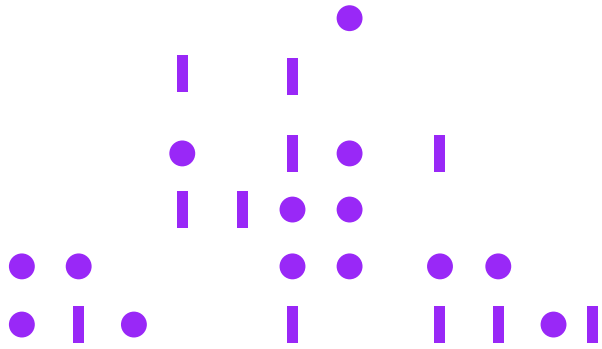
The group of low-income economies is led by Rwanda (99th), Uganda (117th), and Gambia (120th).

Rwanda demonstrates relative strengths in digital technology Governance (79th), particularly excelling in Regulatory aspects (60th), including a robust ICT regulatory environment (45th), strong regulations for emerging technologies (57th), and competitive e-commerce legislation. Additionally, the country benefits from government promotion of investments in emerging technologies (32nd) and offers its citizens the Freedom to make life choices (39th). Rwanda has opportunities in the area of patent applications (99th), virtual social network use (128th) for businesses, and boosting internet shopping (128th). These areas can further bolster its digital capabilities and leverage digital transformation for economic development.

Uganda, much like Rwanda, excels in the Governance dimension (99th) of digital technologies, notably standing out in cultivating Trust (85th) in the process of digitization, primarily through robust digital Regulation (92nd). It surpasses its peer group in critical areas such as Cybersecurity (79th), increased online access to financial accounts (63rd), and maintaining a strong ICT regulatory environment (58th). In the Technology dimension (110th), Uganda's strengths include robust international internet bandwidth (34th), noteworthy production of AI scientific publications (62nd), and substantial investments in emerging technologies (78th). Nevertheless, there remain areas with potential, including the scope to enhance tertiary enrollment (126th), promote the use of virtual social networks (132nd), and Affordable and Clean Energy (130th). Overall, Uganda's digital landscape shows promise and the potential for further growth and development through strategic efforts and investments in these key areas.

Gambia presents a well-balanced performance across all pillars of network readiness, including Technology (120th), People (130th), Governance (102nd), and Impact (121st). Notably, it excels in the area of Regulatory strength (50th) and stands out in the top quartile for Privacy protection by law content, securing an impressive 18th position. Gambia's strong focus on Future Technologies (57th) and its continued investment in emerging technologies (77th) indicate a commitment to staying at the forefront of digital advancements. Furthermore, Gambia's dedication to SDG contribution (109th) is evident through its significant contribution to SDG 7: Affordable and Clean Energy, where it secures a notable 31st position. However, there are some areas where Gambia could benefit from improvement, such as enhancing digital Access (127th) and digital Content creation (132nd). These improvements can empower businesses, individuals, and the government to harness the full potential of digital technologies, thereby driving innovation and economic progress.

China stands out as the only economy not classified as high-income to secure a place in the top quartile, ranking among the Top 20 overall in the NRI 2023. This achievement underscores its remarkable strength and ability to outperform both high-income and upper-middle-income nations in various aspects.



NRI Performances by Region

Figure 3 offers a comprehensive overview of NRI statistics across six distinct regions: Africa, the Arab States, Asia and the Pacific, the Commonwealth of Independent States (CIS), Europe, and the Americas. Within each region, a striking correlation emerges between regional performance and the prevalence of income groups.

Europe notably stands out as a region with a robust leadership position in NRI 2023, boasting an impressive median score of 62.19. This dominance is further underscored by the fact that over three-quarters of the countries in Europe (76 percent) are classified as high-income economies. In stark contrast, the African region records the lowest scores, with a median score of 31.08. Africa is notably characterized by the highest concentration of lower-middle-income and low-income economies.

Asia and the Pacific (with a median score of 50.25), as well as the Americas (with a median score of 45.88), each consist of 21 countries with a substantial representation of both upper and lower-middle-income nations, in addition to a strong presence of high-income countries. These regions also display the highest variability in performance, as evidenced by the standard deviation of NRI scores. Conversely, the CIS, composed of a total of 7 countries, showcases the smallest variation in scores among its member nations.

It's important to highlight that Africa (31 countries) and Europe (41 countries) each exhibit less variation in NRI scores, as compared to Asia and the Pacific or the Americas. This difference can primarily be attributed to the high concentration of lower-middle-income or low-income groups in Africa and a significant presence of high-income nations in Europe. These insights emphasize the varying degrees of income group representation and performance dispersion across regions and their significant impact on regional digital readiness and capabilities.

Figure 3 Box plot by region

Note: The whiskers indicate minimum and maximum values, while the extremes of a box indicate the 25th and 75th percentiles. The line within a box represents the median (i.e. 50th percentile)

Source: Network Readiness Index Database, Portulans Institute, 2023.

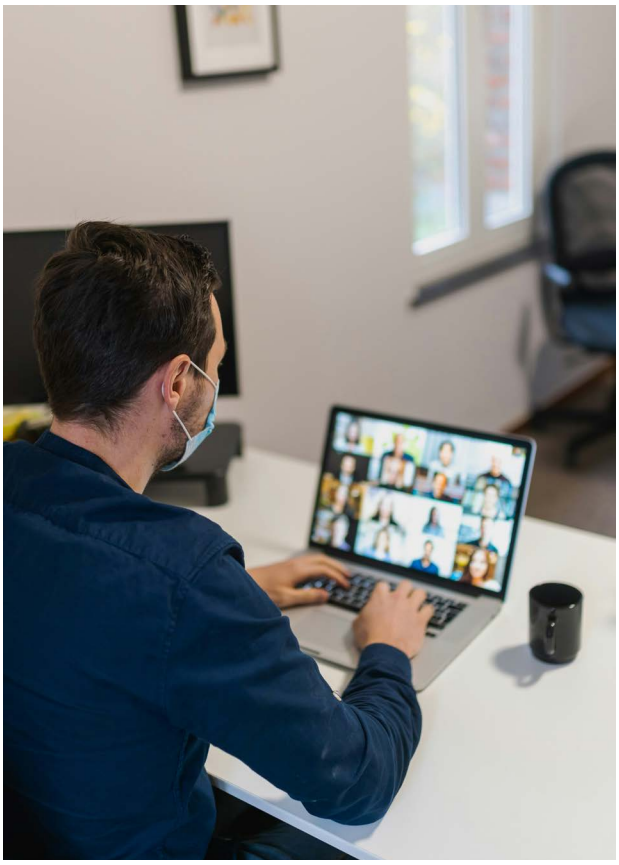


Photo by Maxime on Unsplash

The dominance of Northern and Western European countries in network readiness is a noteworthy trend in the NRI performances by region. These regions consistently excel in various aspects of network capabilities, including technology, people, governance, and impact. In the NRI 2023 rankings, Western European countries, in particular, stand out with four of them securing positions in the top 10. These countries have demonstrated strong performance in fostering digital innovation, ensuring access to advanced technologies, and creating a conducive environment for digital development. Northern Europe, while also performing well, has three countries in the top 10. Nonetheless, the remaining European countries are making substantial progress in network readiness, leveraging technology to drive economic and social development. In contrast, the Americas and the Asia & Pacific region have fewer representatives in the top 10 rankings, indicating that there is room for improvement in certain aspects of network capabilities in these regions. However, it's essential to note that these regions encompass a wide range of countries with varying levels of economic development and digital infrastructure. Overall, the dominance of Northern and Western European countries in the top ranks of network readiness showcases their commitment to embracing digital technologies and creating an environment conducive to digital innovation and growth. Other regions can draw valuable insights from their success stories to further enhance their network readiness and harness the benefits of the digital era.

Table 4 Top 3 countries by region

Africa	Arab States	Asia & Pacific	CIS	Europe	The Americas
1. Kenya (70)	1. United Arab Emirates (30)	1. Singapore (2)	1. Russian Federation (38)	1. Finland (3)	1. United States of America (1)
2. South Africa (74)	2. Saudi Arabia (41)	2. Republic of Korea (7)	2. Kazakhstan (58)	2. Netherlands (4)	2. Canada (11)
3. Mauritius (76)	3. Qatar (46)	3. Japan (13)	3. Armenia (63)	3. Sweden (5)	3. Brazil (44)

Note: Global ranks in parentheses. CIS = Commonwealth of Independent States.
Source: Network Readiness Index Database, Portulans Institute, 2023.

Notable scores by individual countries

Africa

The highest-ranked economies in Africa are Kenya (70th), South Africa (74th), and Mauritius (76th).

Kenya stands out as a regional leader, demonstrating significant strengths in its Technological capabilities (65th), with outstanding performance in Future Technologies (43rd) supported by substantial Investment in emerging technologies (32nd). The nation's Governance pillar (61st) reflects effective regulatory mechanisms and an environment conducive to digital innovation. Kenya ensures the widespread availability of digital technologies, providing users access to Online financial accounts (18th), thereby promoting financial inclusion. Moreover, Kenya exhibits a high level of digitization within the Government (40th), with exceptional performance in the Publication and use of open data (41st). It demonstrates strength in providing Access (76th), primarily due to its extensive coverage of international Internet bandwidth (8th), enhancing connectivity and global data exchange. Nonetheless, Kenya has opportunities in the area of digital Inclusion (77th), characterized by a noticeable Gender gap in internet use (97th), which impedes the engagement of the entire society in accessing or generating digital content. Further, Kenya has potential to improve metrics such as raising healthy life expectancy at birth (110th) and enhancing the Freedom to make life choices (108th). These factors contribute significantly to the economy's ability to empower its digital workforce, promote overall well-being, and stimulate economic growth.

South Africa showcases considerable strengths in network readiness, particularly within the digital Technology realm (59th), complemented by a robust digital Governance framework (60th). The nation's dedication to technological progress is clearly visible through its increased investment in Computer software (28th) and a strategic focus on the Adoption of emerging technologies (33rd), which collectively contribute to its high performance in Future Technologies (49th). Within the Governance pillar, South Africa exhibits balanced growth across all aspects, ensuring the security and Trust (60th) in its digital capabilities, implementing robust digital Regulations (67th), and promoting a high level of digital Inclusion (65th). However, South Africa's digital capabilities have potential to develop further by creating Impact (105th) of digital technologies on the economy and society, particularly concerning Quality of Life (124th), Freedom to make life choices (109th), creating Healthy life expectancy at birth (115th), and reducing Income inequality (116th). These measures have the potential to bolster the nation's overall network readiness and improve the well-being of its citizens.

Mauritius stands out as a leader among African countries, achieving overall success driven by its Governance (56th) of digital technologies and its capacity to create Impact (66th) through its digital capabilities. The nation distinguishes itself as a pioneer in ensuring widespread Internet access in schools (1st), a testament to its commitment to digital education and connectivity. Mauritius' digital governance strength is fortified by exceptional performance in E-commerce legislation (1st), robust Cybersecurity (23rd), and high Regulatory quality (27th). These factors contribute to a secure and conducive digital environment. The country excels in creating Impact within its economy and community, particularly through its supremacy in ICT services exports (37th) and its contributions toward achieving SDG Goals, notably Affordable and Clean Energy (10th). However, Mauritius has opportunity in the People (106th) dimension in the aspects of promoting digitally-engaged Businesses (131st), fostering a culture of digital innovation and skill development which could enhance the workforce to drive digital transformation and economic growth.

Arab States

The United Arab Emirates (30th), Saudi Arabia (41st), and Qatar (46th) are the highest ranked Arab States in the NRI 2023.

The United Arab Emirates (UAE) exhibits a solid overall performance, securing a place among the top 30 performers in NRI 2023. Notably, it demonstrates particular strengths in the dimensions of People (18th) and Technology (22nd). UAE has achieved widespread Access (3rd) to Future Technology (14th) through deliberate efforts, including extensive 3G mobile network coverage (1st), ensuring Internet access in schools (1st), competitive Mobile tariffs (7th), and affordable Handset prices (5th). These initiatives have led to widespread digitalization among Individuals (7th), Businesses (26th), and Governments (27th). UAE's leadership in the Use of virtual social networks (1st), business enterprise-financed GERD (5th), and government promotion of Investment in emerging technologies (4th) underscores its commitment to digital advancement. Furthermore, the country has managed to create a positive Impact in society by reducing Income Inequality (5th) and ensuring a high Quality of Life (13th). However, UAE has potential to enhance its digital readiness by addressing the privacy protection by law content (131st) and digital Regulation (74th), which can contribute to an overall stronger performance in Trust (46th). Such would further bolster the country's digital readiness and enhance its overall performance in the digital landscape.

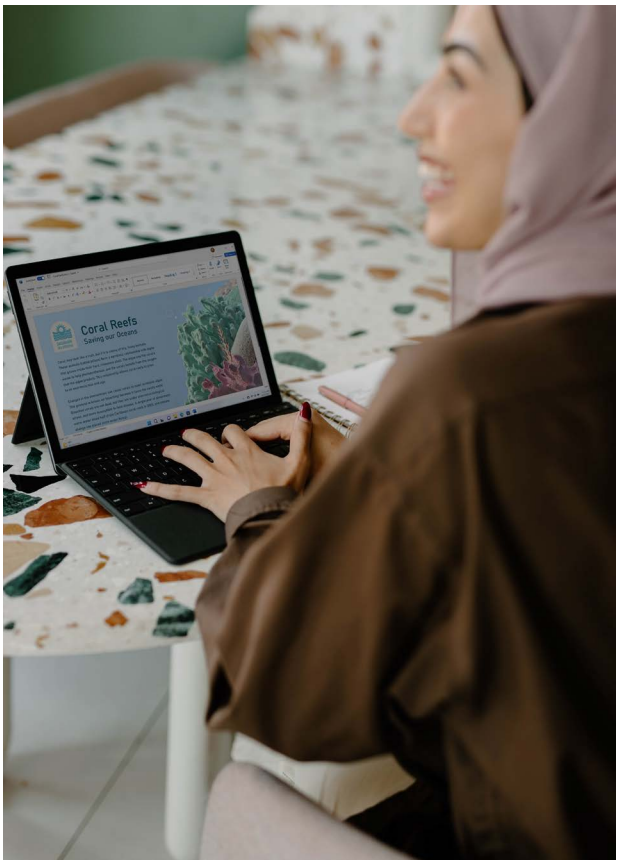


Photo by Windows on Unsplash

Qatar ranks third in the region for Network readiness, highlighting its Technological prowess (34th). The nation's strong commitment to technology is evident through initiatives such as establishing extensive 3G mobile network coverage (1st), ensuring internet access in schools (1st), and providing affordable Handset prices (5th).

Saudi Arabia displays notable strengths in the People (31st) and Technology (36th) dimensions within the NRI 2023. The country's dedication to enhancing digital Access (30th) within its society is evident through initiatives such as widespread 3G mobile network coverage (1st) and ensuring internet access in schools (1st). These efforts, along with a focus on Future Technologies (19th), contribute to Saudi Arabia's technological prowess. Moreover, the government's promotion of investment in emerging technologies (5th), substantial Mobile broadband internet traffic within the country (8th), and the development of ICT skills in the education system (8th) have resulted in a large digital workforce. However, Saudi Arabia has expansion possibilities in creating Impact (62nd) through its digital capabilities, enhancing its overall network readiness through Regulations (98th) and contributing towards the SDG (104th). These areas could further enhance Saudi Arabia's ability to demonstrate network readiness effectively and comprehensively.

Qatar ranks third in the region for Network readiness, highlighting its Technological prowess (34th). The nation's strong commitment to technology is evident through initiatives such as establishing extensive 3G mobile network coverage (1st), ensuring internet access in schools (1st), and providing affordable Handset prices (5th). Qatar's continued Investment in emerging technologies (17th) further strengthens its technological capabilities. The country's leadership in areas like ICT skills in the education system (4th) and the Use of virtual social networks (3rd) has driven digitalization within its society, positioning its individuals competitively (12th). While Qatar excels in many aspects, there are opportunities for improvement in areas such as developing High-tech exports (101st), increasing FTTH/building Internet subscriptions (102nd), and enhancing AI scientific publications (106th), including contributing to SDG Goals (108th), particularly in Affordable and Clean Energy (117th) and Women's economic opportunity (134th), could further enhance its network readiness and societal well-being.

Asia and the Pacific

Singapore (2nd), the Republic of Korea (7th), and Japan (13th) are the leading economies for network readiness in Asia and the Pacific. Australia (14th) closely follows Japan and deserves further analysis.

Singapore: find a detailed review of Singapore's NRI 2023 performance in the Top 10 NRI performers section.

The Republic of Korea: find a detailed review of Korea's NRI 2023 performance in the Top 10 NRI performers section.

Japan remains one of the region's top performers, securing a place among the Top 20 in NRI and emerging as a global leader in the People dimension (3rd). The nation has achieved widespread digital adoption across its society, with strong performances by Individuals (5th), Businesses (14th), and Governments (4th). Additionally, Japan excels in creating

widespread Access (5th) to its digital technologies, leading to high levels of digital Inclusion (8th) and creating substantial Impact (14th) on its Economy (12th). To further enhance its digital capabilities, Japan has expansion opportunities in ICT services exports (82nd), ICT regulatory environment (92nd), reducing the Gender gap in Internet use (86th) and enhancing Women's economic opportunity (88th) which could contribute to a more well-rounded digital economy. Japan's strong foundation in digital readiness positions it well to continue its leadership in the digital landscape with targeted improvements.

Australia maintains its position as a top performer in network readiness, (14th overall). The country exhibits significant strength in digital Governance (8th), supported by robust performances across various aspects of Governance, including Trust (8th), Regulations (9th), and Inclusion (7th). Australia also excels in providing high levels of Access (10th), driven by competitive handset prices (6th) and its leading role in ensuring Internet access for schools (1st). Other areas of strength include increased E-Participation (2nd), high Tertiary enrollment (3rd), increased Publication and use of open data (3rd), and high Regulatory quality (4th). However, there are opportunities for improvement in areas such as ICT services exports (75th), AI talent concentration (28th), Computer software spending (67th), and contributions to SDG 7: Affordable and Clean Energy (78th), which can further enhance its network readiness and strengthen its position as a digital leader.

The Commonwealth of Independent States (CIS)

The Russian Federation (38th), Kazakhstan (58th), and Armenia (63th) lead the region of the Commonwealth of Independent States (CIS).

The Russian Federation: find a detailed review of the Russian Federation's NRI 2023 performance in the NRI Performances by Income Group section.

Kazakhstan demonstrates a strong and engaged digital workforce within this region, highlighted by the People pillar (49th), encompassing society and Individuals (54th), Businesses (56th), and Government (48th). Its robust digital Governance (54th) is evident through its exceptional levels of digital Inclusion (35th). Additionally, Kazakhstan's ability to create Impact (55th) in society is reflected in its high scores in the Quality of Life aspect (35th). The country's efforts across various facets of network readiness indicate a commitment to overall growth and digital development. Kazakhstan has potential to develop Future Technologies (98th) and digital Content creation (82nd), Regulations (104th) and contributions to SDGs (88th). These are tools to further enhance its network readiness and digital capabilities, positioning the nation for continued progress in the digital landscape.

Armenia has made significant strides in developing its digital Technology (53rd) ecosystem. Notably, the country has improved its digital Content creation (53rd, up from 75th in 2022) and has focused on Future Technologies (48th, up from 55th in 2022). These advancements are supported by increased GitHub commits (36th) and robust Mobile apps development (39th). Armenia also continues to generate a meaningful digital Impact (51st), ensuring a high Quality of Life (54th) for its residents and actively contributing to SDG Goals (55th). The nation boasts strengths in several areas, including extensive mobile network coverage, Internet access in schools, a reduced Gender gap in Internet use, a high adult literacy rate, and very strong ICT services exports. However, there are opportunities for further growth, such as developing High-tech and medium-high-tech manufacturing capabilities (98th), increasing Annual investment in telecommunication services (113th), and expanding the Domestic market size (108th), bridging the Rural gap in the use of digital payments (120th) which could further enhance Armenia's digital readiness and economic development

Europe

Finland (3rd), the Netherlands (4th), and Sweden (5th) are the top three performers in the region of Europe. Detailed remarks about each country can be found in the Top 10 NRI performers section. We also analyze France (15th) and Norway (16th) in detail below.

France has earned a commendable 15th place in network readiness, indicating an overall strong performance with consistent development in Technology (12th), People (12th), and Impact creation (12th). It maintains a solid 21st position in Governance. France's digital leadership across various aspects is supported by its remarkable presence in multiple areas where it ranks in the top 10 globally. These areas of digital prowess include strength in Publication and use of open data, the availability of affordable handsets, mobile broadband internet traffic within the country, and a large domestic market size, achieved through consistent investments in telecommunication services and computer software development. France is also making strides in creating economic opportunities for women and improving healthy life expectancy at birth. To further solidify its dominant position in the global digital landscape, France has potential to increase AI talent concentration (18th) and expand 3G mobile network coverage (57th), reducing the Gender gap in internet use (46th) and encouraging Freedom to make life choices (73rd).

Norway stands at the 16th position in the NRI 2023 rankings. Its most notable strength lies in the realm of digital governance. Norway is recognized as a frontrunner in cultivating security and Trust (2nd), through robust digital Regulations (3rd). It excels in creating high-quality digital Content (8th) on the backdrop of Knowledge intensive employment (5th), and in ensuring a commendable Quality

of Life (5th). However, there exist areas with untapped potential within Norway's digital landscape. One such aspect is the need to bolster the digital workforce within the country amongst the Individuals and Government. This factor plays a significant role in the shift in Norway's NRI ranking, from 10th place in 2022 to 16th in 2023. While this reshuffling can be attributed to various factors, including the superior performance of other nations, areas of opportunity include increasing AI scientific publications, advancing high-tech manufacturing, enhancing government online services and R&D expenditure by both the government and higher education institutions. Addressing these facets can empower Norway to reinforce its leadership in the digital sphere.

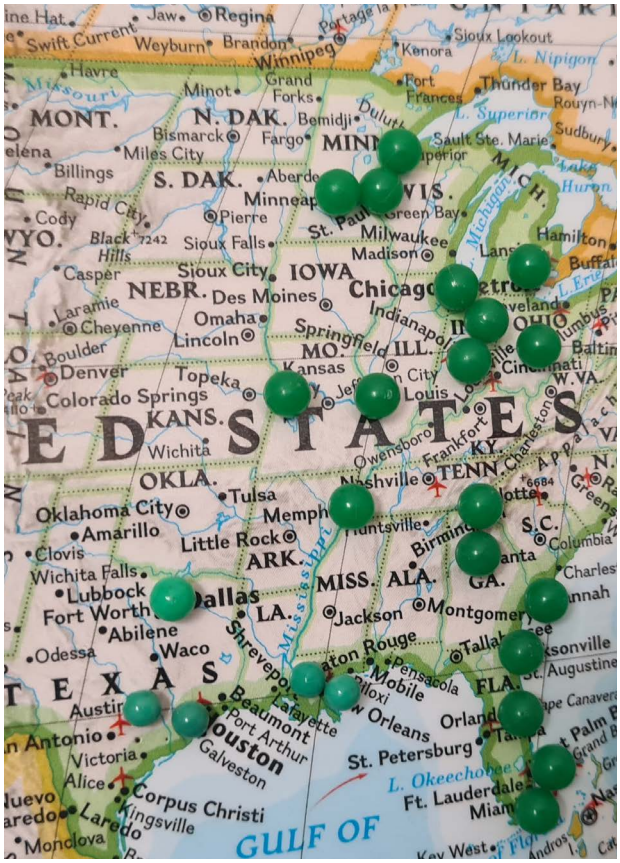


Photo by Nico Smit on Unsplash.

The Americas

The United States (1st) leads the region of the Americas, alongside Canada (11th) and Brazil (43rd). A detailed analysis on the performance of the US can be found in the Top 10 NRI performers section. Canada (11th) and Brazil (43rd) follow the US in second and third place within the region.

Canada ranks just outside the top 10 in network readiness (11th, NRI) and showcases a well-rounded overall performance, earning top 20 rankings across all aspects of network readiness. The country demonstrates notable Technological prowess (7th), particularly excelling in digital Content creation (5th), where it shows leadership in GitHub commits (5th) and Internet domain registrations (11th). Canada's strength in digital Governance (9th) is evident across all aspects, with global leadership in Trust (9th), a conducive Regulatory framework (13th), and high levels of digital Inclusion (5th). To further enhance its digital capabilities, Canada has potential to enhance the digitally capabilities of the workforce, both for Individuals (39th) and Businesses (23rd), encourage mobile broadband internet traffic within the country and fostering greater investment in GERD financed and performed by business enterprises, developing Affordable and Clean Energy initiatives which could contribute to a more comprehensive digital ecosystem.

Brazil maintains its position in the top 50, ranking 44th overall. The country secures a place in the top quartile through its ability to provide widespread Access (28th) to its digital capabilities, which leads to high levels of digital Inclusion (24th). This, in turn, contributes to a strong digital workforce, as evident in the increased digitization of its Businesses (36th) and Government (34th). To further enhance its digital readiness, Brazil has expansion possibilities in increasing Robot density (44th) and fostering AI talent (46th), thereby improving its Future readiness in technology (72nd). Areas of opportunities include investments in Quality Education (65th) by promoting the use of ICT skills in the education system (95th), reducing Income inequality (110th).

Outstanding pillar performance among middle- and low-income economies

A group of middle-and low-income economies stand out as performing above their expected levels of development in one or more of the structural categories comprising the four main pillars of the NRI. Although at a different scale, this achievement highlights similarities in performance among these economies and others that are at higher stages of digital transformation and ranking tiers. These economies show a pillar score that is above their predicted performance given their income level.[26]

In the realm of digital readiness, numerous countries across different income groups have showcased outstanding progress and proficiency. Notably, China, India, and Rwanda remain at the forefront within their respective income groups, consistently surpassing expectations across all four dimensions of digital readiness. Their comprehensive strategies for digital preparedness position them as promising frontrunners in the global digital landscape.

Africa takes the lead with the largest number of economies that have exceeded expectations, with 20 nations surpassing projections in at least one category. Impressively, 15 of these countries have excelled in the crucial dimension of digital Governance. Rwanda, in particular, shines across all aspects of digital readiness, while Malawi, Kenya, Senegal, and Zimbabwe demonstrate exceptional performance in three out of the four key areas.

The Asia & Pacific region is another standout, featuring 13 economies that have surpassed expectations in various dimensions of digital readiness. Notably, nine of these excel particularly in digital Technology underscoring the impressive technological prowess demonstrated by the region. India and China lead the region, demonstrating excellence across all aspects of digital readiness, closely followed by Vietnam, Pakistan, and Thailand, which impressively outperform expectations in three out of the four key dimensions.

Within the Americas, eight economies have showcased robust performance, with five of them excelling in generating substantial impact due to their exceptional network readiness. Notably, Brazil distinguishes itself within this group by exceeding expectations across three different dimensions.

Photo by Annie Spratt on Unsplash

Five out of the seven CIS nations have earned a place on the list of outperforming countries, demonstrating their impressive drive towards digital readiness. Additionally, four European economies have secured spots on the list, with Ukraine emerging as a prominent leader in Europe, excelling in at least three different areas. Completing the list are the Arab States, contributing three high-achieving economies, all of which display remarkable strength in the "People" aspect, showcasing the presence of a strong digital workforce.

The lower-middle-income group comprises the highest number of outperformers, totaling 30 economies that have exceeded expectations in at least one of the four dimensions. Conversely, 15 upper-middle-income economies and eight low-income economies also showcase similar levels of outperformance, reflecting a global trend toward digital readiness. Table 5 shows the full list and further details about the identified outstanding pillar performers.

Note: An economy is identified as displaying outstanding performance when its pillar score is at least 10% above the trendline that is generated across all economies for that particular pillar. Trendlines are produced for each pillar by estimating a linear model to describe the relationship between pillar scores and GDP per capita. These trendlines are independent of, and display different results than, those presented in Figure which shows the outcome of modeling the relationship between the overall NRI scores and GDP per capita.

Table 5 Middle- and low-income economies with outstanding pillar performance by region, income group, and pillar

Region	Economy	Income	Technology	People	Governance	Impact
Africa	Rwanda	Low income	•	•	•	•
	Malawi	Low income		•	•	•
	Kenya	Lower middle income	•	•	•	
	Senegal	Lower middle income	•		•	•
	Zimbabwe	Lower middle income	•	•	•	
	Uganda	Low income	•		•	
	Madagascar	Low income		•	•	
	Burundi	Low income	•	•		
	United Republic of Tanzania	Lower middle income	•		•	
	Zambia	Lower middle income		•	•	
	South Africa	Upper middle income	•		•	
	Gambia	Low income			•	
	Mali	Low income				•
	Ethiopia	Low income	•			
	Cabo Verde	Lower middle income		•		
	Ghana	Lower middle income			•	
	Cote d'Ivoire	Lower middle income			•	
	Nigeria	Lower middle income	•			
	Benin	Lower middle income			•	
	Lesotho	Lower middle income			•	
Asia & Pacific	India	Lower middle income	•	•	•	•
	China	Upper middle income	•	•	•	•
	Viet Nam	Lower middle income	•	•		•
	Pakistan	Lower middle income	•	•		•
	Thailand	Upper middle income	•	•	•	
	Philippines	Lower middle income		•		•
	Indonesia	Upper middle income	•		•	
	Sri Lanka	Lower middle income	•			
	Mongolia	Lower middle income			•	
	Bangladesh	Lower middle income	•			
	Cambodia	Lower middle income				•
	Nepal	Lower middle income				•
	Malaysia	Upper middle income	•			
The Americas	Brazil	Upper middle income	•	•	•	
	Jamaica	Upper middle income			•	•
	Bolivia (Plurinational State of)	Lower middle income		•		
	Honduras	Lower middle income				•
	Nicaragua	Lower middle income				•
	Peru	Upper middle income		•		
	Venezuela (Bolivarian Republic of)	Upper middle income				•
	El Salvador	Upper middle income				•
CIS	Uzbekistan	Lower middle income	•			•
	Kyrgyzstan	Lower middle income			•	•
	Russian Federation	Upper middle income	•	•		
	Tajikistan	Lower middle income				•
	Armenia	Upper middle income	•			
Europe	Ukraine	Lower middle income	•	•	•	
	Turkiye	Upper middle income		•		
	Serbia	Upper middle income			•	
	Albania	Upper middle income		•		
Arab States	Jordan	Lower middle income	•	•	•	
	Morocco	Lower middle income	•	•		
	Lebanon	Lower middle income		•		

Source: Network Readiness Index Database, Portulans Institute, 2023.

The lower-middle-income group comprises the highest number of outperformers, totaling 30 economies that have exceeded expectations in at least one of the four dimensions. Conversely, 15 upper-middle-income economies and eight low-income economies also showcase similar levels of outperformance, reflecting a global trend toward digital readiness.

Annex 1: Pillar Tables

A group of middle-and low-income economies stand out as performing above their expected levels of development in one or more of the structural categories comprising the four main pillars of the NRI. Although at a different scale, this achievement highlights similarities in performance among these economies and others that are at higher stages of digital transformation and ranking tiers. These economies show a pillar score that is above their predicted performance given their income level.

Table A-1.1: Rankings in the Technology pillar and associated sub-pillars

	Pillar	Sub-Pillar		
Economy	Technology	Access	Content	Future Technologies
United States of America	1	7	2	1
Switzerland	2	6	3	5
Hong Kong, China	3	4	1	17
Netherlands	4	19	4	6
Singapore	5	2	13	2
Germany	6	22	7	4
Canada	7	26	5	13
United Kingdom	8	15	6	11
Sweden	9	35	11	3
Finland	10	13	15	7
Denmark	11	17	9	10
France	12	9	19	15
Luxembourg	13	38	14	9
Norway	14	14	8	29
Japan	15	5	33	12
Austria	16	37	17	16
Republic of Korea	17	23	30	8
Australia	18	10	12	36
Israel	19	39	18	18
China	20	1	39	26
Belgium	21	36	23	21
United Arab Emirates	22	3	57	14
Ireland	23	27	27	22
Iceland	24	61	10	33
Spain	25	12	28	25
Portugal	26	33	25	24
New Zealand	27	45	22	37
Czechia	28	55	21	32
Italy	29	42	35	23
Hungary	30	34	16	77
Estonia	31	41	24	54
Slovenia	32	24	36	41
Malta	33	79	31	27
Qatar	34	20	91	20
Lithuania	35	16	34	61
Saudi Arabia	36	30	80	19
Indonesia	37	18	43	45
Malaysia	38	25	59	30
Poland	39	11	37	71
Russian Federation	40	8	41	67
India	41	49	29	58
Slovakia	42	21	44	47
Ukraine	43	43	42	44
Uruguay	44	40	32	64
Brazil	45	28	40	72
Cyprus	46	64	26	74
Montenegro	47	92	20	59
Turkiye	48	29	48	65
Pakistan	49	68	47	40
Thailand	50	32	68	52
Latvia	51	53	38	80
Costa Rica	52	60	79	34

	Pillar	Sub-Pillar		
Economy	Technology	Access	Content	Future Technologies
Armenia	53	62	53	48
Bahrain	54	59	93	31
Viet Nam	55	31	51	85
Kuwait	56	54	90	38
Romania	57	48	50	78
Bulgaria	58	51	46	81
South Africa	59	71	61	49
Chile	60	70	67	50
Sri Lanka	61	86	81	28
Azerbaijan	62	72	98	35
Oman	63	56	84	53
Greece	64	77	45	70
Kenya	65	76	83	43
Colombia	66	75	56	63
Uzbekistan	67	44	88	73
Jordan	68	91	65	39
Egypt	69	47	75	88
Mexico	70	63	62	75
Argentina	71	65	60	82
Morocco	72	69	71	69
Iran (Islamic Republic of)	73	103	52	42
Croatia	74	57	49	110
Republic of Moldova	75	46	63	108
Tunisia	76	73	77	68
Panama	77	83	70	60
Bangladesh	78	58	66	100
Kazakhstan	79	52	82	98
Mauritius	80	67	78	83
Georgia	81	50	58	117
Lebanon	82	78	64	87
Serbia	83	66	54	115
Philippines	84	93	72	62
Jamaica	85	90	106	51
Mongolia	86	74	96	101
Ecuador	87	82	94	89
Nigeria	88	89	69	99
North Macedonia	89	81	73	109
Namibia	90	112	55	79
Senegal	91	97	116	55
Peru	92	84	86	107
United Republic of Tanzania	93	87	108	94
Albania	94	80	95	121
Dominican Republic	95	94	104	96
Venezuela (Bolivarian Republic of)	96	85	99	106
Algeria	97	101	92	91
Cambodia	98	102	85	97
Lao People's Democratic Republic	99	98	126	46
Cote d'Ivoire	100	88	117	103
Rwanda	101	113	109	66
Ghana	102	105	111	90
Eswatini	103	109	76	122
Bosnia and Herzegovina	104	95	102	128

	Pillar	Sub-Pillar		
Economy	Technology	Access	Content	Future Technologies
Bolivia (Plurinational State of)	105	99	114	105
Ethiopia	106	107	87	118
Tajikistan	107	123	97	95
El Salvador	108	108	101	111
Honduras	109	117	110	86
Uganda	110	104	113	104
Kyrgyzstan	111	100	89	129
Nepal	112	116	74	116
Guatemala	113	115	112	93
Paraguay	114	106	103	124
Botswana	115	96	121	102
Cabo Verde	116	111	123	76
Mauritania	117	124	133	56
Zimbabwe	118	120	107	114
Cameroon	119	132	100	92
Gambia	120	127	132	57
Benin	121	114	118	120
Guinea	122	130	119	84
Angola	123	110	115	133
Zambia	124	119	127	112
Mali	125	118	124	123
Lesotho	126	121	131	119
Mozambique	127	122	122	127
Madagascar	128	128	130	113
Nicaragua	129	125	120	132
Burundi	130	134	105	126
Malawi	131	126	125	130
Democratic Republic of the Congo	132	129	128	125
Chad	133	131	134	134
Burkina Faso	134	133	129	131

Source: Network Readiness Index Database, Portulans Institute, 2023.

Table A-1.2: Rankings in the People pillar and associated sub-pillars

	Pillar	Sub-Pillar		
Economy	People	Individuals	Businesses	Governments
Republic of Korea	1	1	1	1
Israel	2	4	11	2
Japan	3	5	14	4
United States of America	4	21	3	3
China	5	6	6	16
Singapore	6	8	15	11
Finland	7	13	8	7
Germany	8	22	5	12
Sweden	9	52	2	9
United Kingdom	10	48	13	5
Denmark	11	64	9	8
France	12	47	16	6
Australia	13	28	17	13
Switzerland	14	26	7	20
Netherlands	15	57	10	14
Austria	16	46	12	15
Canada	17	39	23	10
United Arab Emirates	18	7	26	25
Russian Federation	19	3	42	30
Belgium	20	90	4	21
Spain	21	18	31	27
Estonia	22	31	25	26
New Zealand	23	77	24	17
Norway	24	82	21	19
Ukraine	25	2	53	43
Malta	26	34	33	22
Iceland	27	73	20	24
Italy	28	32	28	29
Slovenia	29	83	19	23
Ireland	30	58	18	33
Saudi Arabia	31	10	40	35
Portugal	32	43	34	31
Luxembourg	33	109	22	18
Thailand	34	11	43	41
Hong Kong, China	35	17	41	42
Lithuania	36	41	37	32
Poland	37	35	29	51
Turkiye	38	19	45	44
Cyprus	39	15	48	63
Czechia	40	87	30	39
Brazil	41	85	36	34
Hungary	42	68	35	55
Albania	43	65	49	38
Jordan	44	44	27	85
Peru	45	42	38	75
Lebanon	46	14	32	105
Greece	47	38	50	64
Malaysia	48	56	62	37
Kazakhstan	49	54	56	48
Uruguay	50	25	86	36
India	51	37	78	46
Chile	52	40	68	54

	Pillar	Sub-Pillar		
Economy	People	Individuals	Businesses	Governments
Oman	53	20	94	45
Latvia	54	53	51	67
Bulgaria	55	50	61	56
Viet Nam	56	16	67	81
Croatia	57	61	47	70
Serbia	58	36	72	59
Philippines	59	23	79	68
Colombia	60	63	70	50
Armenia	61	55	73	53
Bahrain	62	9	98	61
Mexico	63	76	95	28
Argentina	64	86	66	49
Dominican Republic	65	75	64	62
Romania	66	70	52	78
Bolivia (Plurinational State of)	67	24	59	99
Qatar	68	12	107	65
Kenya	69	105	60	40
Georgia	70	27	83	87
Kuwait	71	33	89	74
Azerbaijan	72	89	77	52
Indonesia	73	29	118	47
Slovakia	74	112	39	58
Morocco	75	69	57	91
Montenegro	76	45	74	94
South Africa	77	104	58	66
Iran (Islamic Republic of)	78	49	80	96
Tunisia	79	67	93	71
Republic of Moldova	80	71	101	60
Costa Rica	81	30	113	80
Paraguay	82	66	69	101
Cabo Verde	83	100	63	76
North Macedonia	84	94	75	83
Jamaica	85	117	46	69
Sri Lanka	86	95	81	82
Ecuador	87	74	92	90
Uzbekistan	88	102	85	72
Pakistan	89	103	54	104
Bangladesh	90	101	96	73
Algeria	91	62	111	92
Mongolia	92	60	105	97
Egypt	93	92	100	86
Panama	94	51	123	89
Ghana	95	107	84	84
Nigeria	96	120	44	95
Bosnia and Herzegovina	97	91	71	123
Lao People's Democratic Republic	98	98	116	77
Zambia	99	108	55	114
Venezuela (Bolivarian Republic of)	100	59	90	129
Kyrgyzstan	101	88	102	107
Cote d'Ivoire	102	99	103	102
Nicaragua	103	79	117	109
Cambodia	104	81	120	106

	Pillar	Sub-Pillar		
Economy	People	Individuals	Businesses	Governments
El Salvador	105	96	91	121
Mauritius	106	78	131	88
Rwanda	107	116	122	57
Botswana	108	93	99	119
Cameroon	109	113	97	108
Zimbabwe	110	110	82	124
Guatemala	111	84	127	112
United Republic of Tanzania	112	114	108	98
Benin	113	127	88	93
Honduras	114	80	104	133
Namibia	115	106	110	111
Senegal	116	115	115	103
Eswatini	117	97	114	127
Guinea	118	130	109	79
Tajikistan	119	72	133	115
Angola	120	128	76	118
Malawi	121	119	87	120
Nepal	122	111	130	100
Burkina Faso	123	133	65	116
Madagascar	124	122	106	122
Democratic Republic of the Congo	125	123	119	131
Mali	126	131	112	125
Ethiopia	127	132	126	113
Burundi	128	126	129	117
Lesotho	129	118	124	132
Gambia	130	125	125	126
Uganda	131	121	134	110
Mozambique	132	129	128	128
Chad	133	134	121	130
Mauritania	134	124	132	134

Source: Network Readiness Index Database, Portulans Institute, 2023.

Table A-1.3: Rankings in the Governance pillar and associated sub-pillars

	Pillar	Sub-Pillar		
Economy	Governance	Trust	Regulation	Inclusion
Finland	1	6	2	6
Netherlands	2	3	5	2
Denmark	3	1	8	12
Norway	4	2	3	21
Sweden	5	5	6	11
Estonia	6	7	7	3
United States of America	7	4	16	10
Australia	8	8	9	7
Canada	9	9	13	5
Singapore	10	17	10	1
New Zealand	11	11	19	9
Luxembourg	12	23	1	18
Switzerland	13	25	4	14
Germany	14	13	12	20
Austria	15	21	15	15
United Kingdom	16	18	26	4
Iceland	17	12	34	13
Republic of Korea	18	10	41	17
Lithuania	19	24	11	29
Latvia	20	20	18	25
France	21	26	17	23
Czechia	22	15	21	36
Belgium	23	14	24	39
Japan	24	35	23	8
Ireland	25	19	29	27
Spain	26	32	25	16
Israel	27	29	20	26
Slovakia	28	22	32	45
Portugal	29	43	14	32
Slovenia	30	36	22	34
Poland	31	16	49	41
Italy	32	40	30	28
Malta	33	37	28	38
Cyprus	34	41	38	33
China	35	27	84	19
Croatia	36	39	39	42
Hungary	37	30	33	57
Hong Kong, China	38	31	79	22
Malaysia	39	38	52	46
Qatar	40	28	43	61
Greece	41	42	44	53
Brazil	42	52	47	24
Chile	43	47	40	48
Oman	44	33	89	43
Bulgaria	45	55	31	52
Thailand	46	50	56	37
United Arab Emirates	47	46	74	31
Serbia	48	53	48	44
Russian Federation	49	34	102	40
Saudi Arabia	50	44	98	30
Turkiye	51	45	63	56

	Pillar	Sub-Pillar		
Economy	Governance	Trust	Regulation	Inclusion
Romania	52	51	45	63
Bahrain	53	62	51	47
Kazakhstan	54	48	104	35
Uruguay	55	58	36	71
Mauritius	56	63	53	59
Costa Rica	57	65	35	73
Ukraine	58	54	78	60
Argentina	59	69	68	49
South Africa	60	60	67	65
Kenya	61	56	64	77
North Macedonia	62	61	81	62
Republic of Moldova	63	59	76	68
Indonesia	64	64	72	66
Mongolia	65	66	101	51
Georgia	66	68	86	69
Jordan	67	92	71	50
Mexico	68	71	46	91
Montenegro	69	88	70	55
Colombia	70	79	57	70
Jamaica	71	99	27	87
Kuwait	72	67	80	81
Bosnia and Herzegovina	73	84	69	64
Viet Nam	74	57	94	92
Dominican Republic	75	91	42	89
Ghana	76	75	55	101
Armenia	77	90	65	83
Iran (Islamic Republic of)	78	49	123	72
Rwanda	79	96	60	84
Peru	80	93	82	79
Morocco	81	80	37	117
Egypt	82	94	91	74
India	83	72	75	103
Paraguay	84	98	90	75
Philippines	85	70	88	105
Albania	86	78	66	104
Tunisia	87	73	97	94
Azerbaijan	88	76	103	90
Panama	89	100	83	88
Benin	90	86	62	107
Cabo Verde	91	103	58	100
Botswana	92	81	59	114
Senegal	93	106	54	99
Cote d'Ivoire	94	95	73	102
Kyrgyzstan	95	101	115	58
Ecuador	96	108	93	76
Sri Lanka	97	97	106	85
Uzbekistan	98	77	127	54
Uganda	99	85	92	106
Bangladesh	100	87	116	80
United Republic of Tanzania	101	74	85	120
Gambia	102	122	50	112
Lesotho	103	111	119	67

	Pillar	Sub-Pillar		
Economy	Governance	Trust	Regulation	Inclusion
Venezuela (Bolivarian Republic of)	104	89	124	82
Zambia	105	83	99	121
Algeria	106	117	96	98
Honduras	107	128	87	97
Guatemala	108	124	100	93
Zimbabwe	109	102	121	96
Nepal	110	107	113	109
El Salvador	111	118	95	116
Malawi	112	112	112	111
Madagascar	113	125	61	124
Nigeria	114	82	109	131
Namibia	115	104	120	110
Lebanon	116	110	129	86
Pakistan	117	105	110	122
Mali	118	130	105	113
Cameroon	119	109	107	127
Bolivia (Plurinational State of)	120	116	122	95
Burkina Faso	121	115	77	132
Cambodia	122	121	118	108
Tajikistan	123	119	133	78
Mozambique	124	113	108	125
Nicaragua	125	127	117	118
Eswatini	126	114	126	119
Angola	127	120	114	130
Guinea	128	129	111	133
Chad	129	126	132	115
Lao People's Democratic Republic	130	123	125	126
Mauritania	131	131	128	128
Ethiopia	132	133	130	123
Democratic Republic of the Congo	133	132	131	129
Burundi	134	134	134	134

Source: Network Readiness Index Database, Portulans Institute, 2023.

Table A-1.4: Rankings in the Impact pillar and associated sub-pillars

	Pillar	Sub-Pillar		
Economy	Impact	Economy	Quality of life	SDG Contribution
Singapore	1	1	10	8
Finland	2	6	1	19
Ireland	3	5	12	1
Sweden	4	7	4	4
Netherlands	5	8	7	5
Switzerland	6	9	16	9
Israel	7	2	26	28
Denmark	8	19	3	3
United Kingdom	9	11	21	2
Germany	10	13	15	11
Republic of Korea	11	3	40	26
France	12	16	22	14
Belgium	13	21	8	17
Japan	14	12	31	25
Canada	15	20	18	16
Norway	16	43	5	10
Luxembourg	17	31	11	7
Austria	18	22	14	20
Australia	19	23	19	15
Czechia	20	24	9	31
China	21	4	51	57
Iceland	22	29	2	43
United States of America	23	10	66	29
New Zealand	24	36	17	18
Estonia	25	25	20	27
Slovenia	26	54	6	22
Spain	27	32	37	12
Malta	28	30	25	24
Portugal	29	44	32	13
Italy	30	28	53	21
United Arab Emirates	31	37	13	48
Cyprus	32	26	50	30
Poland	33	45	27	32
Hong Kong, China	34	17	105	6
Slovakia	35	51	28	44
Viet Nam	36	27	36	60
Hungary	37	38	49	38
Uruguay	38	49	44	45
Latvia	39	46	56	37
Costa Rica	40	57	43	40
Malaysia	41	15	60	89
Romania	42	33	41	63
Mexico	43	42	57	50
Lithuania	44	60	55	42
Thailand	45	34	39	87
Serbia	46	52	45	67
Bahrain	47	68	29	61
Philippines	48	14	69	113
El Salvador	49	97	47	34
Jamaica	50	77	46	51
Armenia	51	70	54	55

	Pillar	Sub-Pillar		
Economy	Impact	Economy	Quality of life	SDG Contribution
Chile	52	65	62	53
Argentina	53	53	63	66
Ukraine	54	35	59	86
Kazakhstan	55	63	35	88
India	56	18	95	92
Russian Federation	57	39	70	77
North Macedonia	58	62	48	75
Croatia	59	74	79	41
Greece	60	82	80	35
Republic of Moldova	61	69	42	73
Saudi Arabia	62	47	38	104
Qatar	63	58	23	108
Venezuela (Bolivarian Republic of)	64	87	73	39
Kuwait	65	56	30	110
Mauritius	66	96	76	33
Oman	67	72	24	102
Ecuador	68	116	83	23
Kyrgyzstan	69	112	33	64
Paraguay	70	110	58	47
Bulgaria	71	40	88	78
Brazil	72	61	91	59
Colombia	73	73	87	54
Nicaragua	74	111	61	46
Indonesia	75	48	65	99
Uzbekistan	76	99	34	84
Peru	77	104	67	49
Egypt	78	50	97	80
Sri Lanka	79	64	94	68
Turkiye	80	59	117	36
Montenegro	81	83	64	82
Bolivia (Plurinational State of)	82	117	72	52
Morocco	83	55	96	79
Azerbaijan	84	81	78	72
Panama	85	109	74	58
Albania	86	118	52	69
Lao People's Democratic Republic	87	78	82	91
Guatemala	88	93	86	81
Mongolia	89	98	85	74
Tajikistan	90	130	77	65
Cabo Verde	91	128	92	56
Honduras	92	119	89	62
Pakistan	93	41	98	117
Cambodia	94	114	84	76
Bosnia and Herzegovina	95	100	68	112
Kenya	96	66	113	85
Dominican Republic	97	89	75	116
Georgia	98	113	71	103
Jordan	99	84	93	105
Nepal	100	101	81	107
Bangladesh	101	88	90	115
Senegal	102	91	100	95
Cote d'Ivoire	103	80	108	93

	Pillar	Sub-Pillar		
Economy	Impact	Economy	Quality of life	SDG Contribution
Rwanda	104	107	110	83
South Africa	105	75	124	70
Tunisia	106	92	107	96
Algeria	107	90	102	106
Iran (Islamic Republic of)	108	79	104	118
Ghana	109	103	111	101
United Republic of Tanzania	110	108	106	114
Ethiopia	111	71	112	126
Mali	112	94	103	123
Guinea	113	95	99	130
Malawi	114	122	116	97
Namibia	115	120	127	71
Nigeria	116	85	109	131
Benin	117	105	114	121
Cameroon	118	67	122	128
Uganda	119	106	115	120
Lebanon	120	76	132	94
Gambia	121	125	119	109
Burkina Faso	122	121	123	111
Mauritania	123	131	101	127
Botswana	124	123	129	90
Zambia	125	124	128	100
Madagascar	126	86	125	132
Angola	127	102	133	98
Burundi	128	127	121	129
Mozambique	129	132	120	125
Chad	130	126	118	133
Zimbabwe	131	129	130	122
Lesotho	132	133	131	124
Democratic Republic of the Congo	133	115	126	134
Eswatini	134	134	134	119

Source: Network Readiness Index Database, Portulans Institute, 2023.

Country/Economy Profiles

How to read the Country/Economy Profiles

The Country/Economy Profiles presents a scorecard that summarizes the individual performance of each economy (134 total) covered in The Network Readiness Index 2023.

Each Country/Economy Profile consists of three parts:

1 - Performance Highlights

The first section displays each Country/Economy's overall performance across the NRI, the four primary pillars, and the twelve sub-pillars. For each level of the NRI, the economy's ranking (out of the 134 economies) and individual score (on a 0-to-100 scale) is shown.

2 - Radar Chart

The second section uses a radar chart to visually depict the individual economy's performance in the overall NRI, its four pillars, and sub-pillars. The dark blue line plots the economy's score, while the light blue line represents the average score of all economies found in the same income class. The World Bank defines each country's income classification and reflects data current to September 2023.

3 - Detailed Network Readiness Index Reporting

The third section demonstrates how a particular economy performed across each of the 58 indicators comprising the NRI. All indicators organize into primary and secondary level pillars, and their numbering matches the data tables found in the other report sections with additional information such as descriptions, years, rankings, values, and normalized scores for all the indicators.

Strengths and Weaknesses

The indicators considered a strength of a particular economy are notated on the far right-hand side by a solid circle. Indicators signaled as a weakness receive a hollow circle. For all economies, indicators with the highest rankings are highlighted as strengths, while indicators with the lowest rankings represent weaknesses.

For any remaining indicators, the strengths and weaknesses of a particular economy are based on the percentage of economies with scores that fall above or below a score determined by percent ranks. Indicators highlighted as strengths earn a score in the 10th largest percent rank among the 58 possible indicators of each economy. Indicators highlighted as weaknesses include scores that rank below the 5th lowest percent rank of the 58 indicators.

It is important to note that the absence of data may have an effect on the rankings of those sub-pillars, pillars where these absences are noted. Thus, caution should be averted when reviewing the rankings of elements in the NRI under these circumstances. This includes the signaling of strengths and weaknesses.

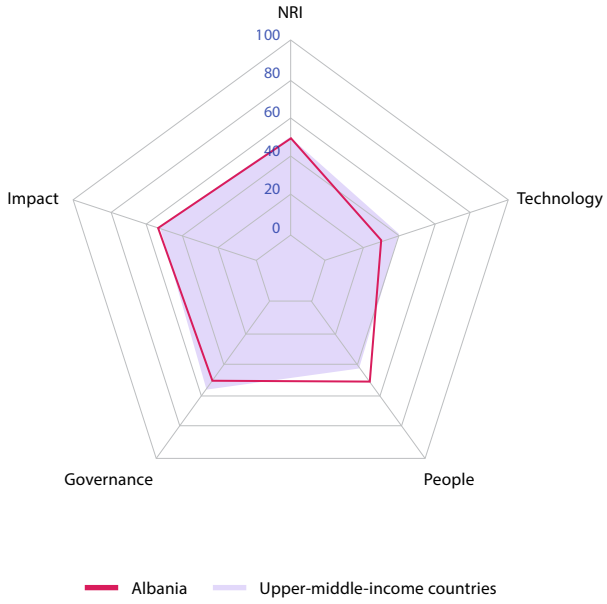
The NRI Online

The NRI website (https://networkreadinessindex.org/) offers additional analysis, analytical tools, individual country/economy profiles, and visualizations such as sortable rankings and maps.

Albania

	Rank (Out of 134)	Score
Network Readiness Index	**79**	**44.98**

Pillar/sub-pillar	Rank	Score
A. Technology pillar	**94**	**31.64**
1st sub-pillar: Access	80	60.04
2nd sub-pillar: Content	95	17.37
3rd sub-pillar: Future Technologies	121	17.50
B. People pillar	**43**	**49.33**
1st sub-pillar: Individuals	65	47.47
2nd sub-pillar: Businesses	49	51.78
3rd sub-pillar: Governments	38	48.72
C. Governance pillar	**86**	**48.85**
1st sub-pillar: Trust	78	36.45
2nd sub-pillar: Regulation	66	65.84
3rd sub-pillar: Inclusion	104	44.27
D. Impact pillar	**86**	**50.11**
1st sub-pillar: Economy	118	14.36
2nd sub-pillar: Quality of Life	52	73.00
3rd sub-pillar: SDG Contribution	69	62.98



The Network Readiness Index in detail

Indicator	Rank	Score	
A. Technology pillar	**94**	**31.64**	
1st sub-pillar: Access	80	60.04	
1.1.1 Mobile tariffs	88	49.09	
1.1.2 Handset prices	67	46.46	
1.1.3 FTTH/building Internet subscriptions	62	29.72	
1.1.4 Population covered by at least a 3G mobile network	57	99.67	
1.1.5 International Internet bandwidth	106	63.04	
1.1.6 Internet access in schools	44	72.27	
2nd sub-pillar: Content	95	17.37	
1.2.1 GitHub commits	65	7.15	
1.2.2 Internet domain registrations	55	5.62	●
1.2.3 Mobile apps development	95	55.88	
1.2.4 AI scientific publications	108	0.84	
3rd sub-pillar: Future Technologies	121	17.50	
1.3.1 Adoption of emerging technologies	117	19.18	○
1.3.2 Investment in emerging technologies	117	21.75	
1.3.3 Robot density	NA	NA	
1.3.4 Computer software spending	86	11.57	
B. People pillar	**43**	**49.33**	
1st sub-pillar: Individuals	65	47.47	
2.1.1 Mobile broadband internet traffic within the country	92	3.06	
2.1.2 ICT skills in the education system	NA	NA	
2.1.3 Use of virtual social networks	84	52.49	
2.1.4 Tertiary enrollment	57	36.45	
2.1.5 Adult literacy rate	26	97.88	●
2.1.6 AI talent concentration	NA	NA	
2nd sub-pillar: Businesses	49	51.78	
2.2.1 Firms with website	51	58.11	
2.2.2 GERD financed by business enterprise	NA	NA	
2.2.3 Knowledge intensive employment	76	25.43	
2.2.4 Annual investment in telecommunication services	104	71.81	
2.2.5 GERD performed by business enterprise	NA	NA	
3rd sub-pillar: Governments	38	48.72	
2.3.1 Government online services	33	79.91	●
2.3.2 Publication and use of open data	49	33.82	
2.3.3 Government promotion of investment in emerging tech	82	32.43	
2.3.4 R&D expenditure by governments and higher education	NA	NA	

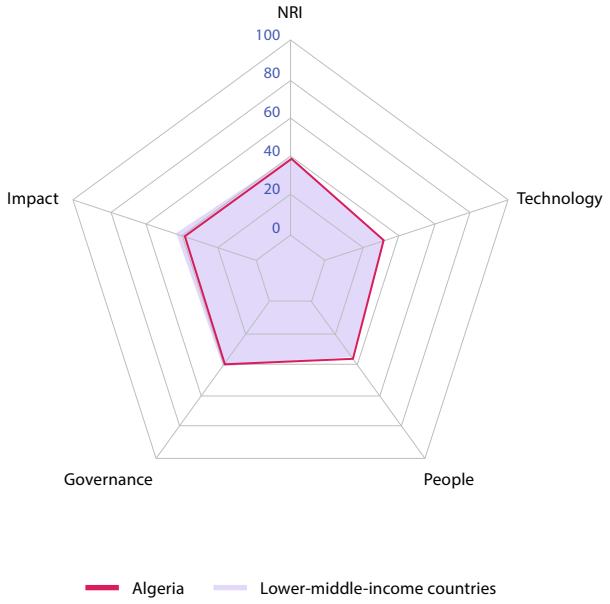
Indicator	Rank	Score	
C. Governance pillar	**86**	**48.85**	
1st sub-pillar: Trust	78	36.45	
3.1.1 Secure Internet servers	66	54.14	
3.1.2 Cybersecurity	87	63.69	
3.1.3 Online access to financial account	113	8.62	
3.1.4 Internet shopping	70	19.36	
2nd sub-pillar: Regulation	66	65.84	
3.2.1 Regulatory quality	59	53.96	
3.2.2 ICT regulatory environment	45	87.06	●
3.2.3 Regulation of emerging technologies	53	49.09	
3.2.4 E-commerce legislation	87	66.67	
3.2.5 Privacy protection by law content	47	72.40	●
3rd sub-pillar: Inclusion	104	44.27	
3.3.1 E-Participation	22	75.59	●
3.3.2 Socioeconomic gap in use of digital payments	125	32.57	○
3.3.3 Availability of local online content	119	26.20	
3.3.4 Gender gap in Internet use	65	67.21	
3.3.5 Rural gap in use of digital payments	119	19.80	○
D. Impact pillar	**86**	**50.11**	
1st sub-pillar: Economy	118	14.36	
4.1.1 High-tech and medium-high-tech manufacturing	99	4.53	○
4.1.2 High-tech exports	128	0.27	○
4.1.3 PCT patent applications	64	3.15	
4.1.4 Domestic market size	107	37.42	
4.1.5 Prevalence of gig economy	100	26.74	
4.1.6 ICT services exports	64	14.03	
2nd sub-pillar: Quality of Life	52	73.00	
4.2.1 Happiness	88	53.19	
4.2.2 Freedom to make life choices	69	71.18	
4.2.3 Income inequality	19	84.42	●
4.2.4 Healthy life expectancy at birth	34	83.19	●
3rd sub-pillar: SDG Contribution	69	62.98	
4.3.1 SDG 3: Good Health and Well-Being	93	55.55	
4.3.2 SDG 4: Quality Education	53	34.98	
4.3.3 SDG 5: Women's economic opportunity	36	87.61	●
4.3.4 SDG 7: Affordable and Clean Energy	17	81.86	●
4.3.5 SDG 11: Sustainable Cities and Communities	83	54.88	

NOTE: ● Indicates a strength and ○ a weakness.

Algeria

	Rank (Out of 134)	Score
Network Readiness Index	**103**	**37.52**

Pillar/sub-pillar	Rank	Score
A. Technology pillar	**97**	**31.45**
1st sub-pillar: Access	101	49.33
2nd sub-pillar: Content	92	17.83
3rd sub-pillar: Future Technologies	91	27.19
B. People pillar	**91**	**35.63**
1st sub-pillar: Individuals	62	48.35
2nd sub-pillar: Businesses	111	28.92
3rd sub-pillar: Governments	92	29.62
C. Governance pillar	**106**	**41.18**
1st sub-pillar: Trust	117	19.16
2nd sub-pillar: Regulation	96	57.26
3rd sub-pillar: Inclusion	98	47.11
D. Impact pillar	**107**	**41.82**
1st sub-pillar: Economy	90	21.43
2nd sub-pillar: Quality of Life	102	52.69
3rd sub-pillar: SDG Contribution	106	51.33



The Network Readiness Index in detail

Indicator	Rank	Score	
A. Technology pillar	**97**	**31.45**	
1st sub-pillar: Access	101	49.33	
1.1.1 Mobile tariffs	76	57.75	
1.1.2 Handset prices	104	30.61	
1.1.3 FTTH/building Internet subscriptions	72	26.39	
1.1.4 Population covered by at least a 3G mobile network	75	99.36	
1.1.5 International Internet bandwidth	36	76.49	●
1.1.6 Internet access in schools	79	5.39	
2nd sub-pillar: Content	92	17.83	
1.2.1 GitHub commits	113	0.95	
1.2.2 Internet domain registrations	115	0.32	
1.2.3 Mobile apps development	102	50.98	
1.2.4 AI scientific publications	28	19.05	●
3rd sub-pillar: Future Technologies	91	27.19	
1.3.1 Adoption of emerging technologies	65	47.15	
1.3.2 Investment in emerging technologies	86	34.00	
1.3.3 Robot density	NA	NA	
1.3.4 Computer software spending	126	0.43	○
B. People pillar	**91**	**35.63**	
1st sub-pillar: Individuals	62	48.35	
2.1.1 Mobile broadband internet traffic within the country	32	27.02	●
2.1.2 ICT skills in the education system	45	56.62	●
2.1.3 Use of virtual social networks	87	49.07	
2.1.4 Tertiary enrollment	63	34.44	
2.1.5 Adult literacy rate	79	74.61	
2.1.6 AI talent concentration	NA	NA	
2nd sub-pillar: Businesses	111	28.92	
2.2.1 Firms with website	NA	NA	
2.2.2 GERD financed by business enterprise	80	8.34	
2.2.3 Knowledge intensive employment	80	24.62	
2.2.4 Annual investment in telecommunication services	42	81.81	●
2.2.5 GERD performed by business enterprise	75	0.91	
3rd sub-pillar: Governments	92	29.62	
2.3.1 Government online services	116	30.85	
2.3.2 Publication and use of open data	NA	NA	
2.3.3 Government promotion of investment in emerging tech	42	48.56	●
2.3.4 R&D expenditure by governments and higher education	59	9.45	

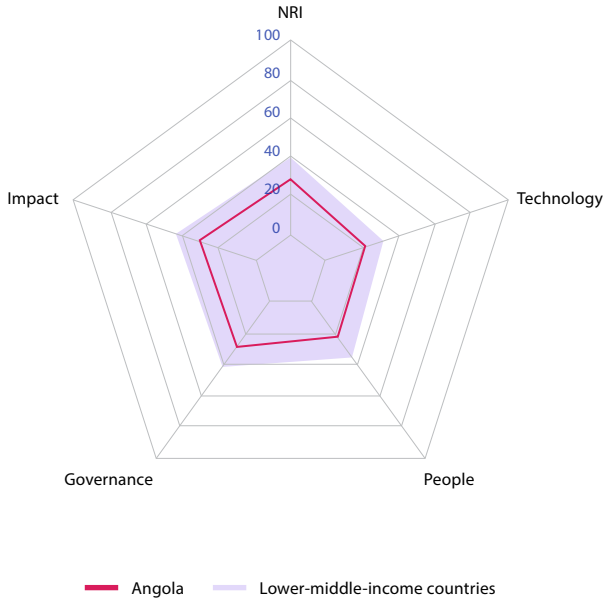
Indicator	Rank	Score	
C. Governance pillar	**106**	**41.18**	
1st sub-pillar: Trust	117	19.16	
3.1.1 Secure Internet servers	114	30.92	
3.1.2 Cybersecurity	105	32.79	
3.1.3 Online access to financial account	123	4.16	○
3.1.4 Internet shopping	98	8.78	
2nd sub-pillar: Regulation	96	57.26	
3.2.1 Regulatory quality	130	23.15	○
3.2.2 ICT regulatory environment	111	64.12	
3.2.3 Regulation of emerging technologies	NA	NA	
3.2.4 E-commerce legislation	1	100.00	●
3.2.5 Privacy protection by law content	114	41.77	
3rd sub-pillar: Inclusion	98	47.11	
3.3.1 E-Participation	122	20.94	
3.3.2 Socioeconomic gap in use of digital payments	116	41.78	
3.3.3 Availability of local online content	91	47.84	
3.3.4 Gender gap in Internet use	98	34.99	
3.3.5 Rural gap in use of digital payments	3	89.99	●
D. Impact pillar	**107**	**41.82**	
1st sub-pillar: Economy	90	21.43	
4.1.1 High-tech and medium-high-tech manufacturing	102	2.88	
4.1.2 High-tech exports	114	1.49	
4.1.3 PCT patent applications	79	1.23	
4.1.4 Domestic market size	40	61.99	●
4.1.5 Prevalence of gig economy	33	59.59	●
4.1.6 ICT services exports	123	1.42	
2nd sub-pillar: Quality of Life	102	52.69	
4.2.1 Happiness	87	53.28	
4.2.2 Freedom to make life choices	125	30.61	○
4.2.3 Income inequality	NA	NA	
4.2.4 Healthy life expectancy at birth	59	74.19	
3rd sub-pillar: SDG Contribution	106	51.33	
4.3.1 SDG 3: Good Health and Well-Being	50	76.52	●
4.3.2 SDG 4: Quality Education	74	11.28	○
4.3.3 SDG 5: Women's economic opportunity	124	39.82	
4.3.4 SDG 7: Affordable and Clean Energy	97	61.99	
4.3.5 SDG 11: Sustainable Cities and Communities	64	67.05	

NOTE: ● Indicates a strength and ○ a weakness.

Angola

	Rank (Out of 134)	Score
Network Readiness Index	**127**	**27.20**

Pillar/sub-pillar	Rank	Score
A. Technology pillar	**123**	**21.12**
1st sub-pillar: Access	110	44.38
2nd sub-pillar: Content	115	10.78
3rd sub-pillar: Future Technologies	133	8.21
B. People pillar	**120**	**24.88**
1st sub-pillar: Individuals	128	15.54
2nd sub-pillar: Businesses	76	42.33
3rd sub-pillar: Governments	118	16.77
C. Governance pillar	**127**	**31.00**
1st sub-pillar: Trust	120	17.58
2nd sub-pillar: Regulation	114	48.93
3rd sub-pillar: Inclusion	130	26.50
D. Impact pillar	**127**	**31.78**
1st sub-pillar: Economy	102	18.26
2nd sub-pillar: Quality of Life	133	22.93
3rd sub-pillar: SDG Contribution	98	54.15



The Network Readiness Index in detail

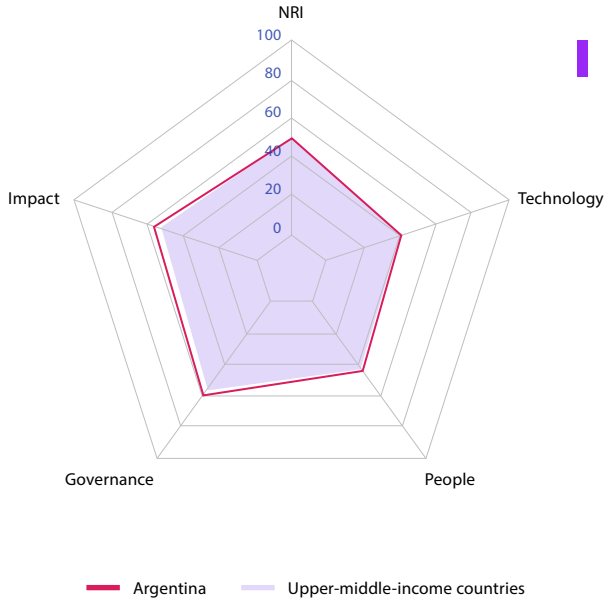
Indicator	Rank	Score	
A. Technology pillar	**123**	**21.12**	
1st sub-pillar: Access	110	44.38	
1.1.1 Mobile tariffs	106	34.76	
1.1.2 Handset prices	75	42.88	●
1.1.3 FTTH/building Internet subscriptions	71	26.42	●
1.1.4 Population covered by at least a 3G mobile network	110	95.38	
1.1.5 International Internet bandwidth	103	64.17	
1.1.6 Internet access in schools	81	2.70	
2nd sub-pillar: Content	115	10.78	
1.2.1 GitHub commits	126	0.35	
1.2.2 Internet domain registrations	129	0.08	○
1.2.3 Mobile apps development	110	42.61	
1.2.4 AI scientific publications	127	0.10	
3rd sub-pillar: Future Technologies	133	8.21	
1.3.1 Adoption of emerging technologies	121	16.41	
1.3.2 Investment in emerging technologies	132	0.00	○
1.3.3 Robot density	NA	NA	
1.3.4 Computer software spending	NA	NA	
B. People pillar	**120**	**24.88**	
1st sub-pillar: Individuals	128	15.54	
2.1.1 Mobile broadband internet traffic within the country	94	2.89	
2.1.2 ICT skills in the education system	106	0.00	○
2.1.3 Use of virtual social networks	120	7.33	
2.1.4 Tertiary enrollment	110	5.34	
2.1.5 Adult literacy rate	91	62.15	
2.1.6 AI talent concentration	NA	NA	
2nd sub-pillar: Businesses	76	42.33	
2.2.1 Firms with website	NA	NA	
2.2.2 GERD financed by business enterprise	NA	NA	
2.2.3 Knowledge intensive employment	113	7.73	
2.2.4 Annual investment in telecommunication services	74	76.93	●
2.2.5 GERD performed by business enterprise	NA	NA	
3rd sub-pillar: Governments	118	16.77	
2.3.1 Government online services	103	41.60	
2.3.2 Publication and use of open data	NA	NA	
2.3.3 Government promotion of investment in emerging tech	119	8.32	
2.3.4 R&D expenditure by governments and higher education	113	0.40	

Indicator	Rank	Score	
C. Governance pillar	**127**	**31.00**	
1st sub-pillar: Trust	120	17.58	
3.1.1 Secure Internet servers	122	23.70	
3.1.2 Cybersecurity	126	11.46	
3.1.3 Online access to financial account	NA	NA	
3.1.4 Internet shopping	NA	NA	
2nd sub-pillar: Regulation	114	48.93	
3.2.1 Regulatory quality	109	34.63	
3.2.2 ICT regulatory environment	88	72.59	●
3.2.3 Regulation of emerging technologies	117	1.82	
3.2.4 E-commerce legislation	87	66.67	
3.2.5 Privacy protection by law content	58	68.96	●
3rd sub-pillar: Inclusion	130	26.50	
3.3.1 E-Participation	128	15.12	○
3.3.2 Socioeconomic gap in use of digital payments	130	12.39	○
3.3.3 Availability of local online content	125	23.08	
3.3.4 Gender gap in Internet use	91	55.39	
3.3.5 Rural gap in use of digital payments	NA	NA	
D. Impact pillar	**127**	**31.78**	
1st sub-pillar: Economy	102	18.26	
4.1.1 High-tech and medium-high-tech manufacturing	106	1.48	
4.1.2 High-tech exports	13	48.70	●
4.1.3 PCT patent applications	99	0.00	○
4.1.4 Domestic market size	64	53.22	●
4.1.5 Prevalence of gig economy	122	5.23	
4.1.6 ICT services exports	128	0.90	○
2nd sub-pillar: Quality of Life	133	22.93	
4.2.1 Happiness	118	26.83	
4.2.2 Freedom to make life choices	130	0.00	○
4.2.3 Income inequality	108	29.40	
4.2.4 Healthy life expectancy at birth	120	35.51	
3rd sub-pillar: SDG Contribution	98	54.15	
4.3.1 SDG 3: Good Health and Well-Being	127	17.18	
4.3.2 SDG 4: Quality Education	NA	NA	
4.3.3 SDG 5: Women's economic opportunity	85	70.80	●
4.3.4 SDG 7: Affordable and Clean Energy	36	78.25	●
4.3.5 SDG 11: Sustainable Cities and Communities	89	50.37	●

NOTE: ● Indicates a strength and ○ a weakness.

Argentina

	Rank (Out of 134)	Score
Network Readiness Index	**61**	**49.78**
Pillar/sub-pillar	**Rank**	**Score**
A. Technology pillar	**71**	**39.53**
1st sub-pillar: Access	65	65.18
2nd sub-pillar: Content	60	24.37
3rd sub-pillar: Future Technologies	82	29.04
B. People pillar	**64**	**44.28**
1st sub-pillar: Individuals	86	42.83
2nd sub-pillar: Businesses	66	44.96
3rd sub-pillar: Governments	49	45.07
C. Governance pillar	**59**	**59.48**
1st sub-pillar: Trust	69	43.62
2nd sub-pillar: Regulation	68	65.12
3rd sub-pillar: Inclusion	49	69.69
D. Impact pillar	**53**	**55.82**
1st sub-pillar: Economy	53	33.64
2nd sub-pillar: Quality of Life	63	69.28
3rd sub-pillar: SDG Contribution	66	64.54



The Network Readiness Index in detail

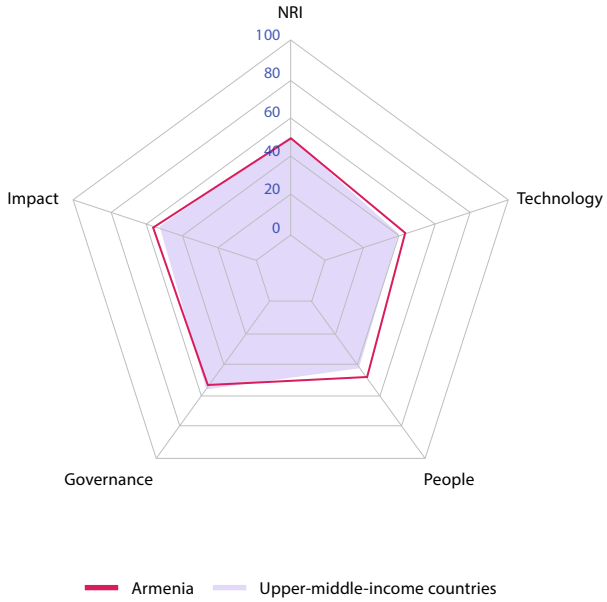
Indicator	Rank	Score	
A. Technology pillar	**71**	**39.53**	
1st sub-pillar: Access	65	65.18	
1.1.1 Mobile tariffs	50	71.25	
1.1.2 Handset prices	73	43.99	
1.1.3 FTTH/building Internet subscriptions	27	44.07	●
1.1.4 Population covered by at least a 3G mobile network	72	99.51	
1.1.5 International Internet bandwidth	48	74.56	
1.1.6 Internet access in schools	51	57.73	
2nd sub-pillar: Content	60	24.37	
1.2.1 GitHub commits	49	14.91	
1.2.2 Internet domain registrations	57	5.21	
1.2.3 Mobile apps development	58	68.49	
1.2.4 AI scientific publications	49	8.86	
3rd sub-pillar: Future Technologies	82	29.04	
1.3.1 Adoption of emerging technologies	51	51.97	
1.3.2 Investment in emerging technologies	85	34.50	
1.3.3 Robot density	40	3.31	
1.3.4 Computer software spending	47	26.37	
B. People pillar	**64**	**44.28**	
1st sub-pillar: Individuals	86	42.83	
2.1.1 Mobile broadband internet traffic within the country	43	17.62	
2.1.2 ICT skills in the education system	56	54.00	
2.1.3 Use of virtual social networks	34	75.27	●
2.1.4 Tertiary enrollment	5	65.10	
2.1.5 Adult literacy rate	NA	NA	
2.1.6 AI talent concentration	44	2.15	○
2nd sub-pillar: Businesses	66	44.96	
2.2.1 Firms with website	35	69.09	●
2.2.2 GERD financed by business enterprise	62	28.98	
2.2.3 Knowledge intensive employment	51	36.74	
2.2.4 Annual investment in telecommunication services	29	84.98	●
2.2.5 GERD performed by business enterprise	53	5.02	
3rd sub-pillar: Governments	49	45.07	
2.3.1 Government online services	38	78.88	●
2.3.2 Publication and use of open data	23	57.35	●
2.3.3 Government promotion of investment in emerging tech	72	34.85	
2.3.4 R&D expenditure by governments and higher education	60	9.19	

Indicator	Rank	Score	
C. Governance pillar	**59**	**59.48**	
1st sub-pillar: Trust	69	43.62	
3.1.1 Secure Internet servers	49	65.53	
3.1.2 Cybersecurity	95	49.24	○
3.1.3 Online access to financial account	76	22.93	
3.1.4 Internet shopping	53	36.76	
2nd sub-pillar: Regulation	68	65.12	
3.2.1 Regulatory quality	105	35.64	○
3.2.2 ICT regulatory environment	73	82.94	
3.2.3 Regulation of emerging technologies	77	35.58	
3.2.4 E-commerce legislation	1	100.00	●
3.2.5 Privacy protection by law content	50	71.46	
3rd sub-pillar: Inclusion	49	69.69	
3.3.1 E-Participation	51	63.95	
3.3.2 Socioeconomic gap in use of digital payments	54	81.47	
3.3.3 Availability of local online content	59	64.18	
3.3.4 Gender gap in Internet use	35	70.43	●
3.3.5 Rural gap in use of digital payments	53	68.43	
D. Impact pillar	**53**	**55.82**	
1st sub-pillar: Economy	53	33.64	
4.1.1 High-tech and medium-high-tech manufacturing	44	34.21	
4.1.2 High-tech exports	82	7.78	
4.1.3 PCT patent applications	NA	NA	
4.1.4 Domestic market size	28	68.79	●
4.1.5 Prevalence of gig economy	81	35.17	
4.1.6 ICT services exports	47	22.28	
2nd sub-pillar: Quality of Life	63	69.28	
4.2.1 Happiness	40	72.70	●
4.2.2 Freedom to make life choices	65	75.00	
4.2.3 Income inequality	88	52.76	○
4.2.4 Healthy life expectancy at birth	49	76.66	
3rd sub-pillar: SDG Contribution	66	64.54	
4.3.1 SDG 3: Good Health and Well-Being	54	73.93	
4.3.2 SDG 4: Quality Education	66	24.86	○
4.3.3 SDG 5: Women's economic opportunity	85	70.80	
4.3.4 SDG 7: Affordable and Clean Energy	45	76.08	
4.3.5 SDG 11: Sustainable Cities and Communities	44	77.02	

NOTE: ● Indicates a strength and ○ a weakness.

Armenia

	Rank (Out of 134)	Score
Network Readiness Index	**63**	**49.36**
Pillar/sub-pillar	**Rank**	**Score**
A. Technology pillar	**53**	**44.04**
1st sub-pillar: Access	62	66.35
2nd sub-pillar: Content	53	26.75
3rd sub-pillar: Future Technologies	48	39.01
B. People pillar	**61**	**45.50**
1st sub-pillar: Individuals	55	50.11
2nd sub-pillar: Businesses	73	43.21
3rd sub-pillar: Governments	53	43.18
C. Governance pillar	**77**	**51.63**
1st sub-pillar: Trust	90	33.96
2nd sub-pillar: Regulation	65	65.88
3rd sub-pillar: Inclusion	83	55.05
D. Impact pillar	**51**	**56.28**
1st sub-pillar: Economy	70	26.81
2nd sub-pillar: Quality of Life	54	72.56
3rd sub-pillar: SDG Contribution	55	69.46



The Network Readiness Index in detail

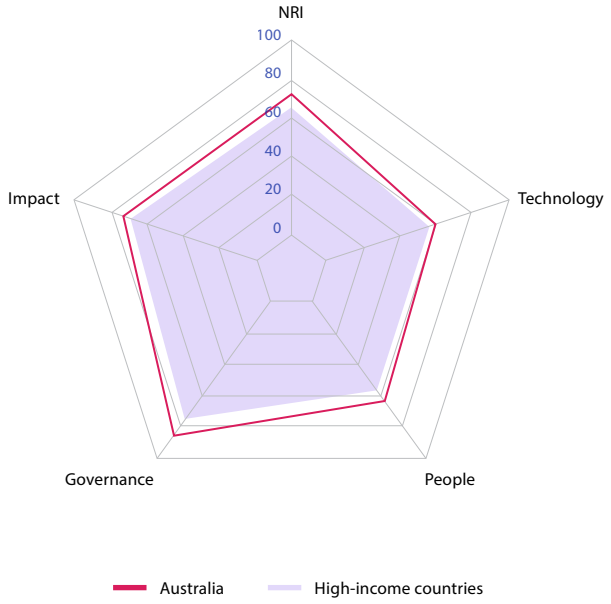
Indicator	Rank	Score	
A. Technology pillar	**53**	**44.04**	
1st sub-pillar: Access	62	66.35	
1.1.1 Mobile tariffs	64	61.49	
1.1.2 Handset prices	89	37.80	
1.1.3 FTTH/building Internet subscriptions	57	30.40	
1.1.4 Population covered by at least a 3G mobile network	1	100.00	●
1.1.5 International Internet bandwidth	85	68.42	
1.1.6 Internet access in schools	1	100.00	●
2nd sub-pillar: Content	53	26.75	
1.2.1 GitHub commits	36	27.89	●
1.2.2 Internet domain registrations	58	5.19	
1.2.3 Mobile apps development	39	72.52	●
1.2.4 AI scientific publications	97	1.39	
3rd sub-pillar: Future Technologies	48	39.01	
1.3.1 Adoption of emerging technologies	64	47.72	
1.3.2 Investment in emerging technologies	51	46.25	
1.3.3 Robot density	NA	NA	
1.3.4 Computer software spending	58	23.07	
B. People pillar	**61**	**45.50**	
1st sub-pillar: Individuals	55	50.11	
2.1.1 Mobile broadband internet traffic within the country	89	4.18	
2.1.2 ICT skills in the education system	66	48.65	
2.1.3 Use of virtual social networks	68	62.46	
2.1.4 Tertiary enrollment	59	35.56	
2.1.5 Adult literacy rate	9	99.71	●
2.1.6 AI talent concentration	NA	NA	
2nd sub-pillar: Businesses	73	43.21	
2.2.1 Firms with website	55	55.45	
2.2.2 GERD financed by business enterprise	71	20.64	
2.2.3 Knowledge intensive employment	75	25.95	
2.2.4 Annual investment in telecommunication services	113	70.79	○
2.2.5 GERD performed by business enterprise	NA	NA	
3rd sub-pillar: Governments	53	43.18	
2.3.1 Government online services	63	69.29	
2.3.2 Publication and use of open data	NA	NA	
2.3.3 Government promotion of investment in emerging tech	29	56.74	●
2.3.4 R&D expenditure by governments and higher education	89	3.53	

Indicator	Rank	Score	
C. Governance pillar	**77**	**51.63**	
1st sub-pillar: Trust	90	33.96	
3.1.1 Secure Internet servers	68	51.31	
3.1.2 Cybersecurity	94	49.60	
3.1.3 Online access to financial account	85	17.52	
3.1.4 Internet shopping	75	17.42	
2nd sub-pillar: Regulation	65	65.88	
3.2.1 Regulatory quality	63	52.88	
3.2.2 ICT regulatory environment	53	86.47	
3.2.3 Regulation of emerging technologies	41	59.48	●
3.2.4 E-commerce legislation	87	66.67	○
3.2.5 Privacy protection by law content	67	63.89	
3rd sub-pillar: Inclusion	83	55.05	
3.3.1 E-Participation	64	56.97	
3.3.2 Socioeconomic gap in use of digital payments	94	55.89	
3.3.3 Availability of local online content	71	59.38	
3.3.4 Gender gap in Internet use	2	84.45	●
3.3.5 Rural gap in use of digital payments	120	18.57	○
D. Impact pillar	**51**	**56.28**	
1st sub-pillar: Economy	70	26.81	
4.1.1 High-tech and medium-high-tech manufacturing	98	4.90	○
4.1.2 High-tech exports	71	10.56	
4.1.3 PCT patent applications	53	5.53	
4.1.4 Domestic market size	108	37.12	○
4.1.5 Prevalence of gig economy	58	44.48	
4.1.6 ICT services exports	9	58.31	●
2nd sub-pillar: Quality of Life	54	72.56	
4.2.1 Happiness	81	56.35	
4.2.2 Freedom to make life choices	77	69.08	
4.2.3 Income inequality	14	88.19	●
4.2.4 Healthy life expectancy at birth	50	76.63	
3rd sub-pillar: SDG Contribution	55	69.46	
4.3.1 SDG 3: Good Health and Well-Being	77	67.15	
4.3.2 SDG 4: Quality Education	NA	NA	
4.3.3 SDG 5: Women's economic opportunity	53	82.30	
4.3.4 SDG 7: Affordable and Clean Energy	52	75.14	
4.3.5 SDG 11: Sustainable Cities and Communities	85	53.25	

NOTE: ● Indicates a strength and ○ a weakness.

Australia

	Rank (Out of 134)	Score
Network Readiness Index	**14**	**70.36**
Pillar/sub-pillar	**Rank**	**Score**
A. Technology pillar	**18**	**59.97**
1st sub-pillar: Access	10	80.05
2nd sub-pillar: Content	12	55.08
3rd sub-pillar: Future Technologies	36	44.78
B. People pillar	**13**	**64.37**
1st sub-pillar: Individuals	28	55.68
2nd sub-pillar: Businesses	17	68.66
3rd sub-pillar: Governments	13	68.78
C. Governance pillar	**8**	**86.88**
1st sub-pillar: Trust	8	87.66
2nd sub-pillar: Regulation	9	88.04
3rd sub-pillar: Inclusion	7	84.96
D. Impact pillar	**19**	**70.23**
1st sub-pillar: Economy	23	43.75
2nd sub-pillar: Quality of Life	19	82.09
3rd sub-pillar: SDG Contribution	15	84.86



The Network Readiness Index in detail

Indicator	Rank	Score	
A. Technology pillar	**18**	**59.97**	
1st sub-pillar: Access	10	80.05	
1.1.1 Mobile tariffs	32	78.25	
1.1.2 Handset prices	6	91.51	●
1.1.3 FTTH/building Internet subscriptions	46	35.94	
1.1.4 Population covered by at least a 3G mobile network	50	99.84	
1.1.5 International Internet bandwidth	47	74.75	
1.1.6 Internet access in schools	1	100.00	●
2nd sub-pillar: Content	12	55.08	
1.2.1 GitHub commits	23	51.26	
1.2.2 Internet domain registrations	10	68.89	
1.2.3 Mobile apps development	37	72.73	
1.2.4 AI scientific publications	17	27.44	
3rd sub-pillar: Future Technologies	36	44.78	
1.3.1 Adoption of emerging technologies	15	82.33	
1.3.2 Investment in emerging technologies	24	65.75	
1.3.3 Robot density	27	10.74	
1.3.4 Computer software spending	67	20.28	○
B. People pillar	**13**	**64.37**	
1st sub-pillar: Individuals	28	55.68	
2.1.1 Mobile broadband internet traffic within the country	29	28.69	
2.1.2 ICT skills in the education system	10	82.28	
2.1.3 Use of virtual social networks	28	76.54	
2.1.4 Tertiary enrollment	3	75.24	
2.1.5 Adult literacy rate	NA	NA	
2.1.6 AI talent concentration	28	15.67	○
2nd sub-pillar: Businesses	17	68.66	
2.2.1 Firms with website	18	81.87	
2.2.2 GERD financed by business enterprise	NA	NA	
2.2.3 Knowledge intensive employment	8	79.39	●
2.2.4 Annual investment in telecommunication services	12	89.85	
2.2.5 GERD performed by business enterprise	24	23.52	
3rd sub-pillar: Governments	13	68.78	
2.3.1 Government online services	7	93.15	●
2.3.2 Publication and use of open data	3	98.53	●
2.3.3 Government promotion of investment in emerging tech	37	51.21	
2.3.4 R&D expenditure by governments and higher education	21	32.24	

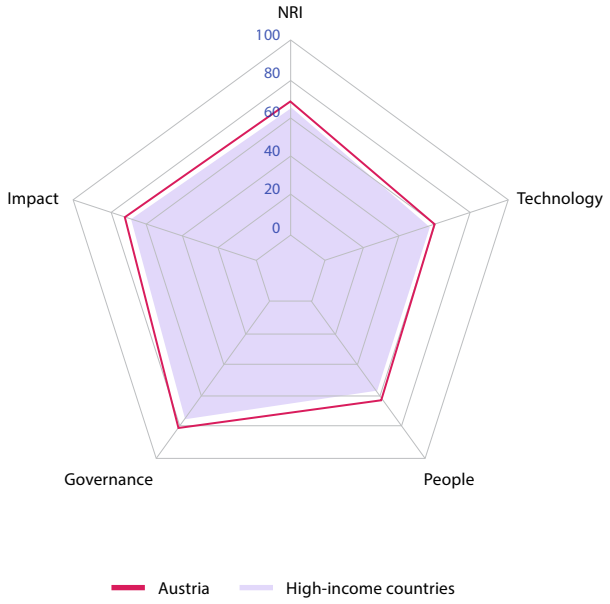
Indicator	Rank	Score	
C. Governance pillar	**8**	**86.88**	
1st sub-pillar: Trust	8	87.66	
3.1.1 Secure Internet servers	18	84.53	
3.1.2 Cybersecurity	17	97.43	
3.1.3 Online access to financial account	11	79.37	
3.1.4 Internet shopping	6	89.30	●
2nd sub-pillar: Regulation	9	88.04	
3.2.1 Regulatory quality	4	91.14	●
3.2.2 ICT regulatory environment	11	94.71	
3.2.3 Regulation of emerging technologies	22	74.29	
3.2.4 E-commerce legislation	1	100.00	●
3.2.5 Privacy protection by law content	33	80.07	
3rd sub-pillar: Inclusion	7	84.96	
3.3.1 E-Participation	2	98.83	●
3.3.2 Socioeconomic gap in use of digital payments	20	96.29	
3.3.3 Availability of local online content	9	93.03	●
3.3.4 Gender gap in Internet use	41	69.85	
3.3.5 Rural gap in use of digital payments	56	66.79	
D. Impact pillar	**19**	**70.23**	
1st sub-pillar: Economy	23	43.75	
4.1.1 High-tech and medium-high-tech manufacturing	49	30.35	
4.1.2 High-tech exports	17	40.37	
4.1.3 PCT patent applications	27	31.51	
4.1.4 Domestic market size	19	71.62	
4.1.5 Prevalence of gig economy	12	78.20	
4.1.6 ICT services exports	75	10.47	○
2nd sub-pillar: Quality of Life	19	82.09	
4.2.1 Happiness	12	87.09	
4.2.2 Freedom to make life choices	50	79.76	
4.2.3 Income inequality	45	72.11	
4.2.4 Healthy life expectancy at birth	22	89.42	
3rd sub-pillar: SDG Contribution	15	84.86	
4.3.1 SDG 3: Good Health and Well-Being	4	96.39	●
4.3.2 SDG 4: Quality Education	20	67.32	
4.3.3 SDG 5: Women's economic opportunity	20	95.58	
4.3.4 SDG 7: Affordable and Clean Energy	78	68.71	○
4.3.5 SDG 11: Sustainable Cities and Communities	9	96.29	

NOTE: ● Indicates a strength and ○ a weakness.

Austria

	Rank (Out of 134)	Score
Network Readiness Index	**17**	**69.13**

Pillar/sub-pillar	Rank	Score
A. Technology pillar	**16**	**60.19**
1st sub-pillar: Access	37	72.68
2nd sub-pillar: Content	17	49.86
3rd sub-pillar: Future Technologies	16	58.02
B. People pillar	**16**	**63.74**
1st sub-pillar: Individuals	46	51.71
2nd sub-pillar: Businesses	12	72.73
3rd sub-pillar: Governments	15	66.78
C. Governance pillar	**15**	**81.98**
1st sub-pillar: Trust	21	77.61
2nd sub-pillar: Regulation	15	86.60
3rd sub-pillar: Inclusion	15	81.73
D. Impact pillar	**18**	**70.61**
1st sub-pillar: Economy	22	43.79
2nd sub-pillar: Quality of Life	14	84.83
3rd sub-pillar: SDG Contribution	20	83.20



The Network Readiness Index in detail

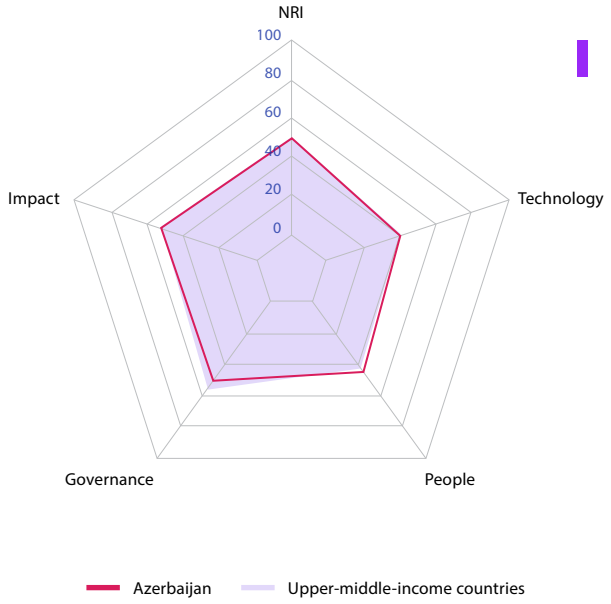
Indicator	Rank	Score	
A. Technology pillar	**16**	**60.19**	
1st sub-pillar: Access	37	72.68	
1.1.1 Mobile tariffs	15	86.50	
1.1.2 Handset prices	3	97.37	●
1.1.3 FTTH/building Internet subscriptions	103	12.10	○
1.1.4 Population covered by at least a 3G mobile network	76	99.34	○
1.1.5 International Internet bandwidth	86	68.07	○
1.1.6 Internet access in schools	NA	NA	
2nd sub-pillar: Content	17	49.86	
1.2.1 GitHub commits	15	60.80	
1.2.2 Internet domain registrations	13	58.08	●
1.2.3 Mobile apps development	52	70.83	
1.2.4 AI scientific publications	47	9.73	
3rd sub-pillar: Future Technologies	16	58.02	
1.3.1 Adoption of emerging technologies	21	74.59	
1.3.2 Investment in emerging technologies	26	64.25	
1.3.3 Robot density	14	29.87	
1.3.4 Computer software spending	8	63.38	●
B. People pillar	**16**	**63.74**	
1st sub-pillar: Individuals	46	51.71	
2.1.1 Mobile broadband internet traffic within the country	30	28.48	
2.1.2 ICT skills in the education system	34	66.53	
2.1.3 Use of virtual social networks	24	77.52	
2.1.4 Tertiary enrollment	15	57.03	
2.1.5 Adult literacy rate	NA	NA	
2.1.6 AI talent concentration	15	28.97	
2nd sub-pillar: Businesses	12	72.73	
2.2.1 Firms with website	4	94.14	●
2.2.2 GERD financed by business enterprise	27	62.56	
2.2.3 Knowledge intensive employment	24	67.62	
2.2.4 Annual investment in telecommunication services	37	82.49	
2.2.5 GERD performed by business enterprise	7	56.84	●
3rd sub-pillar: Governments	15	66.78	
2.3.1 Government online services	19	87.04	
2.3.2 Publication and use of open data	17	69.12	
2.3.3 Government promotion of investment in emerging tech	33	53.67	
2.3.4 R&D expenditure by governments and higher education	8	57.31	●

Indicator	Rank	Score	
C. Governance pillar	**15**	**81.98**	
1st sub-pillar: Trust	21	77.61	
3.1.1 Secure Internet servers	22	83.21	
3.1.2 Cybersecurity	36	93.78	
3.1.3 Online access to financial account	22	59.89	
3.1.4 Internet shopping	20	73.57	
2nd sub-pillar: Regulation	15	86.60	
3.2.1 Regulatory quality	20	80.07	
3.2.2 ICT regulatory environment	38	88.82	
3.2.3 Regulation of emerging technologies	13	80.78	
3.2.4 E-commerce legislation	1	100.00	●
3.2.5 Privacy protection by law content	24	83.33	
3rd sub-pillar: Inclusion	15	81.73	
3.3.1 E-Participation	21	76.74	
3.3.2 Socioeconomic gap in use of digital payments	10	98.14	●
3.3.3 Availability of local online content	23	85.34	
3.3.4 Gender gap in Internet use	51	68.92	
3.3.5 Rural gap in use of digital payments	7	79.51	●
D. Impact pillar	**18**	**70.61**	
1st sub-pillar: Economy	22	43.79	
4.1.1 High-tech and medium-high-tech manufacturing	19	57.18	
4.1.2 High-tech exports	38	24.74	
4.1.3 PCT patent applications	12	53.52	●
4.1.4 Domestic market size	41	61.97	
4.1.5 Prevalence of gig economy	79	35.47	○
4.1.6 ICT services exports	30	29.86	
2nd sub-pillar: Quality of Life	14	84.83	
4.2.1 Happiness	13	86.42	●
4.2.2 Freedom to make life choices	48	80.04	
4.2.3 Income inequality	24	83.42	
4.2.4 Healthy life expectancy at birth	21	89.44	
3rd sub-pillar: SDG Contribution	20	83.20	
4.3.1 SDG 3: Good Health and Well-Being	26	88.39	
4.3.2 SDG 4: Quality Education	27	64.07	
4.3.3 SDG 5: Women's economic opportunity	20	95.58	
4.3.4 SDG 7: Affordable and Clean Energy	28	79.84	
4.3.5 SDG 11: Sustainable Cities and Communities	23	88.14	

NOTE: ● Indicates a strength and ○ a weakness.

Azerbaijan

	Rank (Out of 134)	Score
Network Readiness Index	**75**	**45.57**
Pillar/sub-pillar	**Rank**	**Score**
A. Technology pillar	**62**	**41.37**
1st sub-pillar: Access	72	62.69
2nd sub-pillar: Content	98	16.46
3rd sub-pillar: Future Technologies	35	44.98
B. People pillar	**72**	**42.13**
1st sub-pillar: Individuals	89	41.16
2nd sub-pillar: Businesses	77	41.98
3rd sub-pillar: Governments	52	43.25
C. Governance pillar	**88**	**48.46**
1st sub-pillar: Trust	76	37.95
2nd sub-pillar: Regulation	103	55.44
3rd sub-pillar: Inclusion	90	52.00
D. Impact pillar	**84**	**50.30**
1st sub-pillar: Economy	81	23.67
2nd sub-pillar: Quality of Life	78	65.77
3rd sub-pillar: SDG Contribution	72	61.48



The Network Readiness Index in detail

Indicator	Rank	Score	
A. Technology pillar	**62**	**41.37**	
1st sub-pillar: Access	72	62.69	
1.1.1 Mobile tariffs	55	67.28	
1.1.2 Handset prices	79	41.13	
1.1.3 FTTH/building Internet subscriptions	60	30.16	
1.1.4 Population covered by at least a 3G mobile network	40	99.93	●
1.1.5 International Internet bandwidth	54	73.31	
1.1.6 Internet access in schools	48	64.32	
2nd sub-pillar: Content	98	16.46	
1.2.1 GitHub commits	74	4.40	
1.2.2 Internet domain registrations	93	1.38	
1.2.3 Mobile apps development	92	57.73	
1.2.4 AI scientific publications	84	2.31	
3rd sub-pillar: Future Technologies	35	44.98	
1.3.1 Adoption of emerging technologies	34	62.72	●
1.3.2 Investment in emerging technologies	23	67.00	●
1.3.3 Robot density	NA	NA	
1.3.4 Computer software spending	101	5.21	
B. People pillar	**72**	**42.13**	
1st sub-pillar: Individuals	89	41.16	
2.1.1 Mobile broadband internet traffic within the country	88	4.47	
2.1.2 ICT skills in the education system	NA	NA	
2.1.3 Use of virtual social networks	100	36.46	
2.1.4 Tertiary enrollment	78	23.97	
2.1.5 Adult literacy rate	8	99.72	●
2.1.6 AI talent concentration	NA	NA	
2nd sub-pillar: Businesses	77	41.98	
2.2.1 Firms with website	41	65.50	●
2.2.2 GERD financed by business enterprise	56	38.07	
2.2.3 Knowledge intensive employment	59	33.37	
2.2.4 Annual investment in telecommunication services	101	72.85	
2.2.5 GERD performed by business enterprise	87	0.09	○
3rd sub-pillar: Governments	52	43.25	
2.3.1 Government online services	81	57.11	
2.3.2 Publication and use of open data	NA	NA	
2.3.3 Government promotion of investment in emerging tech	20	69.05	●
2.3.4 R&D expenditure by governments and higher education	88	3.59	

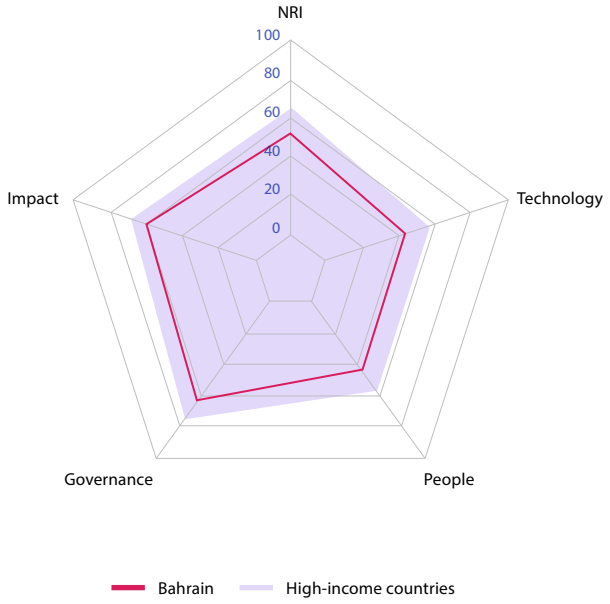
Indicator	Rank	Score	
C. Governance pillar	**88**	**48.46**	
1st sub-pillar: Trust	76	37.95	
3.1.1 Secure Internet servers	84	45.49	
3.1.2 Cybersecurity	48	89.12	●
3.1.3 Online access to financial account	117	6.93	○
3.1.4 Internet shopping	90	10.25	
2nd sub-pillar: Regulation	103	55.44	
3.2.1 Regulatory quality	73	48.25	
3.2.2 ICT regulatory environment	117	59.41	○
3.2.3 Regulation of emerging technologies	NA	NA	
3.2.4 E-commerce legislation	87	66.67	○
3.2.5 Privacy protection by law content	102	47.42	
3rd sub-pillar: Inclusion	90	52.00	
3.3.1 E-Participation	89	37.21	
3.3.2 Socioeconomic gap in use of digital payments	98	54.39	
3.3.3 Availability of local online content	24	85.10	●
3.3.4 Gender gap in Internet use	78	62.58	
3.3.5 Rural gap in use of digital payments	118	20.72	○
D. Impact pillar	**84**	**50.30**	
1st sub-pillar: Economy	81	23.67	
4.1.1 High-tech and medium-high-tech manufacturing	83	13.66	
4.1.2 High-tech exports	97	3.56	
4.1.3 PCT patent applications	85	0.92	
4.1.4 Domestic market size	74	50.08	
4.1.5 Prevalence of gig economy	16	70.06	●
4.1.6 ICT services exports	103	3.72	
2nd sub-pillar: Quality of Life	78	65.77	
4.2.1 Happiness	89	52.47	
4.2.2 Freedom to make life choices	49	79.84	
4.2.3 Income inequality	NA	NA	
4.2.4 Healthy life expectancy at birth	90	65.00	
3rd sub-pillar: SDG Contribution	72	61.48	
4.3.1 SDG 3: Good Health and Well-Being	87	60.63	
4.3.2 SDG 4: Quality Education	62	27.81	
4.3.3 SDG 5: Women's economic opportunity	88	69.91	
4.3.4 SDG 7: Affordable and Clean Energy	76	69.22	
4.3.5 SDG 11: Sustainable Cities and Communities	38	79.80	●

NOTE: ● Indicates a strength and ○ a weakness.

Bahrain

	Rank (Out of 134)	Score
Network Readiness Index	**51**	**52.48**

Pillar/sub-pillar	Rank	Score
A. Technology pillar	**54**	**43.90**
1st sub-pillar: Access	59	67.00
2nd sub-pillar: Content	93	17.82
3rd sub-pillar: Future Technologies	31	46.87
B. People pillar	**62**	**45.18**
1st sub-pillar: Individuals	9	61.42
2nd sub-pillar: Businesses	98	33.41
3rd sub-pillar: Governments	61	40.71
C. Governance pillar	**53**	**63.45**
1st sub-pillar: Trust	62	48.66
2nd sub-pillar: Regulation	51	70.80
3rd sub-pillar: Inclusion	47	70.88
D. Impact pillar	**47**	**57.41**
1st sub-pillar: Economy	68	27.07
2nd sub-pillar: Quality of Life	29	79.50
3rd sub-pillar: SDG Contribution	61	65.66



The Network Readiness Index in detail

Indicator	Rank	Score	
A. Technology pillar	**54**	**43.90**	
1st sub-pillar: Access	59	67.00	
1.1.1 Mobile tariffs	77	56.01	
1.1.2 Handset prices	50	57.39	
1.1.3 FTTH/building Internet subscriptions	101	13.35	
1.1.4 Population covered by at least a 3G mobile network	1	100.00	●
1.1.5 International Internet bandwidth	44	75.24	
1.1.6 Internet access in schools	1	100.00	●
2nd sub-pillar: Content	93	17.82	
1.2.1 GitHub commits	60	8.40	
1.2.2 Internet domain registrations	72	3.28	
1.2.3 Mobile apps development	88	59.20	
1.2.4 AI scientific publications	118	0.40	○
3rd sub-pillar: Future Technologies	31	46.87	
1.3.1 Adoption of emerging technologies	30	65.71	
1.3.2 Investment in emerging technologies	NA	NA	
1.3.3 Robot density	NA	NA	
1.3.4 Computer software spending	45	28.03	
B. People pillar	**62**	**45.18**	
1st sub-pillar: Individuals	9	61.42	
2.1.1 Mobile broadband internet traffic within the country	64	9.99	
2.1.2 ICT skills in the education system	24	72.08	
2.1.3 Use of virtual social networks	2	93.84	●
2.1.4 Tertiary enrollment	48	41.72	
2.1.5 Adult literacy rate	60	89.49	
2.1.6 AI talent concentration	NA	NA	
2nd sub-pillar: Businesses	98	33.41	
2.2.1 Firms with website	NA	NA	
2.2.2 GERD financed by business enterprise	65	26.93	
2.2.3 Knowledge intensive employment	65	31.21	
2.2.4 Annual investment in telecommunication services	87	74.99	
2.2.5 GERD performed by business enterprise	79	0.51	○
3rd sub-pillar: Governments	61	40.71	
2.3.1 Government online services	54	72.62	
2.3.2 Publication and use of open data	76	17.65	
2.3.3 Government promotion of investment in emerging tech	18	70.91	●
2.3.4 R&D expenditure by governments and higher education	105	1.64	○

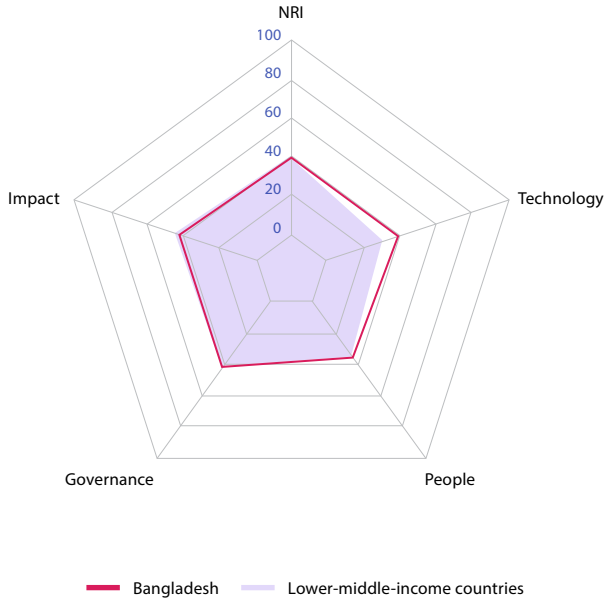
Indicator	Rank	Score	
C. Governance pillar	**53**	**63.45**	
1st sub-pillar: Trust	62	48.66	
3.1.1 Secure Internet servers	73	48.77	
3.1.2 Cybersecurity	68	77.47	
3.1.3 Online access to financial account	46	40.00	
3.1.4 Internet shopping	61	28.38	
2nd sub-pillar: Regulation	51	70.80	
3.2.1 Regulatory quality	35	68.78	
3.2.2 ICT regulatory environment	64	84.12	
3.2.3 Regulation of emerging technologies	19	76.36	●
3.2.4 E-commerce legislation	1	100.00	●
3.2.5 Privacy protection by law content	125	24.72	○
3rd sub-pillar: Inclusion	47	70.88	
3.3.1 E-Participation	85	43.03	
3.3.2 Socioeconomic gap in use of digital payments	66	75.64	
3.3.3 Availability of local online content	14	88.94	●
3.3.4 Gender gap in Internet use	26	71.55	
3.3.5 Rural gap in use of digital payments	26	75.26	●
D. Impact pillar	**47**	**57.41**	
1st sub-pillar: Economy	68	27.07	
4.1.1 High-tech and medium-high-tech manufacturing	91	10.40	
4.1.2 High-tech exports	81	7.82	
4.1.3 PCT patent applications	63	3.21	
4.1.4 Domestic market size	92	42.98	
4.1.5 Prevalence of gig economy	25	63.66	●
4.1.6 ICT services exports	25	34.35	●
2nd sub-pillar: Quality of Life	29	79.50	
4.2.1 Happiness	45	71.06	
4.2.2 Freedom to make life choices	6	94.98	●
4.2.3 Income inequality	NA	NA	
4.2.4 Healthy life expectancy at birth	67	72.47	
3rd sub-pillar: SDG Contribution	61	65.66	
4.3.1 SDG 3: Good Health and Well-Being	63	70.70	
4.3.2 SDG 4: Quality Education	NA	NA	
4.3.3 SDG 5: Women's economic opportunity	114	54.87	
4.3.4 SDG 7: Affordable and Clean Energy	126	40.61	○
4.3.5 SDG 11: Sustainable Cities and Communities	8	96.47	●

NOTE: ● Indicates a strength and ○ a weakness.

Bangladesh

	Rank (Out of 134)	Score
Network Readiness Index	**91**	**41.04**

Pillar/sub-pillar	Rank	Score
A. Technology pillar	**78**	**38.23**
1st sub-pillar: Access	58	67.04
2nd sub-pillar: Content	66	22.90
3rd sub-pillar: Future Technologies	100	24.75
B. People pillar	**90**	**35.85**
1st sub-pillar: Individuals	101	36.27
2nd sub-pillar: Businesses	96	35.17
3rd sub-pillar: Governments	73	36.12
C. Governance pillar	**100**	**45.94**
1st sub-pillar: Trust	87	34.28
2nd sub-pillar: Regulation	116	46.96
3rd sub-pillar: Inclusion	80	56.57
D. Impact pillar	**101**	**44.14**
1st sub-pillar: Economy	88	21.56
2nd sub-pillar: Quality of Life	90	61.31
3rd sub-pillar: SDG Contribution	115	49.56



The Network Readiness Index in detail

Indicator	Rank	Score	
A. Technology pillar	**78**	**38.23**	
1st sub-pillar: Access	58	67.04	
1.1.1 Mobile tariffs	44	72.17	●
1.1.2 Handset prices	108	29.45	
1.1.3 FTTH/building Internet subscriptions	5	71.36	●
1.1.4 Population covered by at least a 3G mobile network	74	99.44	
1.1.5 International Internet bandwidth	24	80.53	●
1.1.6 Internet access in schools	52	49.30	
2nd sub-pillar: Content	66	22.90	
1.2.1 GitHub commits	97	2.31	
1.2.2 Internet domain registrations	119	0.22	
1.2.3 Mobile apps development	65	65.49	
1.2.4 AI scientific publications	19	23.59	●
3rd sub-pillar: Future Technologies	100	24.75	
1.3.1 Adoption of emerging technologies	107	27.75	
1.3.2 Investment in emerging technologies	99	29.00	
1.3.3 Robot density	NA	NA	
1.3.4 Computer software spending	75	17.51	
B. People pillar	**90**	**35.85**	
1st sub-pillar: Individuals	101	36.27	
2.1.1 Mobile broadband internet traffic within the country	21	36.94	●
2.1.2 ICT skills in the education system	77	40.77	
2.1.3 Use of virtual social networks	106	22.78	
2.1.4 Tertiary enrollment	91	15.10	
2.1.5 Adult literacy rate	88	65.74	
2.1.6 AI talent concentration	NA	NA	
2nd sub-pillar: Businesses	96	35.17	
2.2.1 Firms with website	98	18.83	
2.2.2 GERD financed by business enterprise	NA	NA	
2.2.3 Knowledge intensive employment	110	9.07	
2.2.4 Annual investment in telecommunication services	69	77.59	
2.2.5 GERD performed by business enterprise	NA	NA	
3rd sub-pillar: Governments	73	36.12	
2.3.1 Government online services	74	61.55	
2.3.2 Publication and use of open data	86	11.76	
2.3.3 Government promotion of investment in emerging tech	71	35.04	
2.3.4 R&D expenditure by governments and higher education	NA	NA	

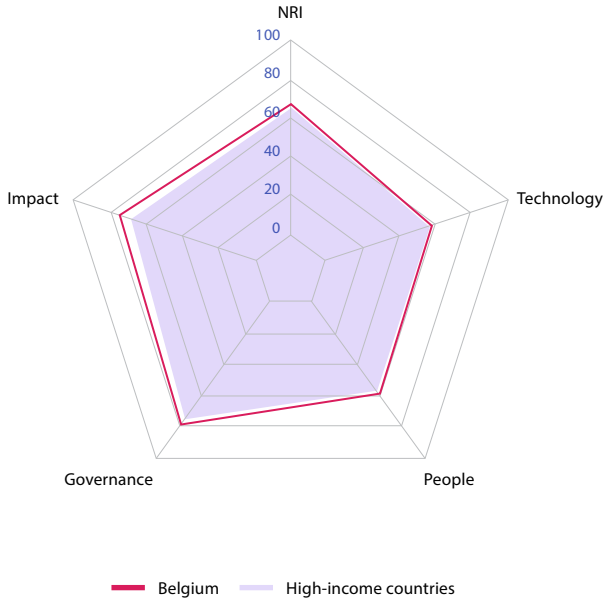
Indicator	Rank	Score	
C. Governance pillar	**100**	**45.94**	
1st sub-pillar: Trust	87	34.28	
3.1.1 Secure Internet servers	97	39.30	
3.1.2 Cybersecurity	61	80.94	
3.1.3 Online access to financial account	97	14.08	
3.1.4 Internet shopping	119	2.79	○
2nd sub-pillar: Regulation	116	46.96	
3.2.1 Regulatory quality	117	30.50	
3.2.2 ICT regulatory environment	117	59.41	
3.2.3 Regulation of emerging technologies	91	28.83	
3.2.4 E-commerce legislation	87	66.67	
3.2.5 Privacy protection by law content	100	49.40	
3rd sub-pillar: Inclusion	80	56.57	
3.3.1 E-Participation	74	51.16	
3.3.2 Socioeconomic gap in use of digital payments	53	82.35	
3.3.3 Availability of local online content	88	50.00	
3.3.4 Gender gap in Internet use	100	25.62	○
3.3.5 Rural gap in use of digital payments	36	73.73	●
D. Impact pillar	**101**	**44.14**	
1st sub-pillar: Economy	88	21.56	
4.1.1 High-tech and medium-high-tech manufacturing	97	6.06	
4.1.2 High-tech exports	127	0.31	○
4.1.3 PCT patent applications	NA	NA	
4.1.4 Domestic market size	24	69.84	●
4.1.5 Prevalence of gig economy	103	24.42	
4.1.6 ICT services exports	90	7.18	
2nd sub-pillar: Quality of Life	90	61.31	
4.2.1 Happiness	124	19.62	○
4.2.2 Freedom to make life choices	43	81.56	●
4.2.3 Income inequality	32	76.88	●
4.2.4 Healthy life expectancy at birth	84	67.17	
3rd sub-pillar: SDG Contribution	115	49.56	
4.3.1 SDG 3: Good Health and Well-Being	109	36.88	
4.3.2 SDG 4: Quality Education	NA	NA	
4.3.3 SDG 5: Women's economic opportunity	127	28.32	○
4.3.4 SDG 7: Affordable and Clean Energy	15	82.30	●
4.3.5 SDG 11: Sustainable Cities and Communities	88	50.75	

NOTE: ● Indicates a strength and ○ a weakness.

Belgium

	Rank (Out of 134)	Score
Network Readiness Index	**21**	**67.02**

Pillar/sub-pillar	Rank	Score
A. Technology pillar	**21**	**57.11**
1st sub-pillar: Access	36	72.75
2nd sub-pillar: Content	23	45.17
3rd sub-pillar: Future Technologies	21	53.41
B. People pillar	**20**	**59.10**
1st sub-pillar: Individuals	90	41.13
2nd sub-pillar: Businesses	4	78.33
3rd sub-pillar: Governments	21	57.84
C. Governance pillar	**23**	**79.40**
1st sub-pillar: Trust	14	82.15
2nd sub-pillar: Regulation	24	81.79
3rd sub-pillar: Inclusion	39	74.27
D. Impact pillar	**13**	**72.47**
1st sub-pillar: Economy	21	45.60
2nd sub-pillar: Quality of Life	8	87.67
3rd sub-pillar: SDG Contribution	17	84.14



The Network Readiness Index in detail

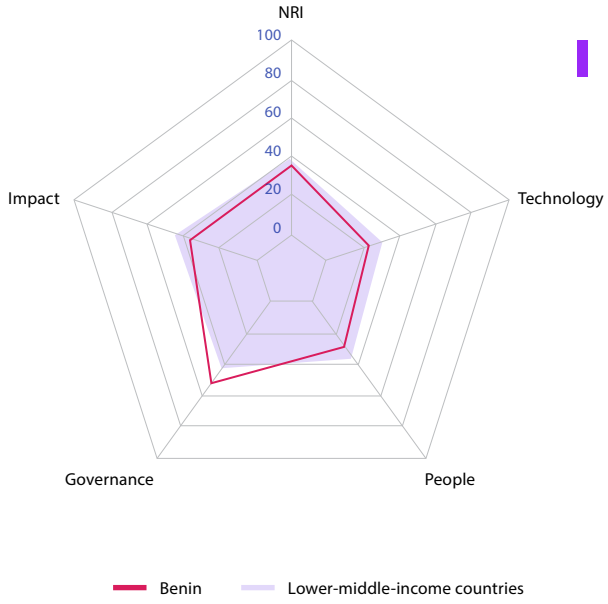
Indicator	Rank	Score	
A. Technology pillar	**21**	**57.11**	
1st sub-pillar: Access	36	72.75	
1.1.1 Mobile tariffs	28	80.45	
1.1.2 Handset prices	32	69.58	
1.1.3 FTTH/building Internet subscriptions	104	12.03	○
1.1.4 Population covered by at least a 3G mobile network	1	100.00	●
1.1.5 International Internet bandwidth	49	74.45	
1.1.6 Internet access in schools	1	100.00	●
2nd sub-pillar: Content	23	45.17	
1.2.1 GitHub commits	17	57.73	
1.2.2 Internet domain registrations	17	47.69	
1.2.3 Mobile apps development	80	62.20	○
1.2.4 AI scientific publications	39	13.05	
3rd sub-pillar: Future Technologies	21	53.41	
1.3.1 Adoption of emerging technologies	NA	NA	
1.3.2 Investment in emerging technologies	21	67.50	
1.3.3 Robot density	15	29.47	
1.3.4 Computer software spending	10	63.25	●
B. People pillar	**20**	**59.10**	
1st sub-pillar: Individuals	90	41.13	
2.1.1 Mobile broadband internet traffic within the country	62	10.21	
2.1.2 ICT skills in the education system	42	57.43	
2.1.3 Use of virtual social networks	29	76.44	
2.1.4 Tertiary enrollment	22	52.76	
2.1.5 Adult literacy rate	NA	NA	
2.1.6 AI talent concentration	37	8.80	○
2nd sub-pillar: Businesses	4	78.33	
2.2.1 Firms with website	7	89.09	●
2.2.2 GERD financed by business enterprise	8	79.53	●
2.2.3 Knowledge intensive employment	12	75.62	●
2.2.4 Annual investment in telecommunication services	27	85.31	
2.2.5 GERD performed by business enterprise	5	62.12	●
3rd sub-pillar: Governments	21	57.84	
2.3.1 Government online services	67	65.73	
2.3.2 Publication and use of open data	27	50.00	
2.3.3 Government promotion of investment in emerging tech	NA	NA	
2.3.4 R&D expenditure by governments and higher education	6	57.79	●

Indicator	Rank	Score	
C. Governance pillar	**23**	**79.40**	
1st sub-pillar: Trust	14	82.15	
3.1.1 Secure Internet servers	28	80.55	
3.1.2 Cybersecurity	26	96.18	
3.1.3 Online access to financial account	13	73.15	●
3.1.4 Internet shopping	16	78.72	
2nd sub-pillar: Regulation	24	81.79	
3.2.1 Regulatory quality	22	79.93	
3.2.2 ICT regulatory environment	26	92.94	
3.2.3 Regulation of emerging technologies	8	82.34	●
3.2.4 E-commerce legislation	87	66.67	○
3.2.5 Privacy protection by law content	16	87.07	
3rd sub-pillar: Inclusion	39	74.27	
3.3.1 E-Participation	82	44.18	○
3.3.2 Socioeconomic gap in use of digital payments	23	95.02	
3.3.3 Availability of local online content	25	84.62	
3.3.4 Gender gap in Internet use	45	69.45	
3.3.5 Rural gap in use of digital payments	10	78.08	●
D. Impact pillar	**13**	**72.47**	
1st sub-pillar: Economy	21	45.60	
4.1.1 High-tech and medium-high-tech manufacturing	18	57.40	
4.1.2 High-tech exports	26	33.02	
4.1.3 PCT patent applications	17	45.05	
4.1.4 Domestic market size	36	63.80	
4.1.5 Prevalence of gig economy	NA	NA	
4.1.6 ICT services exports	32	28.74	
2nd sub-pillar: Quality of Life	8	87.67	
4.2.1 Happiness	18	83.78	
4.2.2 Freedom to make life choices	30	85.77	
4.2.3 Income inequality	5	92.96	●
4.2.4 Healthy life expectancy at birth	26	88.15	
3rd sub-pillar: SDG Contribution	17	84.14	
4.3.1 SDG 3: Good Health and Well-Being	15	93.69	
4.3.2 SDG 4: Quality Education	19	67.69	
4.3.3 SDG 5: Women's economic opportunity	1	100.00	●
4.3.4 SDG 7: Affordable and Clean Energy	64	72.54	
4.3.5 SDG 11: Sustainable Cities and Communities	28	86.75	

NOTE: ● Indicates a strength and ○ a weakness.

Benin

	Rank (Out of 134)	Score
Network Readiness Index	**111**	**33.87**
Pillar/sub-pillar	**Rank**	**Score**
A. Technology pillar	**121**	**22.49**
1st sub-pillar: Access	114	42.56
2nd sub-pillar: Content	118	7.39
3rd sub-pillar: Future Technologies	120	17.52
B. People pillar	**113**	**27.88**
1st sub-pillar: Individuals	127	17.33
2nd sub-pillar: Businesses	88	36.91
3rd sub-pillar: Governments	93	29.39
C. Governance pillar	**90**	**48.29**
1st sub-pillar: Trust	86	34.30
2nd sub-pillar: Regulation	62	66.89
3rd sub-pillar: Inclusion	107	43.67
D. Impact pillar	**117**	**36.81**
1st sub-pillar: Economy	105	17.41
2nd sub-pillar: Quality of Life	114	48.07
3rd sub-pillar: SDG Contribution	121	44.96



The Network Readiness Index in detail

Indicator	Rank	Score	
A. Technology pillar	**121**	**22.49**	
1st sub-pillar: Access	114	42.56	
1.1.1 Mobile tariffs	120	21.44	
1.1.2 Handset prices	111	27.99	
1.1.3 FTTH/building Internet subscriptions	114	6.45	
1.1.4 Population covered by at least a 3G mobile network	122	92.27	
1.1.5 International Internet bandwidth	99	64.66	
1.1.6 Internet access in schools	NA	NA	
2nd sub-pillar: Content	118	7.39	
1.2.1 GitHub commits	115	0.88	
1.2.2 Internet domain registrations	114	0.33	
1.2.3 Mobile apps development	117	26.89	○
1.2.4 AI scientific publications	96	1.45	
3rd sub-pillar: Future Technologies	120	17.52	
1.3.1 Adoption of emerging technologies	110	26.30	
1.3.2 Investment in emerging technologies	116	22.00	
1.3.3 Robot density	NA	NA	
1.3.4 Computer software spending	103	4.26	
B. People pillar	**113**	**27.88**	
1st sub-pillar: Individuals	127	17.33	
2.1.1 Mobile broadband internet traffic within the country	91	3.34	
2.1.2 ICT skills in the education system	72	44.85	
2.1.3 Use of virtual social networks	122	6.74	
2.1.4 Tertiary enrollment	109	5.65	
2.1.5 Adult literacy rate	103	26.05	○
2.1.6 AI talent concentration	NA	NA	
2nd sub-pillar: Businesses	88	36.91	
2.2.1 Firms with website	88	33.27	
2.2.2 GERD financed by business enterprise	NA	NA	
2.2.3 Knowledge intensive employment	117	5.39	
2.2.4 Annual investment in telecommunication services	103	72.07	
2.2.5 GERD performed by business enterprise	NA	NA	
3rd sub-pillar: Governments	93	29.39	
2.3.1 Government online services	94	47.45	
2.3.2 Publication and use of open data	96	7.35	
2.3.3 Government promotion of investment in emerging tech	79	33.36	●
2.3.4 R&D expenditure by governments and higher education	NA	NA	

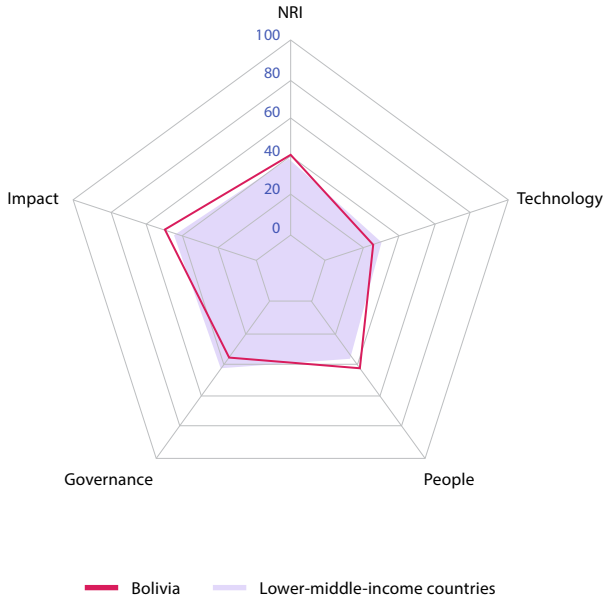
Indicator	Rank	Score	
C. Governance pillar	**90**	**48.29**	
1st sub-pillar: Trust	86	34.30	
3.1.1 Secure Internet servers	123	22.89	
3.1.2 Cybersecurity	64	79.71	●
3.1.3 Online access to financial account	62	30.59	●
3.1.4 Internet shopping	114	4.03	
2nd sub-pillar: Regulation	62	66.89	
3.2.1 Regulatory quality	93	39.85	
3.2.2 ICT regulatory environment	110	64.71	
3.2.3 Regulation of emerging technologies	62	44.68	●
3.2.4 E-commerce legislation	1	100.00	●
3.2.5 Privacy protection by law content	20	85.19	●
3rd sub-pillar: Inclusion	107	43.67	
3.3.1 E-Participation	98	32.56	
3.3.2 Socioeconomic gap in use of digital payments	89	58.72	
3.3.3 Availability of local online content	113	29.57	
3.3.4 Gender gap in Internet use	NA	NA	
3.3.5 Rural gap in use of digital payments	84	53.85	●
D. Impact pillar	**117**	**36.81**	
1st sub-pillar: Economy	105	17.41	
4.1.1 High-tech and medium-high-tech manufacturing	NA	NA	
4.1.2 High-tech exports	89	4.77	
4.1.3 PCT patent applications	88	0.77	
4.1.4 Domestic market size	105	37.92	
4.1.5 Prevalence of gig economy	60	43.60	●
4.1.6 ICT services exports	134	0.00	○
2nd sub-pillar: Quality of Life	114	48.07	
4.2.1 Happiness	111	34.69	
4.2.2 Freedom to make life choices	103	56.50	
4.2.3 Income inequality	65	63.32	●
4.2.4 Healthy life expectancy at birth	118	37.78	
3rd sub-pillar: SDG Contribution	121	44.96	
4.3.1 SDG 3: Good Health and Well-Being	129	16.39	○
4.3.2 SDG 4: Quality Education	NA	NA	
4.3.3 SDG 5: Women's economic opportunity	69	76.99	●
4.3.4 SDG 7: Affordable and Clean Energy	107	56.29	
4.3.5 SDG 11: Sustainable Cities and Communities	123	30.17	○

NOTE: ● Indicates a strength and ○ a weakness.

Bolivia

	Rank (Out of 134)	Score
Network Readiness Index	**97**	**39.35**

Pillar/sub-pillar	Rank	Score
A. Technology pillar	**105**	**27.60**
1st sub-pillar: Access	99	49.42
2nd sub-pillar: Content	114	11.43
3rd sub-pillar: Future Technologies	105	21.93
B. People pillar	**67**	**43.53**
1st sub-pillar: Individuals	24	56.74
2nd sub-pillar: Businesses	59	47.18
3rd sub-pillar: Governments	99	26.66
C. Governance pillar	**120**	**35.73**
1st sub-pillar: Trust	116	20.60
2nd sub-pillar: Regulation	122	38.11
3rd sub-pillar: Inclusion	95	48.47
D. Impact pillar	**82**	**50.54**
1st sub-pillar: Economy	117	14.91
2nd sub-pillar: Quality of Life	72	66.85
3rd sub-pillar: SDG Contribution	52	69.87



The Network Readiness Index in detail

Indicator	Rank	Score	
A. Technology pillar	**105**	**27.60**	
1st sub-pillar: Access	99	49.42	
1.1.1 Mobile tariffs	91	47.23	
1.1.2 Handset prices	105	30.40	
1.1.3 FTTH/building Internet subscriptions	24	46.20	●
1.1.4 Population covered by at least a 3G mobile network	109	95.60	
1.1.5 International Internet bandwidth	76	69.60	
1.1.6 Internet access in schools	75	7.52	
2nd sub-pillar: Content	114	11.43	
1.2.1 GitHub commits	88	3.20	
1.2.2 Internet domain registrations	95	1.09	
1.2.3 Mobile apps development	112	40.40	
1.2.4 AI scientific publications	103	1.04	
3rd sub-pillar: Future Technologies	105	21.93	
1.3.1 Adoption of emerging technologies	106	27.75	
1.3.2 Investment in emerging technologies	129	12.00	○
1.3.3 Robot density	NA	NA	
1.3.4 Computer software spending	50	26.05	●
B. People pillar	**67**	**43.53**	
1st sub-pillar: Individuals	24	56.74	
2.1.1 Mobile broadband internet traffic within the country	NA	NA	
2.1.2 ICT skills in the education system	99	21.63	
2.1.3 Use of virtual social networks	77	56.99	
2.1.4 Tertiary enrollment	NA	NA	
2.1.5 Adult literacy rate	58	91.61	●
2.1.6 AI talent concentration	NA	NA	
2nd sub-pillar: Businesses	59	47.18	
2.2.1 Firms with website	65	46.10	
2.2.2 GERD financed by business enterprise	NA	NA	
2.2.3 Knowledge intensive employment	89	18.21	
2.2.4 Annual investment in telecommunication services	70	77.25	
2.2.5 GERD performed by business enterprise	NA	NA	
3rd sub-pillar: Governments	99	26.66	
2.3.1 Government online services	95	46.87	
2.3.2 Publication and use of open data	61	26.47	
2.3.3 Government promotion of investment in emerging tech	122	6.64	○
2.3.4 R&D expenditure by governments and higher education	NA	NA	

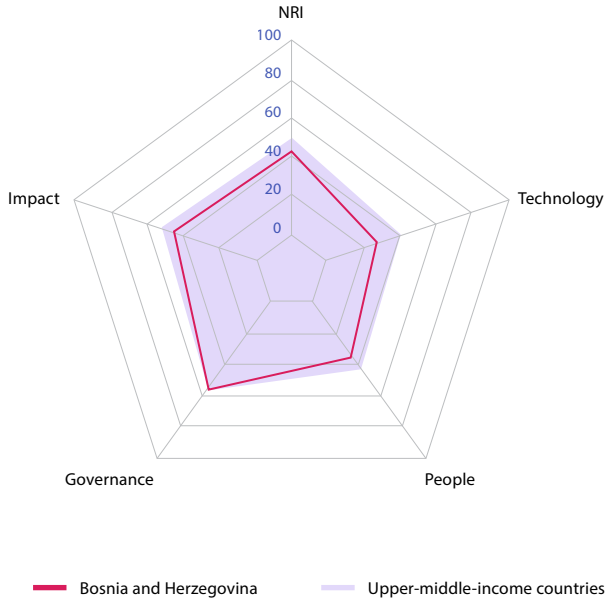
Indicator	Rank	Score	
C. Governance pillar	**120**	**35.73**	
1st sub-pillar: Trust	116	20.60	
3.1.1 Secure Internet servers	91	42.48	
3.1.2 Cybersecurity	123	14.66	
3.1.3 Online access to financial account	102	12.41	
3.1.4 Internet shopping	83	12.86	
2nd sub-pillar: Regulation	122	38.11	
3.2.1 Regulatory quality	128	23.53	○
3.2.2 ICT regulatory environment	111	64.12	
3.2.3 Regulation of emerging technologies	115	3.38	○
3.2.4 E-commerce legislation	121	33.33	○
3.2.5 Privacy protection by law content	64	66.21	●
3rd sub-pillar: Inclusion	95	48.47	
3.3.1 E-Participation	102	30.24	
3.3.2 Socioeconomic gap in use of digital payments	106	49.89	
3.3.3 Availability of local online content	115	28.37	
3.3.4 Gender gap in Internet use	83	60.43	
3.3.5 Rural gap in use of digital payments	37	73.42	●
D. Impact pillar	**82**	**50.54**	
1st sub-pillar: Economy	117	14.91	
4.1.1 High-tech and medium-high-tech manufacturing	85	11.38	
4.1.2 High-tech exports	79	8.00	
4.1.3 PCT patent applications	NA	NA	
4.1.4 Domestic market size	86	46.02	
4.1.5 Prevalence of gig economy	123	4.94	○
4.1.6 ICT services exports	101	4.20	
2nd sub-pillar: Quality of Life	72	66.85	
4.2.1 Happiness	61	66.52	●
4.2.2 Freedom to make life choices	42	81.63	●
4.2.3 Income inequality	84	55.53	
4.2.4 Healthy life expectancy at birth	91	63.74	
3rd sub-pillar: SDG Contribution	52	69.87	
4.3.1 SDG 3: Good Health and Well-Being	84	63.05	
4.3.2 SDG 4: Quality Education	NA	NA	
4.3.3 SDG 5: Women's economic opportunity	44	84.07	●
4.3.4 SDG 7: Affordable and Clean Energy	71	71.10	●
4.3.5 SDG 11: Sustainable Cities and Communities	75	61.26	●

NOTE: ● Indicates a strength and ○ a weakness.

Bosnia and Herzegovina

	Rank (Out of 134)	Score
Network Readiness Index	**92**	**40.06**

Pillar/sub-pillar	Rank	Score
A. Technology pillar	**104**	**27.61**
1st sub-pillar: Access	95	53.64
2nd sub-pillar: Content	102	15.13
3rd sub-pillar: Future Technologies	128	14.08
B. People pillar	**97**	**33.20**
1st sub-pillar: Individuals	91	41.03
2nd sub-pillar: Businesses	71	43.51
3rd sub-pillar: Governments	123	15.06
C. Governance pillar	**73**	**53.85**
1st sub-pillar: Trust	84	34.48
2nd sub-pillar: Regulation	69	64.87
3rd sub-pillar: Inclusion	64	62.22
D. Impact pillar	**95**	**45.59**
1st sub-pillar: Economy	100	18.47
2nd sub-pillar: Quality of Life	68	68.01
3rd sub-pillar: SDG Contribution	112	50.28



The Network Readiness Index in detail

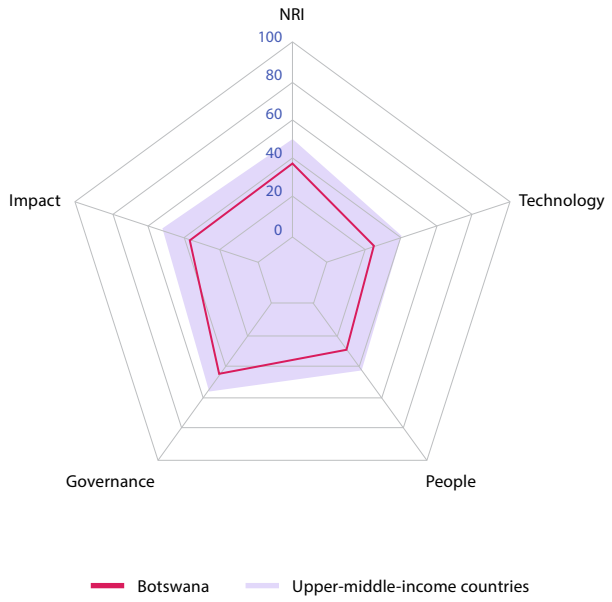
Indicator	Rank	Score	
A. Technology pillar	**104**	**27.61**	
1st sub-pillar: Access	95	53.64	
1.1.1 Mobile tariffs	85	51.47	
1.1.2 Handset prices	85	39.21	
1.1.3 FTTH/building Internet subscriptions	96	14.89	
1.1.4 Population covered by at least a 3G mobile network	57	99.67	
1.1.5 International Internet bandwidth	109	62.95	
1.1.6 Internet access in schools	NA	NA	
2nd sub-pillar: Content	102	15.13	
1.2.1 GitHub commits	63	7.57	
1.2.2 Internet domain registrations	71	3.43	
1.2.3 Mobile apps development	104	47.10	
1.2.4 AI scientific publications	82	2.40	
3rd sub-pillar: Future Technologies	128	14.08	
1.3.1 Adoption of emerging technologies	96	33.05	
1.3.2 Investment in emerging technologies	125	17.00	○
1.3.3 Robot density	53	0.32	○
1.3.4 Computer software spending	97	5.95	
B. People pillar	**97**	**33.20**	
1st sub-pillar: Individuals	91	41.03	
2.1.1 Mobile broadband internet traffic within the country	105	1.52	
2.1.2 ICT skills in the education system	88	29.58	
2.1.3 Use of virtual social networks	85	52.00	
2.1.4 Tertiary enrollment	77	24.64	
2.1.5 Adult literacy rate	30	97.41	●
2.1.6 AI talent concentration	NA	NA	
2nd sub-pillar: Businesses	71	43.51	
2.2.1 Firms with website	38	67.70	●
2.2.2 GERD financed by business enterprise	58	36.37	
2.2.3 Knowledge intensive employment	52	36.62	●
2.2.4 Annual investment in telecommunication services	90	74.82	
2.2.5 GERD performed by business enterprise	63	2.03	
3rd sub-pillar: Governments	123	15.06	
2.3.1 Government online services	100	43.61	
2.3.2 Publication and use of open data	91	8.82	○
2.3.3 Government promotion of investment in emerging tech	124	4.51	○
2.3.4 R&D expenditure by governments and higher education	90	3.29	

Indicator	Rank	Score	
C. Governance pillar	**73**	**53.85**	
1st sub-pillar: Trust	84	34.48	
3.1.1 Secure Internet servers	52	64.22	●
3.1.2 Cybersecurity	109	28.20	
3.1.3 Online access to financial account	104	10.71	
3.1.4 Internet shopping	56	34.79	●
2nd sub-pillar: Regulation	69	64.87	
3.2.1 Regulatory quality	79	45.57	
3.2.2 ICT regulatory environment	34	89.41	●
3.2.3 Regulation of emerging technologies	107	17.14	
3.2.4 E-commerce legislation	1	100.00	●
3.2.5 Privacy protection by law content	48	72.23	●
3rd sub-pillar: Inclusion	64	62.22	
3.3.1 E-Participation	71	52.33	
3.3.2 Socioeconomic gap in use of digital payments	80	65.63	
3.3.3 Availability of local online content	75	54.33	
3.3.4 Gender gap in Internet use	76	63.78	
3.3.5 Rural gap in use of digital payments	28	75.01	●
D. Impact pillar	**95**	**45.59**	
1st sub-pillar: Economy	100	18.47	
4.1.1 High-tech and medium-high-tech manufacturing	72	19.23	
4.1.2 High-tech exports	74	9.40	
4.1.3 PCT patent applications	66	2.61	
4.1.4 Domestic market size	101	39.44	
4.1.5 Prevalence of gig economy	109	21.80	
4.1.6 ICT services exports	54	18.33	●
2nd sub-pillar: Quality of Life	68	68.01	
4.2.1 Happiness	71	63.17	
4.2.2 Freedom to make life choices	89	63.98	
4.2.3 Income inequality	NA	NA	
4.2.4 Healthy life expectancy at birth	48	76.87	●
3rd sub-pillar: SDG Contribution	112	50.28	
4.3.1 SDG 3: Good Health and Well-Being	89	59.55	
4.3.2 SDG 4: Quality Education	60	27.97	
4.3.3 SDG 5: Women's economic opportunity	60	78.76	
4.3.4 SDG 7: Affordable and Clean Energy	112	52.89	
4.3.5 SDG 11: Sustainable Cities and Communities	121	32.25	○

NOTE: ● Indicates a strength and ○ a weakness.

Botswana

	Rank (Out of 134)	Score
Network Readiness Index	**110**	**34.38**
Pillar/sub-pillar	**Rank**	**Score**
A. Technology pillar	**115**	**25.75**
1st sub-pillar: Access	96	52.38
2nd sub-pillar: Content	121	2.35
3rd sub-pillar: Future Technologies	102	22.52
B. People pillar	**108**	**29.88**
1st sub-pillar: Individuals	93	40.81
2nd sub-pillar: Businesses	99	32.55
3rd sub-pillar: Governments	119	16.29
C. Governance pillar	**92**	**47.48**
1st sub-pillar: Trust	81	35.45
2nd sub-pillar: Regulation	59	67.08
3rd sub-pillar: Inclusion	114	39.92
D. Impact pillar	**124**	**34.39**
1st sub-pillar: Economy	123	12.79
2nd sub-pillar: Quality of Life	129	34.39
3rd sub-pillar: SDG Contribution	90	56.00



The Network Readiness Index in detail

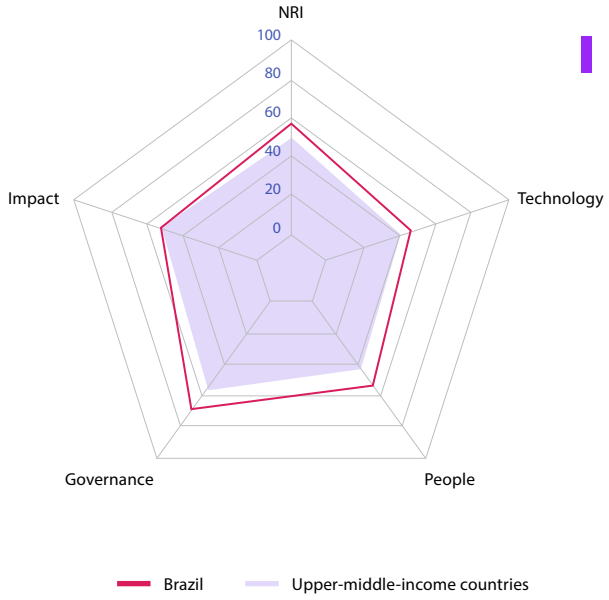
Indicator	Rank	Score	
A. Technology pillar	**115**	**25.75**	
1st sub-pillar: Access	96	52.38	
1.1.1 Mobile tariffs	94	45.84	
1.1.2 Handset prices	76	42.82	
1.1.3 FTTH/building Internet subscriptions	122	3.43	○
1.1.4 Population covered by at least a 3G mobile network	76	99.34	
1.1.5 International Internet bandwidth	72	70.49	●
1.1.6 Internet access in schools	NA	NA	
2nd sub-pillar: Content	121	2.35	
1.2.1 GitHub commits	107	1.51	
1.2.2 Internet domain registrations	86	1.60	
1.2.3 Mobile apps development	120	5.60	○
1.2.4 AI scientific publications	109	0.69	
3rd sub-pillar: Future Technologies	102	22.52	
1.3.1 Adoption of emerging technologies	109	26.73	
1.3.2 Investment in emerging technologies	97	30.75	
1.3.3 Robot density	NA	NA	
1.3.4 Computer software spending	90	10.09	
B. People pillar	**108**	**29.88**	
1st sub-pillar: Individuals	93	40.81	
2.1.1 Mobile broadband internet traffic within the country	111	1.08	
2.1.2 ICT skills in the education system	30	68.39	●
2.1.3 Use of virtual social networks	97	37.73	
2.1.4 Tertiary enrollment	93	14.85	
2.1.5 Adult literacy rate	72	82.01	
2.1.6 AI talent concentration	NA	NA	
2nd sub-pillar: Businesses	99	32.55	
2.2.1 Firms with website	NA	NA	
2.2.2 GERD financed by business enterprise	70	21.87	
2.2.3 Knowledge intensive employment	58	33.54	●
2.2.4 Annual investment in telecommunication services	102	72.36	
2.2.5 GERD performed by business enterprise	62	2.41	
3rd sub-pillar: Governments	119	16.29	
2.3.1 Government online services	128	19.76	○
2.3.2 Publication and use of open data	97	5.88	
2.3.3 Government promotion of investment in emerging tech	91	29.60	
2.3.4 R&D expenditure by governments and higher education	58	9.93	●

Indicator	Rank	Score	
C. Governance pillar	**92**	**47.48**	
1st sub-pillar: Trust	81	35.45	
3.1.1 Secure Internet servers	87	43.84	
3.1.2 Cybersecurity	93	52.23	
3.1.3 Online access to financial account	50	36.21	●
3.1.4 Internet shopping	92	9.51	
2nd sub-pillar: Regulation	59	67.08	
3.2.1 Regulatory quality	43	63.48	●
3.2.2 ICT regulatory environment	86	74.12	
3.2.3 Regulation of emerging technologies	102	22.34	
3.2.4 E-commerce legislation	1	100.00	●
3.2.5 Privacy protection by law content	38	75.47	●
3rd sub-pillar: Inclusion	114	39.92	
3.3.1 E-Participation	128	15.12	○
3.3.2 Socioeconomic gap in use of digital payments	96	54.46	
3.3.3 Availability of local online content	123	23.56	
3.3.4 Gender gap in Internet use	96	44.00	
3.3.5 Rural gap in use of digital payments	69	62.45	●
D. Impact pillar	**124**	**34.39**	
1st sub-pillar: Economy	123	12.79	
4.1.1 High-tech and medium-high-tech manufacturing	57	26.46	●
4.1.2 High-tech exports	125	0.35	
4.1.3 PCT patent applications	99	0.00	○
4.1.4 Domestic market size	113	36.53	
4.1.5 Prevalence of gig economy	118	11.92	
4.1.6 ICT services exports	120	1.48	
2nd sub-pillar: Quality of Life	129	34.39	
4.2.1 Happiness	123	20.14	
4.2.2 Freedom to make life choices	95	60.72	
4.2.3 Income inequality	111	24.37	
4.2.4 Healthy life expectancy at birth	127	32.31	
3rd sub-pillar: SDG Contribution	90	56.00	
4.3.1 SDG 3: Good Health and Well-Being	107	41.65	
4.3.2 SDG 4: Quality Education	NA	NA	
4.3.3 SDG 5: Women's economic opportunity	119	48.67	
4.3.4 SDG 7: Affordable and Clean Energy	34	78.40	●
4.3.5 SDG 11: Sustainable Cities and Communities	82	55.29	

NOTE: ● Indicates a strength and ○ a weakness.

Brazil

	Rank (Out of 134)	Score
Network Readiness Index	**44**	**54.67**
Pillar/sub-pillar	**Rank**	**Score**
A. Technology pillar	**45**	**47.01**
1st sub-pillar: Access	28	75.17
2nd sub-pillar: Content	40	34.60
3rd sub-pillar: Future Technologies	72	31.25
B. People pillar	**41**	**50.31**
1st sub-pillar: Individuals	85	42.87
2nd sub-pillar: Businesses	36	58.16
3rd sub-pillar: Governments	34	49.90
C. Governance pillar	**42**	**68.72**
1st sub-pillar: Trust	52	55.06
2nd sub-pillar: Regulation	47	72.20
3rd sub-pillar: Inclusion	24	78.91
D. Impact pillar	**72**	**52.64**
1st sub-pillar: Economy	61	30.62
2nd sub-pillar: Quality of Life	91	61.16
3rd sub-pillar: SDG Contribution	59	66.13



The Network Readiness Index in detail

Indicator	Rank	Score	
A. Technology pillar	**45**	**47.01**	
1st sub-pillar: Access	28	75.17	
1.1.1 Mobile tariffs	57	66.93	
1.1.2 Handset prices	25	71.76	●
1.1.3 FTTH/building Internet subscriptions	3	72.61	●
1.1.4 Population covered by at least a 3G mobile network	101	97.36	
1.1.5 International Internet bandwidth	25	80.31	
1.1.6 Internet access in schools	50	62.04	
2nd sub-pillar: Content	40	34.60	
1.2.1 GitHub commits	47	16.95	
1.2.2 Internet domain registrations	53	6.16	
1.2.3 Mobile apps development	38	72.65	
1.2.4 AI scientific publications	8	42.62	●
3rd sub-pillar: Future Technologies	72	31.25	
1.3.1 Adoption of emerging technologies	46	55.65	
1.3.2 Investment in emerging technologies	67	39.00	
1.3.3 Robot density	44	2.17	○
1.3.4 Computer software spending	44	28.19	
B. People pillar	**41**	**50.31**	
1st sub-pillar: Individuals	85	42.87	
2.1.1 Mobile broadband internet traffic within the country	17	38.20	●
2.1.2 ICT skills in the education system	95	24.98	○
2.1.3 Use of virtual social networks	64	66.37	
2.1.4 Tertiary enrollment	62	35.00	
2.1.5 Adult literacy rate	56	92.22	
2.1.6 AI talent concentration	46	0.43	○
2nd sub-pillar: Businesses	36	58.16	
2.2.1 Firms with website	58	54.16	
2.2.2 GERD financed by business enterprise	38	53.48	
2.2.3 Knowledge intensive employment	57	34.40	
2.2.4 Annual investment in telecommunication services	9	90.60	●
2.2.5 GERD performed by business enterprise	NA	NA	
3rd sub-pillar: Governments	34	49.90	
2.3.1 Government online services	14	88.55	●
2.3.2 Publication and use of open data	20	61.76	
2.3.3 Government promotion of investment in emerging tech	95	28.44	
2.3.4 R&D expenditure by governments and higher education	34	20.86	

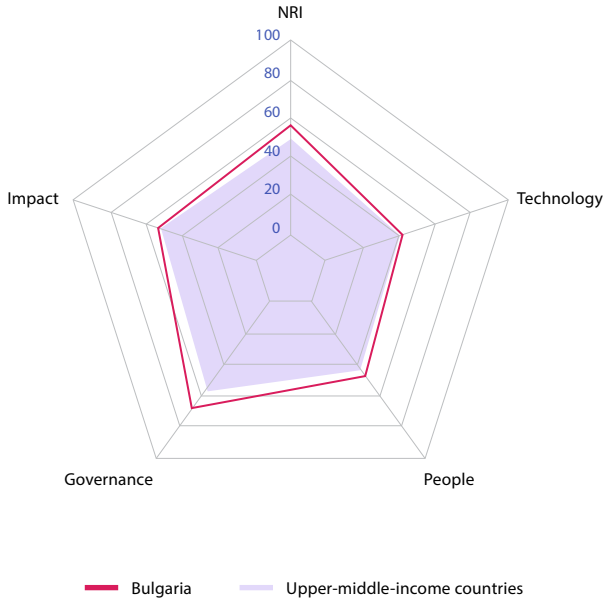
Indicator	Rank	Score	
C. Governance pillar	**42**	**68.72**	
1st sub-pillar: Trust	52	55.06	
3.1.1 Secure Internet servers	54	64.09	
3.1.2 Cybersecurity	25	96.54	
3.1.3 Online access to financial account	79	19.93	
3.1.4 Internet shopping	51	39.66	
2nd sub-pillar: Regulation	47	72.20	
3.2.1 Regulatory quality	77	47.10	
3.2.2 ICT regulatory environment	14	94.12	●
3.2.3 Regulation of emerging technologies	59	45.97	
3.2.4 E-commerce legislation	1	100.00	●
3.2.5 Privacy protection by law content	43	73.81	
3rd sub-pillar: Inclusion	24	78.91	
3.3.1 E-Participation	11	89.53	●
3.3.2 Socioeconomic gap in use of digital payments	41	88.16	
3.3.3 Availability of local online content	50	67.55	
3.3.4 Gender gap in Internet use	16	74.03	●
3.3.5 Rural gap in use of digital payments	25	75.26	
D. Impact pillar	**72**	**52.64**	
1st sub-pillar: Economy	61	30.62	
4.1.1 High-tech and medium-high-tech manufacturing	33	44.02	
4.1.2 High-tech exports	55	16.08	
4.1.3 PCT patent applications	51	5.68	
4.1.4 Domestic market size	8	79.89	●
4.1.5 Prevalence of gig economy	94	29.36	
4.1.6 ICT services exports	85	8.72	
2nd sub-pillar: Quality of Life	91	61.16	
4.2.1 Happiness	42	72.62	
4.2.2 Freedom to make life choices	62	75.76	
4.2.3 Income inequality	110	25.38	○
4.2.4 Healthy life expectancy at birth	73	70.87	
3rd sub-pillar: SDG Contribution	59	66.13	
4.3.1 SDG 3: Good Health and Well-Being	49	76.58	
4.3.2 SDG 4: Quality Education	65	26.91	○
4.3.3 SDG 5: Women's economic opportunity	60	78.76	
4.3.4 SDG 7: Affordable and Clean Energy	69	71.60	
4.3.5 SDG 11: Sustainable Cities and Communities	46	76.80	

NOTE: ● Indicates a strength and ○ a weakness.

Bulgaria

	Rank (Out of 134)	Score
Network Readiness Index	**53**	**52.18**

Pillar/sub-pillar	Rank	Score
A. Technology pillar	**58**	**42.69**
1st sub-pillar: Access	51	69.38
2nd sub-pillar: Content	46	29.60
3rd sub-pillar: Future Technologies	81	29.10
B. People pillar	**55**	**46.33**
1st sub-pillar: Individuals	50	51.09
2nd sub-pillar: Businesses	61	46.54
3rd sub-pillar: Governments	56	41.36
C. Governance pillar	**45**	**66.87**
1st sub-pillar: Trust	55	53.39
2nd sub-pillar: Regulation	31	78.91
3rd sub-pillar: Inclusion	52	68.30
D. Impact pillar	**71**	**52.81**
1st sub-pillar: Economy	40	36.22
2nd sub-pillar: Quality of Life	88	61.92
3rd sub-pillar: SDG Contribution	78	60.30



The Network Readiness Index in detail

Indicator	Rank	Score	
A. Technology pillar	**58**	**42.69**	
1st sub-pillar: Access	51	69.38	
1.1.1 Mobile tariffs	45	72.16	
1.1.2 Handset prices	52	56.21	
1.1.3 FTTH/building Internet subscriptions	38	38.86	
1.1.4 Population covered by at least a 3G mobile network	22	100.00	●
1.1.5 International Internet bandwidth	27	79.65	●
1.1.6 Internet access in schools	NA	NA	
2nd sub-pillar: Content	46	29.60	
1.2.1 GitHub commits	37	26.38	
1.2.2 Internet domain registrations	40	15.27	
1.2.3 Mobile apps development	48	71.28	
1.2.4 AI scientific publications	68	5.48	
3rd sub-pillar: Future Technologies	81	29.10	
1.3.1 Adoption of emerging technologies	60	48.94	
1.3.2 Investment in emerging technologies	50	46.50	
1.3.3 Robot density	43	2.35	○
1.3.4 Computer software spending	74	18.61	
B. People pillar	**55**	**46.33**	
1st sub-pillar: Individuals	50	51.09	
2.1.1 Mobile broadband internet traffic within the country	59	10.65	
2.1.2 ICT skills in the education system	60	51.60	
2.1.3 Use of virtual social networks	70	61.58	
2.1.4 Tertiary enrollment	26	49.06	
2.1.5 Adult literacy rate	27	97.84	
2.1.6 AI talent concentration	9	35.84	●
2nd sub-pillar: Businesses	61	46.54	
2.2.1 Firms with website	61	49.01	
2.2.2 GERD financed by business enterprise	52	43.79	
2.2.3 Knowledge intensive employment	43	48.67	
2.2.4 Annual investment in telecommunication services	62	78.19	
2.2.5 GERD performed by business enterprise	39	13.05	
3rd sub-pillar: Governments	56	41.36	
2.3.1 Government online services	64	67.86	
2.3.2 Publication and use of open data	41	38.24	
2.3.3 Government promotion of investment in emerging tech	50	45.63	
2.3.4 R&D expenditure by governments and higher education	47	13.70	

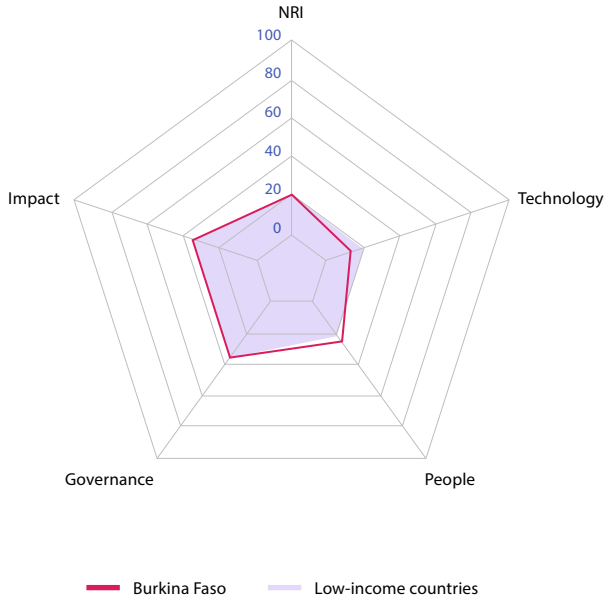
Indicator	Rank	Score	
C. Governance pillar	**45**	**66.87**	
1st sub-pillar: Trust	55	53.39	
3.1.1 Secure Internet servers	14	86.02	●
3.1.2 Cybersecurity	84	66.81	
3.1.3 Online access to financial account	93	16.23	○
3.1.4 Internet shopping	47	44.48	
2nd sub-pillar: Regulation	31	78.91	
3.2.1 Regulatory quality	48	59.73	
3.2.2 ICT regulatory environment	14	94.12	●
3.2.3 Regulation of emerging technologies	41	59.48	
3.2.4 E-commerce legislation	1	100.00	●
3.2.5 Privacy protection by law content	29	81.25	●
3rd sub-pillar: Inclusion	52	68.30	
3.3.1 E-Participation	29	73.25	●
3.3.2 Socioeconomic gap in use of digital payments	77	67.26	
3.3.3 Availability of local online content	36	78.12	
3.3.4 Gender gap in Internet use	64	67.43	
3.3.5 Rural gap in use of digital payments	79	55.45	
D. Impact pillar	**71**	**52.81**	
1st sub-pillar: Economy	40	36.22	
4.1.1 High-tech and medium-high-tech manufacturing	48	30.52	
4.1.2 High-tech exports	44	20.24	
4.1.3 PCT patent applications	47	7.20	
4.1.4 Domestic market size	69	51.12	
4.1.5 Prevalence of gig economy	24	63.95	●
4.1.6 ICT services exports	18	44.28	●
2nd sub-pillar: Quality of Life	88	61.92	
4.2.1 Happiness	82	56.28	
4.2.2 Freedom to make life choices	94	61.05	○
4.2.3 Income inequality	79	56.53	
4.2.4 Healthy life expectancy at birth	60	73.83	
3rd sub-pillar: SDG Contribution	78	60.30	
4.3.1 SDG 3: Good Health and Well-Being	69	68.14	
4.3.2 SDG 4: Quality Education	49	37.78	
4.3.3 SDG 5: Women's economic opportunity	39	86.73	
4.3.4 SDG 7: Affordable and Clean Energy	93	64.09	○
4.3.5 SDG 11: Sustainable Cities and Communities	105	44.76	○

NOTE: ● Indicates a strength and ○ a weakness.

Burkina Faso

	Rank (Out of 134)	Score
Network Readiness Index	**129**	**26.63**

Pillar/sub-pillar	Rank	Score
A. Technology pillar	**134**	**12.14**
1st sub-pillar: Access	133	26.26
2nd sub-pillar: Content	129	0.63
3rd sub-pillar: Future Technologies	131	9.52
B. People pillar	**123**	**24.29**
1st sub-pillar: Individuals	133	9.32
2nd sub-pillar: Businesses	65	45.03
3rd sub-pillar: Governments	116	18.50
C. Governance pillar	**121**	**35.29**
1st sub-pillar: Trust	115	21.17
2nd sub-pillar: Regulation	77	62.61
3rd sub-pillar: Inclusion	132	22.10
D. Impact pillar	**122**	**34.79**
1st sub-pillar: Economy	121	13.46
2nd sub-pillar: Quality of Life	123	40.59
3rd sub-pillar: SDG Contribution	111	50.34



The Network Readiness Index in detail

Indicator	Rank	Score	
A. Technology pillar	**134**	**12.14**	
1st sub-pillar: Access	133	26.26	
1.1.1 Mobile tariffs	127	10.18	
1.1.2 Handset prices	128	14.65	○
1.1.3 FTTH/building Internet subscriptions	124	0.88	○
1.1.4 Population covered by at least a 3G mobile network	130	73.79	○
1.1.5 International Internet bandwidth	121	57.82	
1.1.6 Internet access in schools	82	0.23	
2nd sub-pillar: Content	129	0.63	
1.2.1 GitHub commits	132	0.09	○
1.2.2 Internet domain registrations	131	0.05	○
1.2.3 Mobile apps development	NA	NA	
1.2.4 AI scientific publications	91	1.76	●
3rd sub-pillar: Future Technologies	131	9.52	
1.3.1 Adoption of emerging technologies	126	2.44	○
1.3.2 Investment in emerging technologies	111	24.00	
1.3.3 Robot density	NA	NA	
1.3.4 Computer software spending	114	2.13	
B. People pillar	**123**	**24.29**	
1st sub-pillar: Individuals	133	9.32	
2.1.1 Mobile broadband internet traffic within the country	118	0.31	
2.1.2 ICT skills in the education system	NA	NA	
2.1.3 Use of virtual social networks	124	6.06	
2.1.4 Tertiary enrollment	115	4.60	
2.1.5 Adult literacy rate	102	26.32	
2.1.6 AI talent concentration	NA	NA	
2nd sub-pillar: Businesses	65	45.03	
2.2.1 Firms with website	NA	NA	
2.2.2 GERD financed by business enterprise	NA	NA	
2.2.3 Knowledge intensive employment	94	17.14	
2.2.4 Annual investment in telecommunication services	99	72.92	
2.2.5 GERD performed by business enterprise	NA	NA	
3rd sub-pillar: Governments	116	18.50	
2.3.1 Government online services	117	30.70	
2.3.2 Publication and use of open data	72	20.59	●
2.3.3 Government promotion of investment in emerging tech	106	18.40	
2.3.4 R&D expenditure by governments and higher education	85	4.32	

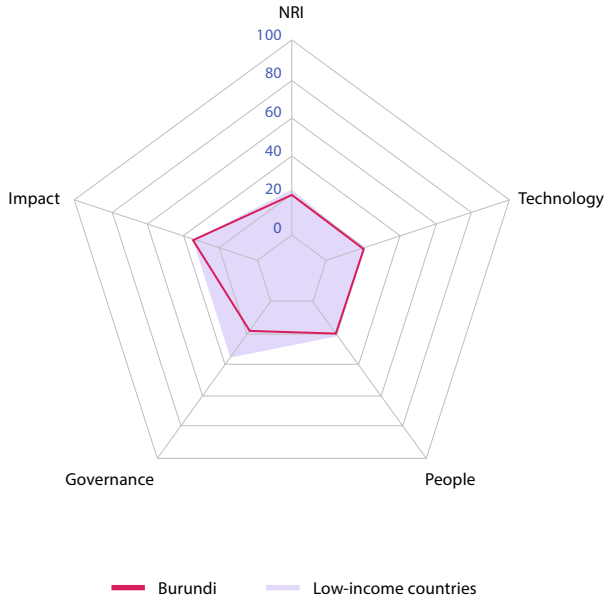
Indicator	Rank	Score	
C. Governance pillar	**121**	**35.29**	
1st sub-pillar: Trust	115	21.17	
3.1.1 Secure Internet servers	131	13.67	○
3.1.2 Cybersecurity	100	38.92	
3.1.3 Online access to financial account	68	27.27	●
3.1.4 Internet shopping	110	4.82	
2nd sub-pillar: Regulation	77	62.61	
3.2.1 Regulatory quality	95	39.05	●
3.2.2 ICT regulatory environment	58	84.71	●
3.2.3 Regulation of emerging technologies	NA	NA	
3.2.4 E-commerce legislation	87	66.67	
3.2.5 Privacy protection by law content	81	60.00	●
3rd sub-pillar: Inclusion	132	22.10	
3.3.1 E-Participation	122	20.94	
3.3.2 Socioeconomic gap in use of digital payments	109	46.40	
3.3.3 Availability of local online content	132	8.41	○
3.3.4 Gender gap in Internet use	105	0.00	○
3.3.5 Rural gap in use of digital payments	107	34.76	
D. Impact pillar	**122**	**34.79**	
1st sub-pillar: Economy	121	13.46	
4.1.1 High-tech and medium-high-tech manufacturing	NA	NA	
4.1.2 High-tech exports	93	3.85	●
4.1.3 PCT patent applications	99	0.00	○
4.1.4 Domestic market size	103	38.86	
4.1.5 Prevalence of gig economy	114	15.99	
4.1.6 ICT services exports	86	8.59	●
2nd sub-pillar: Quality of Life	123	40.59	
4.2.1 Happiness	99	42.46	
4.2.2 Freedom to make life choices	119	44.86	
4.2.3 Income inequality	102	39.45	
4.2.4 Healthy life expectancy at birth	119	35.57	
3rd sub-pillar: SDG Contribution	111	50.34	
4.3.1 SDG 3: Good Health and Well-Being	124	24.54	
4.3.2 SDG 4: Quality Education	NA	NA	
4.3.3 SDG 5: Women's economic opportunity	71	75.22	●
4.3.4 SDG 7: Affordable and Clean Energy	86	66.98	●
4.3.5 SDG 11: Sustainable Cities and Communities	119	34.61	

NOTE: ● Indicates a strength and ○ a weakness.

Burundi

	Rank (Out of 134)	Score
Network Readiness Index	**134**	**20.62**

Pillar/sub-pillar	Rank	Score
A. Technology pillar	**130**	**16.84**
1st sub-pillar: Access	134	20.85
2nd sub-pillar: Content	105	14.22
3rd sub-pillar: Future Technologies	126	15.43
B. People pillar	**128**	**17.72**
1st sub-pillar: Individuals	126	17.60
2nd sub-pillar: Businesses	129	18.35
3rd sub-pillar: Governments	117	17.21
C. Governance pillar	**134**	**16.27**
1st sub-pillar: Trust	134	8.38
2nd sub-pillar: Regulation	134	25.74
3rd sub-pillar: Inclusion	134	14.69
D. Impact pillar	**128**	**31.66**
1st sub-pillar: Economy	127	11.40
2nd sub-pillar: Quality of Life	121	42.75
3rd sub-pillar: SDG Contribution	129	40.82



The Network Readiness Index in detail

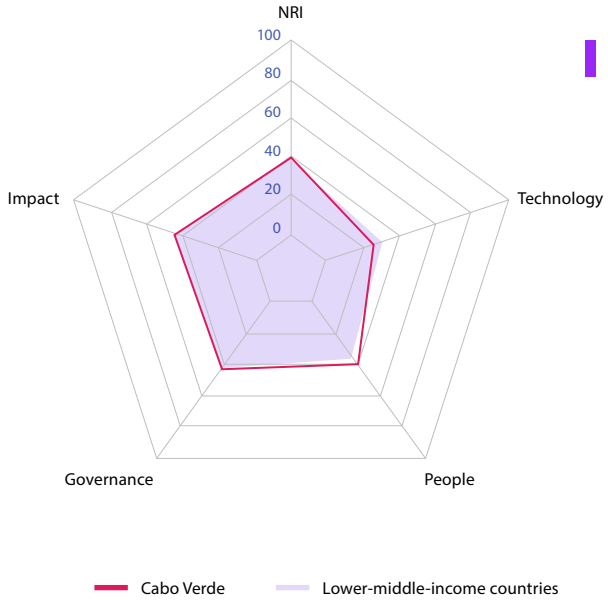
Indicator	Rank	Score	
A. Technology pillar	**130**	**16.84**	
1st sub-pillar: Access	134	20.85	
1.1.1 Mobile tariffs	132	5.29	○
1.1.2 Handset prices	132	0.00	○
1.1.3 FTTH/building Internet subscriptions	123	2.29	
1.1.4 Population covered by at least a 3G mobile network	131	70.76	○
1.1.5 International Internet bandwidth	131	46.78	○
1.1.6 Internet access in schools	84	0.00	
2nd sub-pillar: Content	105	14.22	
1.2.1 GitHub commits	129	0.21	○
1.2.2 Internet domain registrations	128	0.09	○
1.2.3 Mobile apps development	108	46.13	
1.2.4 AI scientific publications	45	10.46	
3rd sub-pillar: Future Technologies	126	15.43	
1.3.1 Adoption of emerging technologies	118	17.31	
1.3.2 Investment in emerging technologies	112	23.50	
1.3.3 Robot density	NA	NA	
1.3.4 Computer software spending	99	5.48	
B. People pillar	**128**	**17.72**	
1st sub-pillar: Individuals	126	17.60	
2.1.1 Mobile broadband internet traffic within the country	121	0.00	
2.1.2 ICT skills in the education system	NA	NA	
2.1.3 Use of virtual social networks	129	2.74	○
2.1.4 Tertiary enrollment	123	2.18	
2.1.5 Adult literacy rate	89	65.47	
2.1.6 AI talent concentration	NA	NA	
2nd sub-pillar: Businesses	129	18.35	
2.2.1 Firms with website	99	18.60	
2.2.2 GERD financed by business enterprise	76	10.90	
2.2.3 Knowledge intensive employment	128	0.00	○
2.2.4 Annual investment in telecommunication services	119	61.81	
2.2.5 GERD performed by business enterprise	80	0.46	
3rd sub-pillar: Governments	117	17.21	
2.3.1 Government online services	124	26.79	
2.3.2 Publication and use of open data	NA	NA	
2.3.3 Government promotion of investment in emerging tech	103	21.19	
2.3.4 R&D expenditure by governments and higher education	87	3.66	

Indicator	Rank	Score	
C. Governance pillar	**134**	**16.27**	
1st sub-pillar: Trust	134	8.38	
3.1.1 Secure Internet servers	129	16.76	○
3.1.2 Cybersecurity	133	0.00	○
3.1.3 Online access to financial account	NA	NA	
3.1.4 Internet shopping	NA	NA	
2nd sub-pillar: Regulation	134	25.74	
3.2.1 Regulatory quality	125	27.37	
3.2.2 ICT regulatory environment	126	54.94	
3.2.3 Regulation of emerging technologies	82	33.25	
3.2.4 E-commerce legislation	129	0.00	○
3.2.5 Privacy protection by law content	132	13.12	○
3rd sub-pillar: Inclusion	134	14.69	
3.3.1 E-Participation	98	32.56	
3.3.2 Socioeconomic gap in use of digital payments	131	0.00	○
3.3.3 Availability of local online content	119	26.20	
3.3.4 Gender gap in Internet use	105	0.00	○
3.3.5 Rural gap in use of digital payments	NA	NA	
D. Impact pillar	**128**	**31.66**	
1st sub-pillar: Economy	127	11.40	
4.1.1 High-tech and medium-high-tech manufacturing	103	2.62	
4.1.2 High-tech exports	130	0.06	○
4.1.3 PCT patent applications	NA	NA	
4.1.4 Domestic market size	131	18.98	○
4.1.5 Prevalence of gig economy	91	30.81	
4.1.6 ICT services exports	99	4.53	
2nd sub-pillar: Quality of Life	121	42.75	
4.2.1 Happiness	119	26.46	
4.2.2 Freedom to make life choices	118	45.24	
4.2.3 Income inequality	71	61.31	
4.2.4 Healthy life expectancy at birth	117	37.99	
3rd sub-pillar: SDG Contribution	129	40.82	
4.3.1 SDG 3: Good Health and Well-Being	122	26.46	
4.3.2 SDG 4: Quality Education	NA	NA	
4.3.3 SDG 5: Women's economic opportunity	98	66.37	
4.3.4 SDG 7: Affordable and Clean Energy	119	44.36	
4.3.5 SDG 11: Sustainable Cities and Communities	126	26.06	

NOTE: ● Indicates a strength and ○ a weakness.

Cabo Verde

	Rank (Out of 134)	Score
Network Readiness Index	**95**	**39.70**
Pillar/sub-pillar	**Rank**	**Score**
A. Technology pillar	**116**	**25.21**
1st sub-pillar: Access	111	44.18
2nd sub-pillar: Content	123	1.64
3rd sub-pillar: Future Technologies	76	29.82
B. People pillar	**83**	**39.17**
1st sub-pillar: Individuals	100	36.64
2nd sub-pillar: Businesses	63	45.51
3rd sub-pillar: Governments	76	35.35
C. Governance pillar	**91**	**47.55**
1st sub-pillar: Trust	103	28.63
2nd sub-pillar: Regulation	58	67.27
3rd sub-pillar: Inclusion	100	46.77
D. Impact pillar	**91**	**46.88**
1st sub-pillar: Economy	128	11.04
2nd sub-pillar: Quality of Life	92	60.31
3rd sub-pillar: SDG Contribution	56	69.29



The Network Readiness Index in detail

Indicator	Rank	Score	
A. Technology pillar	**116**	**25.21**	
1st sub-pillar: Access	111	44.18	
1.1.1 Mobile tariffs	107	33.07	
1.1.2 Handset prices	66	46.80	●
1.1.3 FTTH/building Internet subscriptions	119	4.51	○
1.1.4 Population covered by at least a 3G mobile network	99	97.89	
1.1.5 International Internet bandwidth	127	53.67	○
1.1.6 Internet access in schools	63	29.14	
2nd sub-pillar: Content	123	1.64	
1.2.1 GitHub commits	94	2.66	
1.2.2 Internet domain registrations	80	2.25	●
1.2.3 Mobile apps development	NA	NA	
1.2.4 AI scientific publications	131	0.01	○
3rd sub-pillar: Future Technologies	76	29.82	
1.3.1 Adoption of emerging technologies	103	29.74	
1.3.2 Investment in emerging technologies	86	34.00	
1.3.3 Robot density	NA	NA	
1.3.4 Computer software spending	53	25.72	●
B. People pillar	**83**	**39.17**	
1st sub-pillar: Individuals	100	36.64	
2.1.1 Mobile broadband internet traffic within the country	116	0.47	○
2.1.2 ICT skills in the education system	NA	NA	
2.1.3 Use of virtual social networks	92	44.57	
2.1.4 Tertiary enrollment	95	14.10	
2.1.5 Adult literacy rate	63	87.41	●
2.1.6 AI talent concentration	NA	NA	
2nd sub-pillar: Businesses	63	45.51	
2.2.1 Firms with website	NA	NA	
2.2.2 GERD financed by business enterprise	NA	NA	
2.2.3 Knowledge intensive employment	83	23.40	
2.2.4 Annual investment in telecommunication services	117	67.61	
2.2.5 GERD performed by business enterprise	NA	NA	
3rd sub-pillar: Governments	76	35.35	
2.3.1 Government online services	97	44.35	
2.3.2 Publication and use of open data	NA	NA	
2.3.3 Government promotion of investment in emerging tech	99	26.35	
2.3.4 R&D expenditure by governments and higher education	NA	NA	

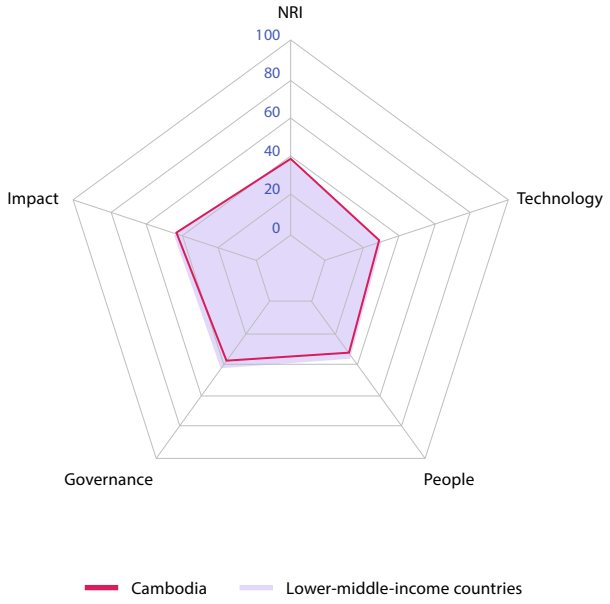
Indicator	Rank	Score	
C. Governance pillar	**91**	**47.55**	
1st sub-pillar: Trust	103	28.63	
3.1.1 Secure Internet servers	94	40.97	
3.1.2 Cybersecurity	121	16.29	
3.1.3 Online access to financial account	NA	NA	
3.1.4 Internet shopping	NA	NA	
2nd sub-pillar: Regulation	58	67.27	
3.2.1 Regulatory quality	56	55.78	●
3.2.2 ICT regulatory environment	84	76.12	
3.2.3 Regulation of emerging technologies	86	31.43	
3.2.4 E-commerce legislation	1	100.00	●
3.2.5 Privacy protection by law content	45	73.00	●
3rd sub-pillar: Inclusion	100	46.77	
3.3.1 E-Participation	115	23.26	
3.3.2 Socioeconomic gap in use of digital payments	NA	NA	
3.3.3 Availability of local online content	87	50.48	
3.3.4 Gender gap in Internet use	70	66.56	
3.3.5 Rural gap in use of digital payments	NA	NA	
D. Impact pillar	**91**	**46.88**	
1st sub-pillar: Economy	128	11.04	
4.1.1 High-tech and medium-high-tech manufacturing	90	10.59	
4.1.2 High-tech exports	118	1.13	
4.1.3 PCT patent applications	NA	NA	
4.1.4 Domestic market size	134	0.00	○
4.1.5 Prevalence of gig economy	84	34.01	
4.1.6 ICT services exports	81	9.47	
2nd sub-pillar: Quality of Life	92	60.31	
4.2.1 Happiness	NA	NA	
4.2.2 Freedom to make life choices	NA	NA	
4.2.3 Income inequality	90	51.76	
4.2.4 Healthy life expectancy at birth	77	68.87	●
3rd sub-pillar: SDG Contribution	56	69.29	
4.3.1 SDG 3: Good Health and Well-Being	76	67.38	●
4.3.2 SDG 4: Quality Education	NA	NA	
4.3.3 SDG 5: Women's economic opportunity	56	80.53	●
4.3.4 SDG 7: Affordable and Clean Energy	24	80.27	●
4.3.5 SDG 11: Sustainable Cities and Communities	95	48.98	

NOTE: ● Indicates a strength and ○ a weakness.

Cambodia

	Rank (Out of 134)	Score
Network Readiness Index	**108**	**35.64**

Pillar/sub-pillar	Rank	Score
A. Technology pillar	**98**	**31.23**
1st sub-pillar: Access	102	49.07
2nd sub-pillar: Content	85	18.59
3rd sub-pillar: Future Technologies	97	26.03
B. People pillar	**104**	**30.22**
1st sub-pillar: Individuals	81	43.42
2nd sub-pillar: Businesses	120	24.31
3rd sub-pillar: Governments	106	22.92
C. Governance pillar	**122**	**34.88**
1st sub-pillar: Trust	121	17.32
2nd sub-pillar: Regulation	118	44.27
3rd sub-pillar: Inclusion	108	43.06
D. Impact pillar	**94**	**46.23**
1st sub-pillar: Economy	114	15.44
2nd sub-pillar: Quality of Life	84	62.76
3rd sub-pillar: SDG Contribution	76	60.48



The Network Readiness Index in detail

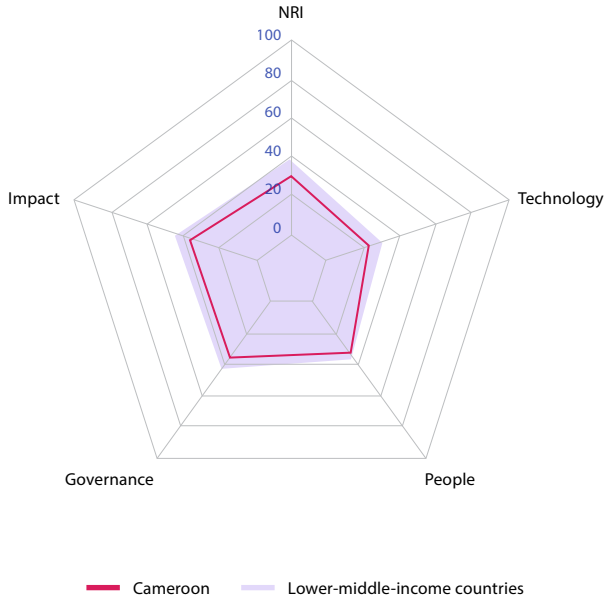
Indicator	Rank	Score	
A. Technology pillar	**98**	**31.23**	
1st sub-pillar: Access	102	49.07	
1.1.1 Mobile tariffs	86	49.82	●
1.1.2 Handset prices	106	30.39	
1.1.3 FTTH/building Internet subscriptions	35	39.57	●
1.1.4 Population covered by at least a 3G mobile network	102	97.27	
1.1.5 International Internet bandwidth	74	70.32	●
1.1.6 Internet access in schools	76	7.06	
2nd sub-pillar: Content	85	18.59	
1.2.1 GitHub commits	99	2.10	
1.2.2 Internet domain registrations	110	0.42	
1.2.3 Mobile apps development	55	70.14	●
1.2.4 AI scientific publications	93	1.70	
3rd sub-pillar: Future Technologies	97	26.03	
1.3.1 Adoption of emerging technologies	100	32.06	
1.3.2 Investment in emerging technologies	55	43.75	●
1.3.3 Robot density	NA	NA	
1.3.4 Computer software spending	113	2.28	
B. People pillar	**104**	**30.22**	
1st sub-pillar: Individuals	81	43.42	
2.1.1 Mobile broadband internet traffic within the country	31	27.84	●
2.1.2 ICT skills in the education system	NA	NA	
2.1.3 Use of virtual social networks	73	60.90	●
2.1.4 Tertiary enrollment	105	6.92	
2.1.5 Adult literacy rate	73	78.03	
2.1.6 AI talent concentration	NA	NA	
2nd sub-pillar: Businesses	120	24.31	
2.2.1 Firms with website	101	16.98	
2.2.2 GERD financed by business enterprise	67	24.05	
2.2.3 Knowledge intensive employment	118	5.20	○
2.2.4 Annual investment in telecommunication services	88	74.91	
2.2.5 GERD performed by business enterprise	82	0.38	
3rd sub-pillar: Governments	106	22.92	
2.3.1 Government online services	112	35.69	
2.3.2 Publication and use of open data	NA	NA	
2.3.3 Government promotion of investment in emerging tech	87	31.13	
2.3.4 R&D expenditure by governments and higher education	103	1.95	

Indicator	Rank	Score	
C. Governance pillar	**122**	**34.88**	
1st sub-pillar: Trust	121	17.32	
3.1.1 Secure Internet servers	93	41.95	
3.1.2 Cybersecurity	118	17.70	
3.1.3 Online access to financial account	121	5.27	○
3.1.4 Internet shopping	112	4.34	
2nd sub-pillar: Regulation	118	44.27	
3.2.1 Regulatory quality	108	35.05	
3.2.2 ICT regulatory environment	113	63.53	
3.2.3 Regulation of emerging technologies	87	30.91	
3.2.4 E-commerce legislation	87	66.67	○
3.2.5 Privacy protection by law content	124	25.18	○
3rd sub-pillar: Inclusion	108	43.06	
3.3.1 E-Participation	106	26.75	
3.3.2 Socioeconomic gap in use of digital payments	113	43.37	
3.3.3 Availability of local online content	94	45.19	
3.3.4 Gender gap in Internet use	62	67.50	●
3.3.5 Rural gap in use of digital payments	110	32.51	
D. Impact pillar	**94**	**46.23**	
1st sub-pillar: Economy	114	15.44	
4.1.1 High-tech and medium-high-tech manufacturing	NA	NA	
4.1.2 High-tech exports	92	3.89	
4.1.3 PCT patent applications	99	0.00	○
4.1.4 Domestic market size	91	43.14	
4.1.5 Prevalence of gig economy	97	27.62	
4.1.6 ICT services exports	109	2.57	
2nd sub-pillar: Quality of Life	84	62.76	
4.2.1 Happiness	109	35.30	
4.2.2 Freedom to make life choices	5	95.15	●
4.2.3 Income inequality	NA	NA	
4.2.4 Healthy life expectancy at birth	98	57.83	
3rd sub-pillar: SDG Contribution	76	60.48	
4.3.1 SDG 3: Good Health and Well-Being	97	53.95	
4.3.2 SDG 4: Quality Education	NA	NA	
4.3.3 SDG 5: Women's economic opportunity	76	73.45	●
4.3.4 SDG 7: Affordable and Clean Energy	95	63.29	
4.3.5 SDG 11: Sustainable Cities and Communities	86	51.22	

NOTE: ● Indicates a strength and ○ a weakness.

Cameroon

	Rank (Out of 134)	Score
Network Readiness Index	**118**	**31.09**
Pillar/sub-pillar	**Rank**	**Score**
A. Technology pillar	**119**	**23.29**
1st sub-pillar: Access	132	26.62
2nd sub-pillar: Content	100	16.18
3rd sub-pillar: Future Technologies	92	27.08
B. People pillar	**109**	**28.46**
1st sub-pillar: Individuals	113	27.96
2nd sub-pillar: Businesses	97	35.16
3rd sub-pillar: Governments	108	22.26
C. Governance pillar	**119**	**35.79**
1st sub-pillar: Trust	109	24.13
2nd sub-pillar: Regulation	107	53.23
3rd sub-pillar: Inclusion	127	30.00
D. Impact pillar	**118**	**36.81**
1st sub-pillar: Economy	67	27.07
2nd sub-pillar: Quality of Life	122	42.36
3rd sub-pillar: SDG Contribution	128	40.99



The Network Readiness Index in detail

Indicator	Rank	Score	
A. Technology pillar	**119**	**23.29**	
1st sub-pillar: Access	132	26.62	
1.1.1 Mobile tariffs	114	27.66	
1.1.2 Handset prices	116	24.45	
1.1.3 FTTH/building Internet subscriptions	91	17.96	
1.1.4 Population covered by at least a 3G mobile network	134	0.00	○
1.1.5 International Internet bandwidth	108	63.02	
1.1.6 Internet access in schools	NA	NA	
2nd sub-pillar: Content	100	16.18	
1.2.1 GitHub commits	109	1.38	
1.2.2 Internet domain registrations	104	0.64	
1.2.3 Mobile apps development	97	55.39	
1.2.4 AI scientific publications	59	7.32	●
3rd sub-pillar: Future Technologies	92	27.08	
1.3.1 Adoption of emerging technologies	93	36.36	
1.3.2 Investment in emerging technologies	90	33.25	
1.3.3 Robot density	NA	NA	
1.3.4 Computer software spending	85	11.64	
B. People pillar	**109**	**28.46**	
1st sub-pillar: Individuals	113	27.96	
2.1.1 Mobile broadband internet traffic within the country	113	0.75	○
2.1.2 ICT skills in the education system	63	50.11	●
2.1.3 Use of virtual social networks	116	10.85	
2.1.4 Tertiary enrollment	104	7.79	
2.1.5 Adult literacy rate	84	70.28	
2.1.6 AI talent concentration	NA	NA	
2nd sub-pillar: Businesses	97	35.16	
2.2.1 Firms with website	102	15.13	
2.2.2 GERD financed by business enterprise	NA	NA	
2.2.3 Knowledge intensive employment	102	13.23	
2.2.4 Annual investment in telecommunication services	73	77.12	●
2.2.5 GERD performed by business enterprise	NA	NA	
3rd sub-pillar: Governments	108	22.26	
2.3.1 Government online services	114	32.76	
2.3.2 Publication and use of open data	99	4.41	○
2.3.3 Government promotion of investment in emerging tech	90	29.62	
2.3.4 R&D expenditure by governments and higher education	NA	NA	

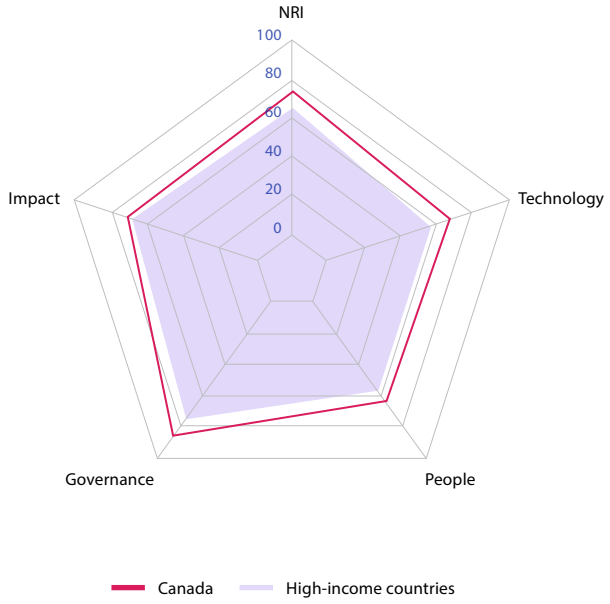
Indicator	Rank	Score	
C. Governance pillar	**119**	**35.79**	
1st sub-pillar: Trust	109	24.13	
3.1.1 Secure Internet servers	124	22.37	
3.1.2 Cybersecurity	97	44.67	
3.1.3 Online access to financial account	72	24.15	●
3.1.4 Internet shopping	107	5.31	
2nd sub-pillar: Regulation	107	53.23	
3.2.1 Regulatory quality	121	28.76	
3.2.2 ICT regulatory environment	100	68.24	
3.2.3 Regulation of emerging technologies	96	24.94	
3.2.4 E-commerce legislation	1	100.00	●
3.2.5 Privacy protection by law content	111	44.23	
3rd sub-pillar: Inclusion	127	30.00	
3.3.1 E-Participation	106	26.75	
3.3.2 Socioeconomic gap in use of digital payments	115	41.96	
3.3.3 Availability of local online content	122	24.76	
3.3.4 Gender gap in Internet use	101	22.14	○
3.3.5 Rural gap in use of digital payments	108	34.43	
D. Impact pillar	**118**	**36.81**	
1st sub-pillar: Economy	67	27.07	
4.1.1 High-tech and medium-high-tech manufacturing	NA	NA	
4.1.2 High-tech exports	64	12.50	●
4.1.3 PCT patent applications	78	1.33	
4.1.4 Domestic market size	85	46.39	●
4.1.5 Prevalence of gig economy	41	56.10	●
4.1.6 ICT services exports	51	19.03	●
2nd sub-pillar: Quality of Life	122	42.36	
4.2.1 Happiness	97	43.89	
4.2.2 Freedom to make life choices	113	49.92	
4.2.3 Income inequality	101	41.21	
4.2.4 Healthy life expectancy at birth	123	34.42	
3rd sub-pillar: SDG Contribution	128	40.99	
4.3.1 SDG 3: Good Health and Well-Being	123	26.36	
4.3.2 SDG 4: Quality Education	NA	NA	
4.3.3 SDG 5: Women's economic opportunity	121	43.36	
4.3.4 SDG 7: Affordable and Clean Energy	81	67.85	●
4.3.5 SDG 11: Sustainable Cities and Communities	125	26.38	○

NOTE: ● Indicates a strength and ○ a weakness.

Canada

	Rank (Out of 134)	Score
Network Readiness Index	**11**	**71.99**

Pillar/sub-pillar	Rank	Score
A. Technology pillar	**7**	**67.69**
1st sub-pillar: Access	26	75.51
2nd sub-pillar: Content	5	66.39
3rd sub-pillar: Future Technologies	13	61.16
B. People pillar	**17**	**62.84**
1st sub-pillar: Individuals	39	52.88
2nd sub-pillar: Businesses	23	64.28
3rd sub-pillar: Governments	10	71.36
C. Governance pillar	**9**	**86.48**
1st sub-pillar: Trust	9	86.11
2nd sub-pillar: Regulation	13	87.15
3rd sub-pillar: Inclusion	5	86.17
D. Impact pillar	**15**	**70.95**
1st sub-pillar: Economy	20	46.25
2nd sub-pillar: Quality of Life	18	82.30
3rd sub-pillar: SDG Contribution	16	84.30



The Network Readiness Index in detail

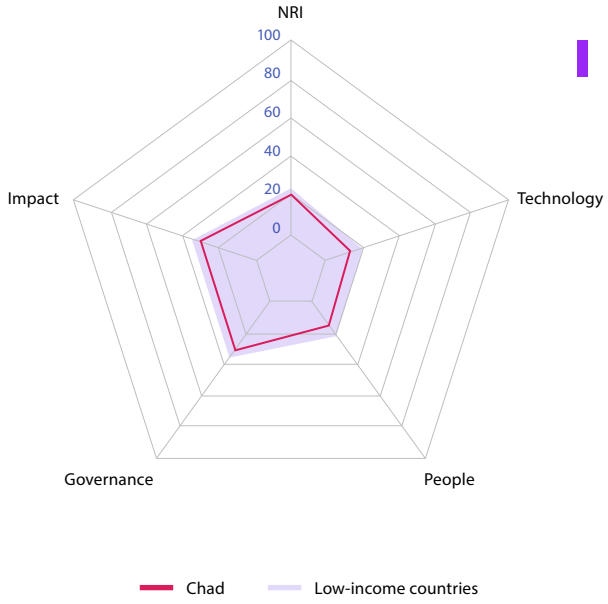
Indicator	Rank	Score	
A. Technology pillar	**7**	**67.69**	
1st sub-pillar: Access	26	75.51	
1.1.1 Mobile tariffs	36	75.88	
1.1.2 Handset prices	12	81.43	
1.1.3 FTTH/building Internet subscriptions	30	42.64	
1.1.4 Population covered by at least a 3G mobile network	46	99.90	
1.1.5 International Internet bandwidth	31	77.70	
1.1.6 Internet access in schools	NA	NA	
2nd sub-pillar: Content	5	66.39	
1.2.1 GitHub commits	5	95.55	●
1.2.2 Internet domain registrations	11	64.71	●
1.2.3 Mobile apps development	41	72.43	
1.2.4 AI scientific publications	14	32.87	
3rd sub-pillar: Future Technologies	13	61.16	
1.3.1 Adoption of emerging technologies	11	85.04	
1.3.2 Investment in emerging technologies	20	68.25	
1.3.3 Robot density	16	26.98	
1.3.4 Computer software spending	5	64.36	●
B. People pillar	**17**	**62.84**	
1st sub-pillar: Individuals	39	52.88	
2.1.1 Mobile broadband internet traffic within the country	38	19.99	
2.1.2 ICT skills in the education system	15	79.47	
2.1.3 Use of virtual social networks	11	81.13	
2.1.4 Tertiary enrollment	25	51.83	
2.1.5 Adult literacy rate	NA	NA	
2.1.6 AI talent concentration	11	31.97	
2nd sub-pillar: Businesses	23	64.28	
2.2.1 Firms with website	8	86.41	●
2.2.2 GERD financed by business enterprise	36	54.57	
2.2.3 Knowledge intensive employment	25	66.75	
2.2.4 Annual investment in telecommunication services	7	91.75	●
2.2.5 GERD performed by business enterprise	28	21.91	
3rd sub-pillar: Governments	10	71.36	
2.3.1 Government online services	27	83.47	
2.3.2 Publication and use of open data	1	100.00	●
2.3.3 Government promotion of investment in emerging tech	13	74.16	
2.3.4 R&D expenditure by governments and higher education	25	27.79	

Indicator	Rank	Score	
C. Governance pillar	**9**	**86.48**	
1st sub-pillar: Trust	9	86.11	
3.1.1 Secure Internet servers	17	84.53	
3.1.2 Cybersecurity	13	97.63	
3.1.3 Online access to financial account	10	81.53	●
3.1.4 Internet shopping	14	80.76	
2nd sub-pillar: Regulation	13	87.15	
3.2.1 Regulatory quality	12	86.13	
3.2.2 ICT regulatory environment	53	86.47	○
3.2.3 Regulation of emerging technologies	16	79.22	
3.2.4 E-commerce legislation	1	100.00	●
3.2.5 Privacy protection by law content	23	83.95	
3rd sub-pillar: Inclusion	5	86.17	
3.3.1 E-Participation	14	82.55	
3.3.2 Socioeconomic gap in use of digital payments	19	96.33	
3.3.3 Availability of local online content	15	88.70	
3.3.4 Gender gap in Internet use	NA	NA	
3.3.5 Rural gap in use of digital payments	12	77.09	
D. Impact pillar	**15**	**70.95**	
1st sub-pillar: Economy	20	46.25	
4.1.1 High-tech and medium-high-tech manufacturing	34	42.85	
4.1.2 High-tech exports	35	26.91	
4.1.3 PCT patent applications	24	33.28	
4.1.4 Domestic market size	15	74.80	
4.1.5 Prevalence of gig economy	9	81.98	●
4.1.6 ICT services exports	55	17.68	○
2nd sub-pillar: Quality of Life	18	82.30	
4.2.1 Happiness	15	84.91	
4.2.2 Freedom to make life choices	56	77.18	○
4.2.3 Income inequality	33	76.63	
4.2.4 Healthy life expectancy at birth	16	90.48	
3rd sub-pillar: SDG Contribution	16	84.30	
4.3.1 SDG 3: Good Health and Well-Being	1	100.00	●
4.3.2 SDG 4: Quality Education	7	74.55	
4.3.3 SDG 5: Women's economic opportunity	1	100.00	●
4.3.4 SDG 7: Affordable and Clean Energy	116	50.36	○
4.3.5 SDG 11: Sustainable Cities and Communities	7	96.57	●

NOTE: ● Indicates a strength and ○ a weakness.

Chad

	Rank (Out of 134)	Score
Network Readiness Index	**133**	**20.82**
Pillar/sub-pillar	**Rank**	**Score**
A. Technology pillar	**133**	**12.18**
1st sub-pillar: Access	131	28.40
2nd sub-pillar: Content	134	0.07
3rd sub-pillar: Future Technologies	134	8.06
B. People pillar	**133**	**13.73**
1st sub-pillar: Individuals	134	6.37
2nd sub-pillar: Businesses	121	23.49
3rd sub-pillar: Governments	130	11.32
C. Governance pillar	**129**	**28.10**
1st sub-pillar: Trust	126	15.07
2nd sub-pillar: Regulation	132	29.36
3rd sub-pillar: Inclusion	115	39.86
D. Impact pillar	**130**	**29.27**
1st sub-pillar: Economy	126	11.41
2nd sub-pillar: Quality of Life	118	44.72
3rd sub-pillar: SDG Contribution	133	31.68



The Network Readiness Index in detail

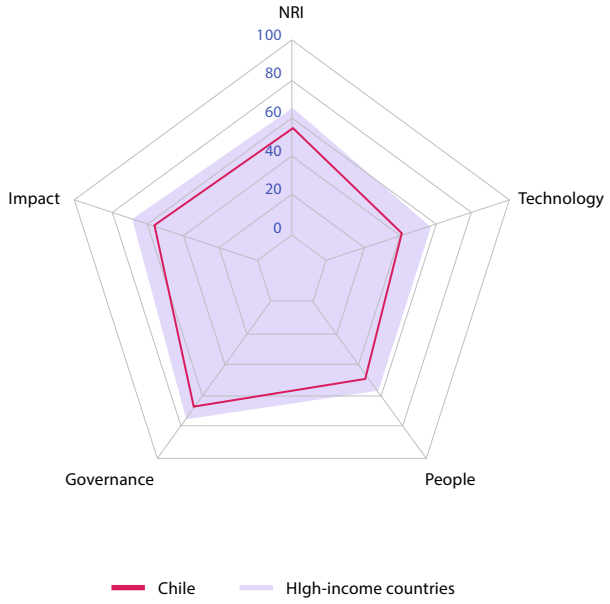
Indicator	Rank	Score	
A. Technology pillar	**133**	**12.18**	
1st sub-pillar: Access	131	28.40	
1.1.1 Mobile tariffs	134	0.00	○
1.1.2 Handset prices	132	0.00	○
1.1.3 FTTH/building Internet subscriptions	NA	NA	
1.1.4 Population covered by at least a 3G mobile network	126	85.83	
1.1.5 International Internet bandwidth	124	56.16	
1.1.6 Internet access in schools	84	0.00	
2nd sub-pillar: Content	134	0.07	
1.2.1 GitHub commits	134	0.00	○
1.2.2 Internet domain registrations	130	0.05	○
1.2.3 Mobile apps development	NA	NA	
1.2.4 AI scientific publications	125	0.15	
3rd sub-pillar: Future Technologies	134	8.06	
1.3.1 Adoption of emerging technologies	125	3.37	
1.3.2 Investment in emerging technologies	127	12.75	
1.3.3 Robot density	NA	NA	
1.3.4 Computer software spending	NA	NA	
B. People pillar	**133**	**13.73**	
1st sub-pillar: Individuals	134	6.37	
2.1.1 Mobile broadband internet traffic within the country	114	0.58	
2.1.2 ICT skills in the education system	86	30.93	
2.1.3 Use of virtual social networks	134	0.00	○
2.1.4 Tertiary enrollment	129	0.36	
2.1.5 Adult literacy rate	106	0.00	
2.1.6 AI talent concentration	NA	NA	
2nd sub-pillar: Businesses	121	23.49	
2.2.1 Firms with website	112	0.00	
2.2.2 GERD financed by business enterprise	NA	NA	
2.2.3 Knowledge intensive employment	127	0.18	
2.2.4 Annual investment in telecommunication services	115	70.28	
2.2.5 GERD performed by business enterprise	NA	NA	
3rd sub-pillar: Governments	130	11.32	
2.3.1 Government online services	129	19.61	○
2.3.2 Publication and use of open data	NA	NA	
2.3.3 Government promotion of investment in emerging tech	117	9.12	
2.3.4 R&D expenditure by governments and higher education	76	5.23	

Indicator	Rank	Score	
C. Governance pillar	**129**	**28.10**	
1st sub-pillar: Trust	126	15.07	
3.1.1 Secure Internet servers	134	0.00	○
3.1.2 Cybersecurity	99	39.39	
3.1.3 Online access to financial account	89	16.73	
3.1.4 Internet shopping	113	4.16	
2nd sub-pillar: Regulation	132	29.36	
3.2.1 Regulatory quality	129	23.51	○
3.2.2 ICT regulatory environment	128	52.59	○
3.2.3 Regulation of emerging technologies	111	8.31	
3.2.4 E-commerce legislation	129	0.00	○
3.2.5 Privacy protection by law content	71	62.39	
3rd sub-pillar: Inclusion	115	39.86	
3.3.1 E-Participation	102	30.24	
3.3.2 Socioeconomic gap in use of digital payments	83	64.74	
3.3.3 Availability of local online content	133	0.00	○
3.3.4 Gender gap in Internet use	NA	NA	
3.3.5 Rural gap in use of digital payments	63	64.45	
D. Impact pillar	**130**	**29.27**	
1st sub-pillar: Economy	126	11.41	
4.1.1 High-tech and medium-high-tech manufacturing	NA	NA	
4.1.2 High-tech exports	NA	NA	
4.1.3 PCT patent applications	99	0.00	○
4.1.4 Domestic market size	125	31.64	
4.1.5 Prevalence of gig economy	119	10.76	
4.1.6 ICT services exports	104	3.23	
2nd sub-pillar: Quality of Life	118	44.72	
4.2.1 Happiness	104	38.02	
4.2.2 Freedom to make life choices	112	50.75	
4.2.3 Income inequality	63	64.07	
4.2.4 Healthy life expectancy at birth	130	26.04	○
3rd sub-pillar: SDG Contribution	133	31.68	
4.3.1 SDG 3: Good Health and Well-Being	133	0.00	○
4.3.2 SDG 4: Quality Education	NA	NA	
4.3.3 SDG 5: Women's economic opportunity	115	52.21	
4.3.4 SDG 7: Affordable and Clean Energy	55	74.49	
4.3.5 SDG 11: Sustainable Cities and Communities	133	0.00	○

NOTE: ● Indicates a strength and ○ a weakness.

Chile

	Rank (Out of 134)	Score
Network Readiness Index	**48**	**53.18**
Pillar/sub-pillar	**Rank**	**Score**
A. Technology pillar	**60**	**41.47**
1st sub-pillar: Access	70	63.70
2nd sub-pillar: Content	67	22.76
3rd sub-pillar: Future Technologies	50	37.93
B. People pillar	**52**	**46.78**
1st sub-pillar: Individuals	40	52.76
2nd sub-pillar: Businesses	68	44.56
3rd sub-pillar: Governments	54	43.00
C. Governance pillar	**43**	**68.65**
1st sub-pillar: Trust	47	59.81
2nd sub-pillar: Regulation	40	75.51
3rd sub-pillar: Inclusion	48	70.64
D. Impact pillar	**52**	**55.82**
1st sub-pillar: Economy	65	28.32
2nd sub-pillar: Quality of Life	62	69.30
3rd sub-pillar: SDG Contribution	53	69.85



The Network Readiness Index in detail

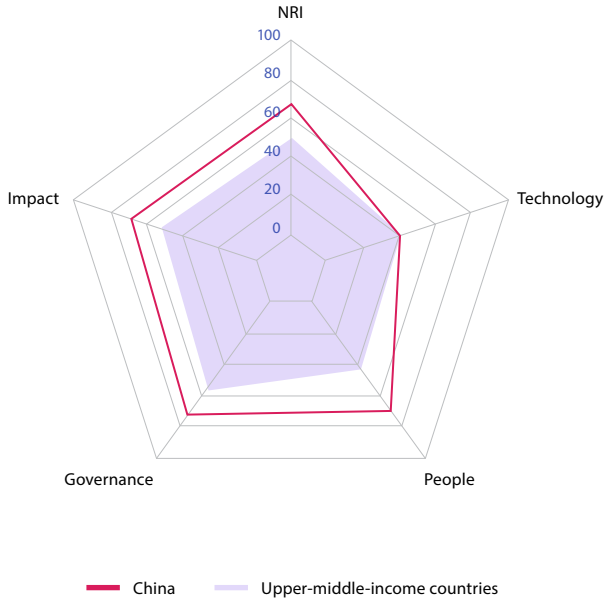
Indicator	Rank	Score	
A. Technology pillar	**60**	**41.47**	
1st sub-pillar: Access	70	63.70	
1.1.1 Mobile tariffs	49	71.57	
1.1.2 Handset prices	58	52.99	
1.1.3 FTTH/building Internet subscriptions	26	44.42	●
1.1.4 Population covered by at least a 3G mobile network	93	98.31	○
1.1.5 International Internet bandwidth	23	80.55	●
1.1.6 Internet access in schools	59	34.35	
2nd sub-pillar: Content	67	22.76	
1.2.1 GitHub commits	56	8.96	
1.2.2 Internet domain registrations	46	9.58	
1.2.3 Mobile apps development	71	64.50	
1.2.4 AI scientific publications	55	8.01	
3rd sub-pillar: Future Technologies	50	37.93	
1.3.1 Adoption of emerging technologies	36	61.55	
1.3.2 Investment in emerging technologies	69	38.50	
1.3.3 Robot density	52	0.57	○
1.3.4 Computer software spending	21	51.12	●
B. People pillar	**52**	**46.78**	
1st sub-pillar: Individuals	40	52.76	
2.1.1 Mobile broadband internet traffic within the country	25	32.37	●
2.1.2 ICT skills in the education system	68	46.86	
2.1.3 Use of virtual social networks	16	79.86	●
2.1.4 Tertiary enrollment	12	60.04	
2.1.5 Adult literacy rate	38	95.96	
2.1.6 AI talent concentration	45	1.50	○
2nd sub-pillar: Businesses	68	44.56	
2.2.1 Firms with website	NA	NA	
2.2.2 GERD financed by business enterprise	54	42.98	
2.2.3 Knowledge intensive employment	45	47.45	
2.2.4 Annual investment in telecommunication services	30	84.77	
2.2.5 GERD performed by business enterprise	60	3.05	
3rd sub-pillar: Governments	54	43.00	
2.3.1 Government online services	30	80.99	●
2.3.2 Publication and use of open data	31	47.06	
2.3.3 Government promotion of investment in emerging tech	64	38.06	
2.3.4 R&D expenditure by governments and higher education	73	5.89	

Indicator	Rank	Score	
C. Governance pillar	**43**	**68.65**	
1st sub-pillar: Trust	47	59.81	
3.1.1 Secure Internet servers	40	75.46	
3.1.2 Cybersecurity	81	68.28	
3.1.3 Online access to financial account	47	39.41	
3.1.4 Internet shopping	40	56.09	
2nd sub-pillar: Regulation	40	75.51	
3.2.1 Regulatory quality	31	71.14	
3.2.2 ICT regulatory environment	41	88.24	
3.2.3 Regulation of emerging technologies	51	50.39	
3.2.4 E-commerce legislation	1	100.00	●
3.2.5 Privacy protection by law content	60	67.81	
3rd sub-pillar: Inclusion	48	70.64	
3.3.1 E-Participation	43	68.61	
3.3.2 Socioeconomic gap in use of digital payments	11	97.84	●
3.3.3 Availability of local online content	54	66.35	
3.3.4 Gender gap in Internet use	74	65.12	
3.3.5 Rural gap in use of digital payments	81	55.27	
D. Impact pillar	**52**	**55.82**	
1st sub-pillar: Economy	65	28.32	
4.1.1 High-tech and medium-high-tech manufacturing	54	28.72	
4.1.2 High-tech exports	41	22.32	
4.1.3 PCT patent applications	36	12.30	
4.1.4 Domestic market size	44	61.57	
4.1.5 Prevalence of gig economy	65	40.41	
4.1.6 ICT services exports	98	4.58	○
2nd sub-pillar: Quality of Life	62	69.30	
4.2.1 Happiness	32	75.56	
4.2.2 Freedom to make life choices	76	69.72	
4.2.3 Income inequality	96	45.48	○
4.2.4 Healthy life expectancy at birth	30	86.45	●
3rd sub-pillar: SDG Contribution	53	69.85	
4.3.1 SDG 3: Good Health and Well-Being	30	84.45	●
4.3.2 SDG 4: Quality Education	45	42.32	
4.3.3 SDG 5: Women's economic opportunity	83	71.68	
4.3.4 SDG 7: Affordable and Clean Energy	59	73.99	
4.3.5 SDG 11: Sustainable Cities and Communities	45	76.81	

NOTE: ● Indicates a strength and ○ a weakness.

China

	Rank (Out of 134)	Score
Network Readiness Index	**20**	**67.31**
Pillar/sub-pillar	**Rank**	**Score**
A. Technology pillar	**20**	**57.89**
1st sub-pillar: Access	1	89.25
2nd sub-pillar: Content	39	35.29
3rd sub-pillar: Future Technologies	26	49.15
B. People pillar	**5**	**70.46**
1st sub-pillar: Individuals	6	68.41
2nd sub-pillar: Businesses	6	76.81
3rd sub-pillar: Governments	16	66.15
C. Governance pillar	**35**	**71.96**
1st sub-pillar: Trust	27	73.82
2nd sub-pillar: Regulation	84	61.91
3rd sub-pillar: Inclusion	19	80.15
D. Impact pillar	**21**	**68.92**
1st sub-pillar: Economy	4	64.44
2nd sub-pillar: Quality of Life	51	73.05
3rd sub-pillar: SDG Contribution	57	69.25



The Network Readiness Index in detail

Indicator	Rank	Score	
A. Technology pillar	**20**	**57.89**	
1st sub-pillar: Access	1	89.25	
1.1.1 Mobile tariffs	40	75.27	
1.1.2 Handset prices	37	66.69	
1.1.3 FTTH/building Internet subscriptions	1	100.00	●
1.1.4 Population covered by at least a 3G mobile network	28	99.97	
1.1.5 International Internet bandwidth	3	94.98	●
1.1.6 Internet access in schools	32	98.56	
2nd sub-pillar: Content	39	35.29	
1.2.1 GitHub commits	106	1.76	○
1.2.2 Internet domain registrations	63	4.10	
1.2.3 Mobile apps development	NA	NA	
1.2.4 AI scientific publications	1	100.00	●
3rd sub-pillar: Future Technologies	26	49.15	
1.3.1 Adoption of emerging technologies	NA	NA	
1.3.2 Investment in emerging technologies	33	59.75	
1.3.3 Robot density	5	53.67	
1.3.4 Computer software spending	27	34.02	
B. People pillar	**5**	**70.46**	
1st sub-pillar: Individuals	6	68.41	
2.1.1 Mobile broadband internet traffic within the country	1	100.00	●
2.1.2 ICT skills in the education system	NA	NA	
2.1.3 Use of virtual social networks	61	67.74	
2.1.4 Tertiary enrollment	49	41.09	
2.1.5 Adult literacy rate	36	96.11	
2.1.6 AI talent concentration	8	37.12	
2nd sub-pillar: Businesses	6	76.81	
2.2.1 Firms with website	42	65.39	
2.2.2 GERD financed by business enterprise	3	95.82	●
2.2.3 Knowledge intensive employment	NA	NA	
2.2.4 Annual investment in telecommunication services	2	98.94	●
2.2.5 GERD performed by business enterprise	13	47.11	
3rd sub-pillar: Governments	16	66.15	
2.3.1 Government online services	15	87.58	
2.3.2 Publication and use of open data	49	33.82	
2.3.3 Government promotion of investment in emerging tech	1	100.00	●
2.3.4 R&D expenditure by governments and higher education	14	43.21	

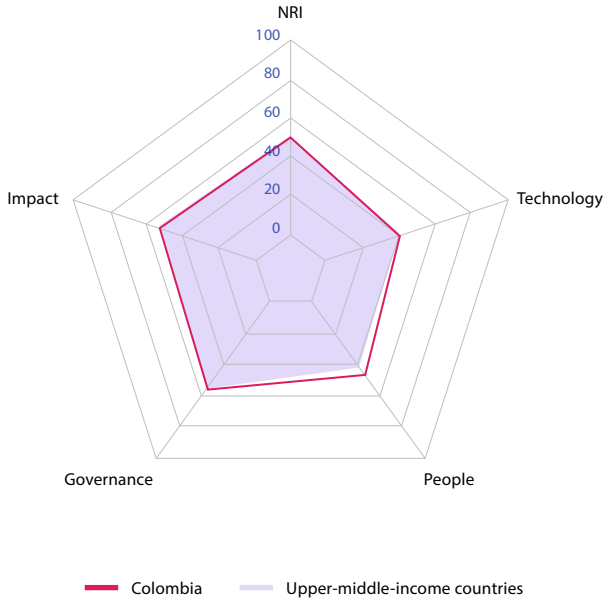
Indicator	Rank	Score	
C. Governance pillar	**35**	**71.96**	
1st sub-pillar: Trust	27	73.82	
3.1.1 Secure Internet servers	64	54.70	
3.1.2 Cybersecurity	40	92.40	
3.1.3 Online access to financial account	28	55.81	
3.1.4 Internet shopping	3	92.37	●
2nd sub-pillar: Regulation	84	61.91	
3.2.1 Regulatory quality	87	42.52	
3.2.2 ICT regulatory environment	120	57.65	○
3.2.3 Regulation of emerging technologies	7	83.90	
3.2.4 E-commerce legislation	1	100.00	●
3.2.5 Privacy protection by law content	123	25.49	○
3rd sub-pillar: Inclusion	19	80.15	
3.3.1 E-Participation	13	86.04	
3.3.2 Socioeconomic gap in use of digital payments	51	83.52	
3.3.3 Availability of local online content	3	97.12	●
3.3.4 Gender gap in Internet use	42	69.81	
3.3.5 Rural gap in use of digital payments	64	64.25	
D. Impact pillar	**21**	**68.92**	
1st sub-pillar: Economy	4	64.44	
4.1.1 High-tech and medium-high-tech manufacturing	13	60.86	
4.1.2 High-tech exports	10	54.10	
4.1.3 PCT patent applications	14	52.81	
4.1.4 Domestic market size	1	100.00	●
4.1.5 Prevalence of gig economy	1	100.00	●
4.1.6 ICT services exports	52	18.90	
2nd sub-pillar: Quality of Life	51	73.05	
4.2.1 Happiness	68	65.29	
4.2.2 Freedom to make life choices	37	83.25	
4.2.3 Income inequality	68	62.31	
4.2.4 Healthy life expectancy at birth	41	81.36	
3rd sub-pillar: SDG Contribution	57	69.25	
4.3.1 SDG 3: Good Health and Well-Being	27	88.24	
4.3.2 SDG 4: Quality Education	1	100.00	●
4.3.3 SDG 5: Women's economic opportunity	93	69.03	
4.3.4 SDG 7: Affordable and Clean Energy	109	54.48	○
4.3.5 SDG 11: Sustainable Cities and Communities	120	34.51	○

NOTE: ● Indicates a strength and ○ a weakness.

Colombia

	Rank (Out of 134)	Score
Network Readiness Index	**65**	**48.28**

Pillar/sub-pillar	Rank	Score
A. Technology pillar	**66**	**40.40**
1st sub-pillar: Access	75	62.07
2nd sub-pillar: Content	56	25.35
3rd sub-pillar: Future Technologies	63	33.79
B. People pillar	**60**	**45.51**
1st sub-pillar: Individuals	63	48.24
2nd sub-pillar: Businesses	70	43.52
3rd sub-pillar: Governments	50	44.78
C. Governance pillar	**70**	**54.65**
1st sub-pillar: Trust	79	36.26
2nd sub-pillar: Regulation	57	67.44
3rd sub-pillar: Inclusion	70	60.24
D. Impact pillar	**73**	**52.55**
1st sub-pillar: Economy	73	25.84
2nd sub-pillar: Quality of Life	87	62.05
3rd sub-pillar: SDG Contribution	54	69.76



The Network Readiness Index in detail

Indicator	Rank	Score	
A. Technology pillar	**66**	**40.40**	
1st sub-pillar: Access	75	62.07	
1.1.1 Mobile tariffs	87	49.21	
1.1.2 Handset prices	57	53.51	
1.1.3 FTTH/building Internet subscriptions	23	46.63	●
1.1.4 Population covered by at least a 3G mobile network	1	100.00	●
1.1.5 International Internet bandwidth	14	84.88	●
1.1.6 Internet access in schools	58	38.18	
2nd sub-pillar: Content	56	25.35	
1.2.1 GitHub commits	64	7.49	
1.2.2 Internet domain registrations	38	16.00	
1.2.3 Mobile apps development	73	64.03	
1.2.4 AI scientific publications	37	13.89	
3rd sub-pillar: Future Technologies	63	33.79	
1.3.1 Adoption of emerging technologies	67	46.99	
1.3.2 Investment in emerging technologies	68	38.75	
1.3.3 Robot density	NA	NA	
1.3.4 Computer software spending	79	15.63	
B. People pillar	**60**	**45.51**	
1st sub-pillar: Individuals	63	48.24	
2.1.1 Mobile broadband internet traffic within the country	33	24.55	●
2.1.2 ICT skills in the education system	39	59.72	
2.1.3 Use of virtual social networks	46	69.70	
2.1.4 Tertiary enrollment	56	36.71	
2.1.5 Adult literacy rate	47	94.04	
2.1.6 AI talent concentration	42	4.72	○
2nd sub-pillar: Businesses	70	43.52	
2.2.1 Firms with website	34	69.30	
2.2.2 GERD financed by business enterprise	22	66.08	●
2.2.3 Knowledge intensive employment	55	34.92	
2.2.4 Annual investment in telecommunication services	NA	NA	
2.2.5 GERD performed by business enterprise	56	3.81	
3rd sub-pillar: Governments	50	44.78	
2.3.1 Government online services	59	71.46	
2.3.2 Publication and use of open data	18	64.71	●
2.3.3 Government promotion of investment in emerging tech	65	37.92	
2.3.4 R&D expenditure by governments and higher education	80	5.03	

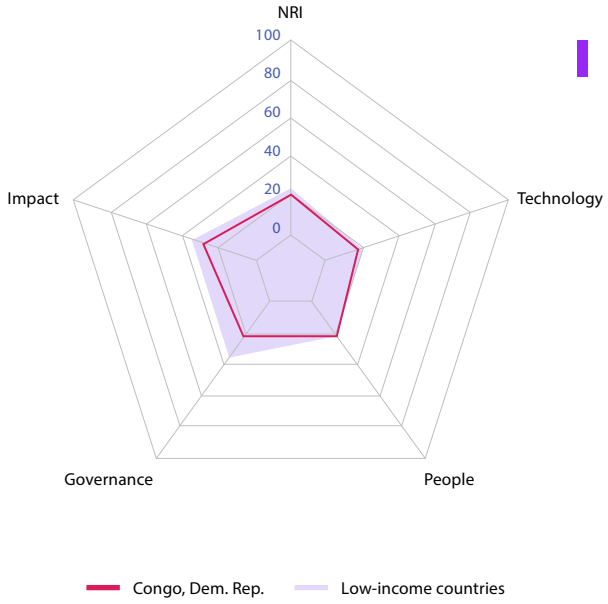
Indicator	Rank	Score	
C. Governance pillar	**70**	**54.65**	
1st sub-pillar: Trust	79	36.26	
3.1.1 Secure Internet servers	78	47.91	
3.1.2 Cybersecurity	88	63.08	
3.1.3 Online access to financial account	86	17.15	
3.1.4 Internet shopping	76	16.89	
2nd sub-pillar: Regulation	57	67.44	
3.2.1 Regulatory quality	57	54.57	
3.2.2 ICT regulatory environment	58	84.71	
3.2.3 Regulation of emerging technologies	55	48.05	
3.2.4 E-commerce legislation	1	100.00	●
3.2.5 Privacy protection by law content	98	49.88	○
3rd sub-pillar: Inclusion	70	60.24	
3.3.1 E-Participation	37	70.93	
3.3.2 Socioeconomic gap in use of digital payments	95	55.54	
3.3.3 Availability of local online content	78	53.85	
3.3.4 Gender gap in Internet use	11	75.22	●
3.3.5 Rural gap in use of digital payments	97	45.66	○
D. Impact pillar	**73**	**52.55**	
1st sub-pillar: Economy	73	25.84	
4.1.1 High-tech and medium-high-tech manufacturing	60	24.82	
4.1.2 High-tech exports	58	14.64	
4.1.3 PCT patent applications	56	4.96	
4.1.4 Domestic market size	31	66.61	●
4.1.5 Prevalence of gig economy	81	35.17	
4.1.6 ICT services exports	84	8.84	
2nd sub-pillar: Quality of Life	87	62.05	
4.2.1 Happiness	64	65.83	
4.2.2 Freedom to make life choices	72	70.67	
4.2.3 Income inequality	109	28.89	○
4.2.4 Healthy life expectancy at birth	35	82.82	●
3rd sub-pillar: SDG Contribution	54	69.76	
4.3.1 SDG 3: Good Health and Well-Being	37	81.88	
4.3.2 SDG 4: Quality Education	59	29.15	○
4.3.3 SDG 5: Women's economic opportunity	68	77.88	
4.3.4 SDG 7: Affordable and Clean Energy	12	83.60	●
4.3.5 SDG 11: Sustainable Cities and Communities	47	76.31	

NOTE: ● Indicates a strength and ○ a weakness.

Congo, Dem. Rep.

	Rank (Out of 134)	Score
Network Readiness Index	**132**	**21.09**

Pillar/sub-pillar	Rank	Score
A. Technology pillar	**132**	**16.27**
1st sub-pillar: Access	129	32.56
2nd sub-pillar: Content	128	0.78
3rd sub-pillar: Future Technologies	125	15.48
B. People pillar	**125**	**18.27**
1st sub-pillar: Individuals	123	19.92
2nd sub-pillar: Businesses	119	24.33
3rd sub-pillar: Governments	131	10.55
C. Governance pillar	**133**	**22.81**
1st sub-pillar: Trust	132	12.10
2nd sub-pillar: Regulation	131	29.69
3rd sub-pillar: Inclusion	129	26.65
D. Impact pillar	**133**	**27.00**
1st sub-pillar: Economy	115	15.24
2nd sub-pillar: Quality of Life	126	37.40
3rd sub-pillar: SDG Contribution	134	28.38



The Network Readiness Index in detail

Indicator	Rank	Score	
A. Technology pillar	**132**	**16.27**	
1st sub-pillar: Access	129	32.56	
1.1.1 Mobile tariffs	131	6.54	○
1.1.2 Handset prices	121	19.19	
1.1.3 FTTH/building Internet subscriptions	NA	NA	
1.1.4 Population covered by at least a 3G mobile network	128	75.66	○
1.1.5 International Internet bandwidth	115	61.39	
1.1.6 Internet access in schools	84	0.00	○
2nd sub-pillar: Content	128	0.78	
1.2.1 GitHub commits	131	0.10	○
1.2.2 Internet domain registrations	133	0.02	○
1.2.3 Mobile apps development	NA	NA	
1.2.4 AI scientific publications	86	2.21	
3rd sub-pillar: Future Technologies	125	15.48	
1.3.1 Adoption of emerging technologies	123	13.47	
1.3.2 Investment in emerging technologies	123	17.50	
1.3.3 Robot density	NA	NA	
1.3.4 Computer software spending	NA	NA	
B. People pillar	**125**	**18.27**	
1st sub-pillar: Individuals	123	19.92	
2.1.1 Mobile broadband internet traffic within the country	76	7.16	
2.1.2 ICT skills in the education system	102	14.68	
2.1.3 Use of virtual social networks	131	2.15	○
2.1.4 Tertiary enrollment	120	2.89	
2.1.5 Adult literacy rate	82	72.72	
2.1.6 AI talent concentration	NA	NA	
2nd sub-pillar: Businesses	119	24.33	
2.2.1 Firms with website	110	8.66	
2.2.2 GERD financed by business enterprise	99	0.05	
2.2.3 Knowledge intensive employment	106	11.98	
2.2.4 Annual investment in telecommunication services	75	76.61	
2.2.5 GERD performed by business enterprise	NA	NA	
3rd sub-pillar: Governments	131	10.55	
2.3.1 Government online services	131	15.35	○
2.3.2 Publication and use of open data	86	11.76	
2.3.3 Government promotion of investment in emerging tech	120	7.96	
2.3.4 R&D expenditure by governments and higher education	67	7.14	

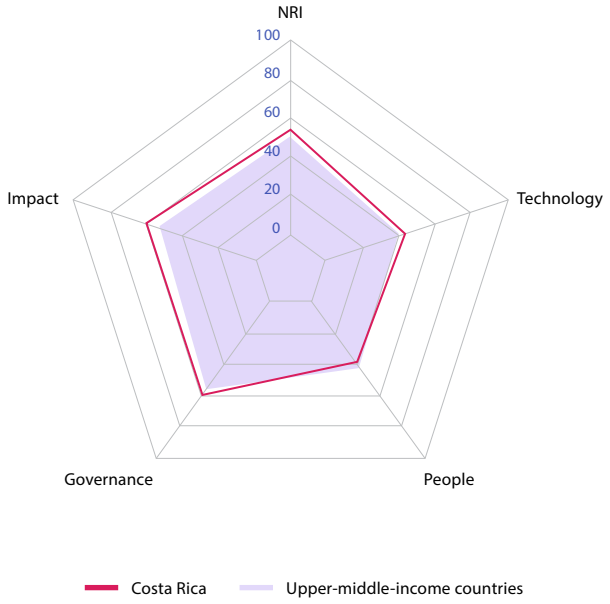
Indicator	Rank	Score	
C. Governance pillar	**133**	**22.81**	
1st sub-pillar: Trust	132	12.10	
3.1.1 Secure Internet servers	133	9.89	○
3.1.2 Cybersecurity	131	3.63	○
3.1.3 Online access to financial account	56	33.51	
3.1.4 Internet shopping	123	1.38	
2nd sub-pillar: Regulation	131	29.69	
3.2.1 Regulatory quality	132	17.46	○
3.2.2 ICT regulatory environment	100	68.24	
3.2.3 Regulation of emerging technologies	118	1.30	
3.2.4 E-commerce legislation	129	0.00	○
3.2.5 Privacy protection by law content	76	61.46	
3rd sub-pillar: Inclusion	129	26.65	
3.3.1 E-Participation	115	23.26	
3.3.2 Socioeconomic gap in use of digital payments	118	39.66	
3.3.3 Availability of local online content	131	10.34	○
3.3.4 Gender gap in Internet use	NA	NA	
3.3.5 Rural gap in use of digital payments	109	33.34	
D. Impact pillar	**133**	**27.00**	
1st sub-pillar: Economy	115	15.24	
4.1.1 High-tech and medium-high-tech manufacturing	NA	NA	
4.1.2 High-tech exports	121	0.68	
4.1.3 PCT patent applications	NA	NA	
4.1.4 Domestic market size	83	46.80	
4.1.5 Prevalence of gig economy	117	13.37	
4.1.6 ICT services exports	132	0.09	○
2nd sub-pillar: Quality of Life	126	37.40	
4.2.1 Happiness	128	15.90	○
4.2.2 Freedom to make life choices	116	48.19	
4.2.3 Income inequality	89	52.51	
4.2.4 Healthy life expectancy at birth	126	33.00	
3rd sub-pillar: SDG Contribution	134	28.38	
4.3.1 SDG 3: Good Health and Well-Being	128	16.95	○
4.3.2 SDG 4: Quality Education	NA	NA	
4.3.3 SDG 5: Women's economic opportunity	88	69.91	
4.3.4 SDG 7: Affordable and Clean Energy	134	0.00	○
4.3.5 SDG 11: Sustainable Cities and Communities	124	26.64	

NOTE: ● Indicates a strength and ○ a weakness.

Costa Rica

	Rank (Out of 134)	Score
Network Readiness Index	**57**	**50.99**

Pillar/sub-pillar	Rank	Score
A. Technology pillar	**52**	**44.22**
1st sub-pillar: Access	60	66.96
2nd sub-pillar: Content	79	19.97
3rd sub-pillar: Future Technologies	34	45.72
B. People pillar	**81**	**39.51**
1st sub-pillar: Individuals	30	54.91
2nd sub-pillar: Businesses	113	28.76
3rd sub-pillar: Governments	80	34.85
C. Governance pillar	**57**	**60.30**
1st sub-pillar: Trust	65	44.95
2nd sub-pillar: Regulation	35	76.62
3rd sub-pillar: Inclusion	73	59.32
D. Impact pillar	**40**	**59.96**
1st sub-pillar: Economy	57	31.51
2nd sub-pillar: Quality of Life	43	74.78
3rd sub-pillar: SDG Contribution	40	73.58



The Network Readiness Index in detail

Indicator	Rank	Score	
A. Technology pillar	**52**	**44.22**	
1st sub-pillar: Access	60	66.96	
1.1.1 Mobile tariffs	67	60.90	
1.1.2 Handset prices	53	55.88	
1.1.3 FTTH/building Internet subscriptions	74	25.77	
1.1.4 Population covered by at least a 3G mobile network	98	97.96	
1.1.5 International Internet bandwidth	46	74.98	
1.1.6 Internet access in schools	38	86.29	
2nd sub-pillar: Content	79	19.97	
1.2.1 GitHub commits	51	11.69	
1.2.2 Internet domain registrations	52	6.48	
1.2.3 Mobile apps development	84	60.56	
1.2.4 AI scientific publications	101	1.15	○
3rd sub-pillar: Future Technologies	34	45.72	
1.3.1 Adoption of emerging technologies	43	57.76	
1.3.2 Investment in emerging technologies	48	48.25	
1.3.3 Robot density	NA	NA	
1.3.4 Computer software spending	32	31.13	●
B. People pillar	**81**	**39.51**	
1st sub-pillar: Individuals	30	54.91	
2.1.1 Mobile broadband internet traffic within the country	84	5.19	
2.1.2 ICT skills in the education system	35	65.53	
2.1.3 Use of virtual social networks	48	69.40	
2.1.4 Tertiary enrollment	55	37.09	
2.1.5 Adult literacy rate	31	97.32	
2.1.6 AI talent concentration	NA	NA	
2nd sub-pillar: Businesses	113	28.76	
2.2.1 Firms with website	NA	NA	
2.2.2 GERD financed by business enterprise	85	2.85	○
2.2.3 Knowledge intensive employment	69	30.35	
2.2.4 Annual investment in telecommunication services	63	78.18	
2.2.5 GERD performed by business enterprise	57	3.68	
3rd sub-pillar: Governments	80	34.85	
2.3.1 Government online services	70	64.77	
2.3.2 Publication and use of open data	49	33.82	
2.3.3 Government promotion of investment in emerging tech	74	34.29	
2.3.4 R&D expenditure by governments and higher education	69	6.51	

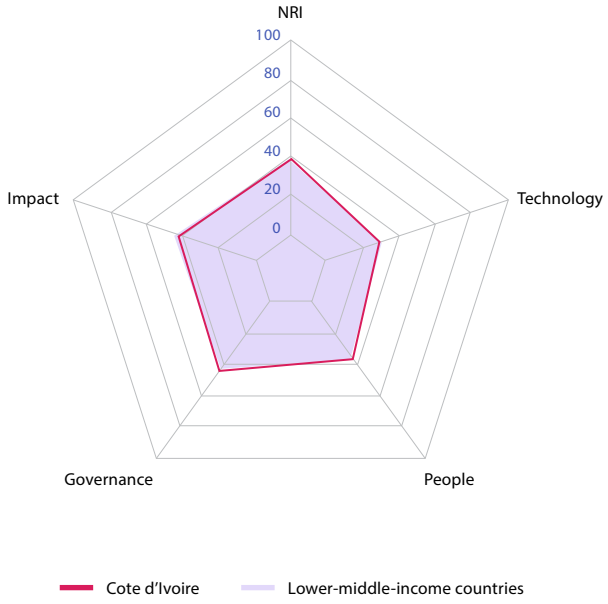
Indicator	Rank	Score	
C. Governance pillar	**57**	**60.30**	
1st sub-pillar: Trust	65	44.95	
3.1.1 Secure Internet servers	62	57.29	
3.1.2 Cybersecurity	83	66.88	
3.1.3 Online access to financial account	64	29.47	
3.1.4 Internet shopping	62	26.18	
2nd sub-pillar: Regulation	35	76.62	
3.2.1 Regulatory quality	47	59.91	
3.2.2 ICT regulatory environment	28	90.59	●
3.2.3 Regulation of emerging technologies	43	57.14	
3.2.4 E-commerce legislation	1	100.00	●
3.2.5 Privacy protection by law content	39	75.44	
3rd sub-pillar: Inclusion	73	59.32	
3.3.1 E-Participation	66	54.65	
3.3.2 Socioeconomic gap in use of digital payments	93	55.92	
3.3.3 Availability of local online content	65	60.34	
3.3.4 Gender gap in Internet use	20	73.15	●
3.3.5 Rural gap in use of digital payments	87	52.52	
D. Impact pillar	**40**	**59.96**	
1st sub-pillar: Economy	57	31.51	
4.1.1 High-tech and medium-high-tech manufacturing	81	14.48	○
4.1.2 High-tech exports	33	28.20	●
4.1.3 PCT patent applications	83	0.95	
4.1.4 Domestic market size	82	46.91	
4.1.5 Prevalence of gig economy	52	45.64	
4.1.6 ICT services exports	14	52.89	●
2nd sub-pillar: Quality of Life	43	74.78	
4.2.1 Happiness	9	87.87	●
4.2.2 Freedom to make life choices	20	89.12	●
4.2.3 Income inequality	105	35.93	○
4.2.4 Healthy life expectancy at birth	31	86.20	●
3rd sub-pillar: SDG Contribution	40	73.58	
4.3.1 SDG 3: Good Health and Well-Being	38	81.78	
4.3.2 SDG 4: Quality Education	56	32.95	○
4.3.3 SDG 5: Women's economic opportunity	34	88.50	●
4.3.4 SDG 7: Affordable and Clean Energy	9	84.83	●
4.3.5 SDG 11: Sustainable Cities and Communities	37	79.86	

NOTE: ● Indicates a strength and ○ a weakness.

Cote d'Ivoire

	Rank (Out of 134)	Score
Network Readiness Index	**101**	**37.89**

Pillar/sub-pillar	Rank	Score
A. Technology pillar	**100**	**29.40**
1st sub-pillar: Access	88	55.78
2nd sub-pillar: Content	117	10.07
3rd sub-pillar: Future Technologies	103	22.36
B. People pillar	**102**	**31.67**
1st sub-pillar: Individuals	99	37.33
2nd sub-pillar: Businesses	103	31.70
3rd sub-pillar: Governments	102	25.96
C. Governance pillar	**94**	**47.29**
1st sub-pillar: Trust	95	32.34
2nd sub-pillar: Regulation	73	63.35
3rd sub-pillar: Inclusion	102	46.18
D. Impact pillar	**103**	**43.21**
1st sub-pillar: Economy	80	23.71
2nd sub-pillar: Quality of Life	108	50.76
3rd sub-pillar: SDG Contribution	93	55.17



The Network Readiness Index in detail

Indicator	Rank	Score	
A. Technology pillar	**100**	**29.40**	
1st sub-pillar: Access	88	55.78	
1.1.1 Mobile tariffs	102	37.33	
1.1.2 Handset prices	72	44.13	
1.1.3 FTTH/building Internet subscriptions	65	29.08	
1.1.4 Population covered by at least a 3G mobile network	81	99.07	
1.1.5 International Internet bandwidth	77	69.28	
1.1.6 Internet access in schools	NA	NA	
2nd sub-pillar: Content	117	10.07	
1.2.1 GitHub commits	123	0.43	
1.2.2 Internet domain registrations	112	0.39	
1.2.3 Mobile apps development	114	38.49	○
1.2.4 AI scientific publications	105	0.98	
3rd sub-pillar: Future Technologies	103	22.36	
1.3.1 Adoption of emerging technologies	89	37.49	
1.3.2 Investment in emerging technologies	101	28.50	
1.3.3 Robot density	NA	NA	
1.3.4 Computer software spending	121	1.10	○
B. People pillar	**102**	**31.67**	
1st sub-pillar: Individuals	99	37.33	
2.1.1 Mobile broadband internet traffic within the country	60	10.31	●
2.1.2 ICT skills in the education system	26	70.42	●
2.1.3 Use of virtual social networks	110	14.86	
2.1.4 Tertiary enrollment	114	4.85	
2.1.5 Adult literacy rate	65	86.20	
2.1.6 AI talent concentration	NA	NA	
2nd sub-pillar: Businesses	103	31.70	
2.2.1 Firms with website	109	9.94	○
2.2.2 GERD financed by business enterprise	NA	NA	
2.2.3 Knowledge intensive employment	115	7.08	
2.2.4 Annual investment in telecommunication services	64	78.10	●
2.2.5 GERD performed by business enterprise	NA	NA	
3rd sub-pillar: Governments	102	25.96	
2.3.1 Government online services	90	49.90	
2.3.2 Publication and use of open data	82	13.24	
2.3.3 Government promotion of investment in emerging tech	58	39.64	●
2.3.4 R&D expenditure by governments and higher education	108	1.09	○

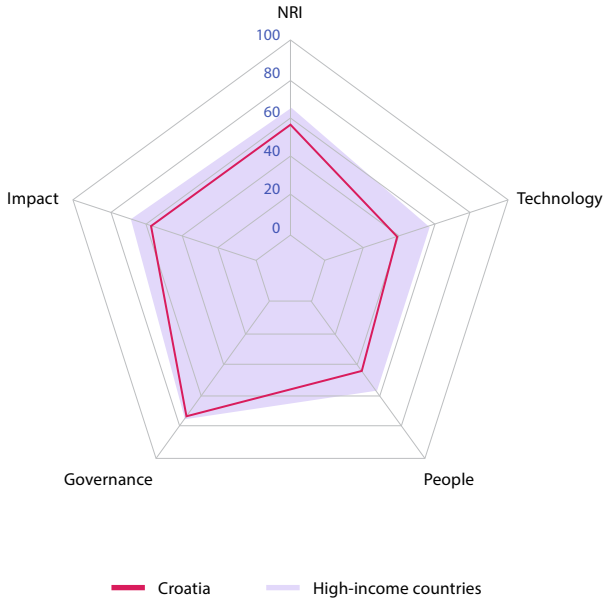
Indicator	Rank	Score	
C. Governance pillar	**94**	**47.29**	
1st sub-pillar: Trust	95	32.34	
3.1.1 Secure Internet servers	112	32.04	
3.1.2 Cybersecurity	82	67.25	
3.1.3 Online access to financial account	73	23.87	
3.1.4 Internet shopping	104	6.21	
2nd sub-pillar: Regulation	73	63.35	
3.2.1 Regulatory quality	84	43.81	
3.2.2 ICT regulatory environment	90	70.59	
3.2.3 Regulation of emerging technologies	56	47.01	●
3.2.4 E-commerce legislation	1	100.00	●
3.2.5 Privacy protection by law content	87	55.35	
3rd sub-pillar: Inclusion	102	46.18	
3.3.1 E-Participation	90	36.05	
3.3.2 Socioeconomic gap in use of digital payments	67	74.56	●
3.3.3 Availability of local online content	110	33.17	
3.3.4 Gender gap in Internet use	99	29.87	
3.3.5 Rural gap in use of digital payments	76	57.24	
D. Impact pillar	**103**	**43.21**	
1st sub-pillar: Economy	80	23.71	
4.1.1 High-tech and medium-high-tech manufacturing	NA	NA	
4.1.2 High-tech exports	45	20.13	●
4.1.3 PCT patent applications	94	0.23	
4.1.4 Domestic market size	73	50.24	
4.1.5 Prevalence of gig economy	64	40.99	●
4.1.6 ICT services exports	91	6.98	
2nd sub-pillar: Quality of Life	108	50.76	
4.2.1 Happiness	94	46.43	
4.2.2 Freedom to make life choices	104	56.39	
4.2.3 Income inequality	62	64.82	
4.2.4 Healthy life expectancy at birth	121	35.38	
3rd sub-pillar: SDG Contribution	93	55.17	
4.3.1 SDG 3: Good Health and Well-Being	118	28.21	
4.3.2 SDG 4: Quality Education	NA	NA	
4.3.3 SDG 5: Women's economic opportunity	25	92.92	●
4.3.4 SDG 7: Affordable and Clean Energy	54	75.07	●
4.3.5 SDG 11: Sustainable Cities and Communities	128	24.48	○

NOTE: ● Indicates a strength and ○ a weakness.

Croatia

	Rank (Out of 134)	Score
Network Readiness Index	**50**	**52.75**

Pillar/sub-pillar	Rank	Score
A. Technology pillar	**74**	**38.80**
1st sub-pillar: Access	57	67.37
2nd sub-pillar: Content	49	28.93
3rd sub-pillar: Future Technologies	110	20.10
B. People pillar	**57**	**45.98**
1st sub-pillar: Individuals	61	48.52
2nd sub-pillar: Businesses	47	52.22
3rd sub-pillar: Governments	70	37.21
C. Governance pillar	**36**	**71.50**
1st sub-pillar: Trust	39	66.65
2nd sub-pillar: Regulation	39	75.56
3rd sub-pillar: Inclusion	42	72.30
D. Impact pillar	**59**	**54.71**
1st sub-pillar: Economy	74	25.73
2nd sub-pillar: Quality of Life	79	65.57
3rd sub-pillar: SDG Contribution	41	72.84



The Network Readiness Index in detail

Indicator	Rank	Score	
A. Technology pillar	**74**	**38.80**	
1st sub-pillar: Access	57	67.37	
1.1.1 Mobile tariffs	30	78.93	●
1.1.2 Handset prices	34	68.98	●
1.1.3 FTTH/building Internet subscriptions	94	16.94	
1.1.4 Population covered by at least a 3G mobile network	36	99.96	
1.1.5 International Internet bandwidth	61	72.03	
1.1.6 Internet access in schools	NA	NA	
2nd sub-pillar: Content	49	28.93	
1.2.1 GitHub commits	39	24.86	
1.2.2 Internet domain registrations	39	15.28	
1.2.3 Mobile apps development	53	70.79	
1.2.4 AI scientific publications	71	4.81	
3rd sub-pillar: Future Technologies	110	20.10	
1.3.1 Adoption of emerging technologies	57	49.87	
1.3.2 Investment in emerging technologies	109	25.25	○
1.3.3 Robot density	46	1.76	
1.3.4 Computer software spending	107	3.54	○
B. People pillar	**57**	**45.98**	
1st sub-pillar: Individuals	61	48.52	
2.1.1 Mobile broadband internet traffic within the country	52	13.03	
2.1.2 ICT skills in the education system	NA	NA	
2.1.3 Use of virtual social networks	53	68.82	
2.1.4 Tertiary enrollment	43	44.13	
2.1.5 Adult literacy rate	15	99.25	●
2.1.6 AI talent concentration	25	17.38	
2nd sub-pillar: Businesses	47	52.22	
2.2.1 Firms with website	40	67.33	
2.2.2 GERD financed by business enterprise	49	46.51	
2.2.3 Knowledge intensive employment	40	52.92	
2.2.4 Annual investment in telecommunication services	52	79.47	
2.2.5 GERD performed by business enterprise	36	14.85	
3rd sub-pillar: Governments	70	37.21	
2.3.1 Government online services	36	79.09	
2.3.2 Publication and use of open data	57	29.41	
2.3.3 Government promotion of investment in emerging tech	107	18.17	○
2.3.4 R&D expenditure by governments and higher education	33	22.17	

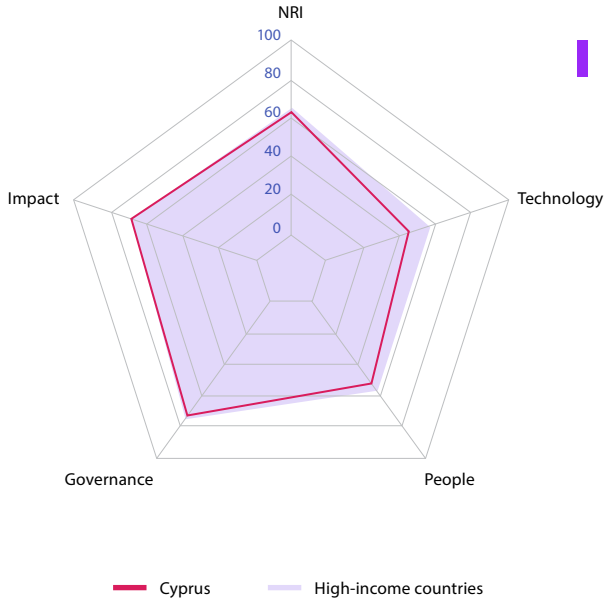
Indicator	Rank	Score	
C. Governance pillar	**36**	**71.50**	
1st sub-pillar: Trust	39	66.65	
3.1.1 Secure Internet servers	30	79.91	●
3.1.2 Cybersecurity	40	92.40	
3.1.3 Online access to financial account	39	43.89	
3.1.4 Internet shopping	43	50.39	
2nd sub-pillar: Regulation	39	75.56	
3.2.1 Regulatory quality	45	60.94	
3.2.2 ICT regulatory environment	14	94.12	●
3.2.3 Regulation of emerging technologies	69	43.12	
3.2.4 E-commerce legislation	1	100.00	●
3.2.5 Privacy protection by law content	35	79.61	
3rd sub-pillar: Inclusion	42	72.30	
3.3.1 E-Participation	29	73.25	●
3.3.2 Socioeconomic gap in use of digital payments	63	77.08	
3.3.3 Availability of local online content	56	65.87	
3.3.4 Gender gap in Internet use	75	64.85	
3.3.5 Rural gap in use of digital payments	5	80.46	●
D. Impact pillar	**59**	**54.71**	
1st sub-pillar: Economy	74	25.73	
4.1.1 High-tech and medium-high-tech manufacturing	47	31.80	
4.1.2 High-tech exports	50	17.10	
4.1.3 PCT patent applications	55	4.99	
4.1.4 Domestic market size	78	48.37	
4.1.5 Prevalence of gig economy	104	23.55	○
4.1.6 ICT services exports	34	28.59	●
2nd sub-pillar: Quality of Life	79	65.57	
4.2.1 Happiness	78	60.01	
4.2.2 Freedom to make life choices	122	36.44	○
4.2.3 Income inequality	20	84.17	●
4.2.4 Healthy life expectancy at birth	39	81.67	
3rd sub-pillar: SDG Contribution	41	72.84	
4.3.1 SDG 3: Good Health and Well-Being	56	73.09	
4.3.2 SDG 4: Quality Education	36	56.24	
4.3.3 SDG 5: Women's economic opportunity	29	91.15	●
4.3.4 SDG 7: Affordable and Clean Energy	39	77.17	
4.3.5 SDG 11: Sustainable Cities and Communities	66	66.54	

NOTE: ● Indicates a strength and ○ a weakness.

Cyprus

	Rank (Out of 134)	Score
Network Readiness Index	**35**	**58.43**

Pillar/sub-pillar	Rank	Score
A. Technology pillar	**46**	**46.26**
1st sub-pillar: Access	64	65.22
2nd sub-pillar: Content	26	43.65
3rd sub-pillar: Future Technologies	74	29.90
B. People pillar	**39**	**50.84**
1st sub-pillar: Individuals	15	59.93
2nd sub-pillar: Businesses	48	52.13
3rd sub-pillar: Governments	63	40.47
C. Governance pillar	**34**	**72.50**
1st sub-pillar: Trust	41	66.15
2nd sub-pillar: Regulation	38	75.95
3rd sub-pillar: Inclusion	33	75.39
D. Impact pillar	**32**	**64.13**
1st sub-pillar: Economy	26	42.08
2nd sub-pillar: Quality of Life	50	73.06
3rd sub-pillar: SDG Contribution	30	77.25



The Network Readiness Index in detail

Indicator	Rank	Score	
A. Technology pillar	**46**	**46.26**	
1st sub-pillar: Access	64	65.22	
1.1.1 Mobile tariffs	66	61.24	
1.1.2 Handset prices	15	79.75	●
1.1.3 FTTH/building Internet subscriptions	109	9.12	○
1.1.4 Population covered by at least a 3G mobile network	1	100.00	●
1.1.5 International Internet bandwidth	41	76.01	
1.1.6 Internet access in schools	NA	NA	
2nd sub-pillar: Content	26	43.65	
1.2.1 GitHub commits	33	32.77	
1.2.2 Internet domain registrations	22	39.63	
1.2.3 Mobile apps development	1	100.00	●
1.2.4 AI scientific publications	85	2.21	
3rd sub-pillar: Future Technologies	74	29.90	
1.3.1 Adoption of emerging technologies	73	44.07	
1.3.2 Investment in emerging technologies	93	31.25	
1.3.3 Robot density	NA	NA	
1.3.4 Computer software spending	81	14.40	
B. People pillar	**39**	**50.84**	
1st sub-pillar: Individuals	15	59.93	
2.1.1 Mobile broadband internet traffic within the country	106	1.46	○
2.1.2 ICT skills in the education system	52	55.18	
2.1.3 Use of virtual social networks	10	82.99	●
2.1.4 Tertiary enrollment	10	60.89	●
2.1.5 Adult literacy rate	17	99.13	●
2.1.6 AI talent concentration	NA	NA	
2nd sub-pillar: Businesses	48	52.13	
2.2.1 Firms with website	30	71.63	
2.2.2 GERD financed by business enterprise	46	47.01	
2.2.3 Knowledge intensive employment	32	58.08	
2.2.4 Annual investment in telecommunication services	95	73.47	○
2.2.5 GERD performed by business enterprise	43	10.49	
3rd sub-pillar: Governments	63	40.47	
2.3.1 Government online services	46	75.60	
2.3.2 Publication and use of open data	NA	NA	
2.3.3 Government promotion of investment in emerging tech	88	30.30	
2.3.4 R&D expenditure by governments and higher education	45	15.50	

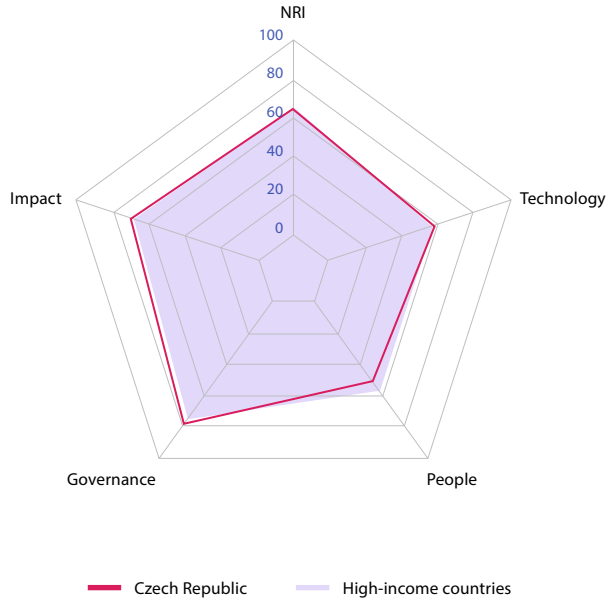
Indicator	Rank	Score	
C. Governance pillar	**34**	**72.50**	
1st sub-pillar: Trust	41	66.15	
3.1.1 Secure Internet servers	27	80.61	
3.1.2 Cybersecurity	49	88.62	
3.1.3 Online access to financial account	43	42.11	
3.1.4 Internet shopping	41	53.27	
2nd sub-pillar: Regulation	38	75.95	
3.2.1 Regulatory quality	34	69.01	
3.2.2 ICT regulatory environment	56	85.53	
3.2.3 Regulation of emerging technologies	60	45.45	
3.2.4 E-commerce legislation	1	100.00	●
3.2.5 Privacy protection by law content	34	79.77	
3rd sub-pillar: Inclusion	33	75.39	
3.3.1 E-Participation	25	74.42	
3.3.2 Socioeconomic gap in use of digital payments	50	83.94	
3.3.3 Availability of local online content	44	72.36	
3.3.4 Gender gap in Internet use	8	76.22	●
3.3.5 Rural gap in use of digital payments	50	70.01	
D. Impact pillar	**32**	**64.13**	
1st sub-pillar: Economy	26	42.08	
4.1.1 High-tech and medium-high-tech manufacturing	67	20.67	
4.1.2 High-tech exports	31	28.71	
4.1.3 PCT patent applications	23	33.36	
4.1.4 Domestic market size	114	36.00	○
4.1.5 Prevalence of gig economy	86	33.72	
4.1.6 ICT services exports	1	100.00	●
2nd sub-pillar: Quality of Life	50	73.06	
4.2.1 Happiness	67	65.33	
4.2.2 Freedom to make life choices	110	53.90	○
4.2.3 Income inequality	29	78.64	
4.2.4 Healthy life expectancy at birth	5	94.37	●
3rd sub-pillar: SDG Contribution	30	77.25	
4.3.1 SDG 3: Good Health and Well-Being	33	82.64	
4.3.2 SDG 4: Quality Education	44	42.42	
4.3.3 SDG 5: Women's economic opportunity	27	92.04	
4.3.4 SDG 7: Affordable and Clean Energy	27	79.91	
4.3.5 SDG 11: Sustainable Cities and Communities	21	89.25	●

NOTE: ● Indicates a strength and ○ a weakness.

Czech Republic

	Rank (Out of 134)	Score
Network Readiness Index	**27**	**63.20**

Pillar/sub-pillar	Rank	Score
A. Technology pillar	**28**	**53.39**
1st sub-pillar: Access	55	67.92
2nd sub-pillar: Content	21	46.35
3rd sub-pillar: Future Technologies	32	45.92
B. People pillar	**40**	**50.37**
1st sub-pillar: Individuals	87	42.20
2nd sub-pillar: Businesses	30	60.76
3rd sub-pillar: Governments	39	48.13
C. Governance pillar	**22**	**79.76**
1st sub-pillar: Trust	15	81.11
2nd sub-pillar: Regulation	21	83.18
3rd sub-pillar: Inclusion	36	74.99
D. Impact pillar	**20**	**69.27**
1st sub-pillar: Economy	24	43.44
2nd sub-pillar: Quality of Life	9	87.35
3rd sub-pillar: SDG Contribution	31	77.04



The Network Readiness Index in detail

Indicator	Rank	Score	
A. Technology pillar	**28**	**53.39**	
1st sub-pillar: Access	55	67.92	
1.1.1 Mobile tariffs	24	81.99	
1.1.2 Handset prices	46	60.44	
1.1.3 FTTH/building Internet subscriptions	67	28.08	
1.1.4 Population covered by at least a 3G mobile network	40	99.93	
1.1.5 International Internet bandwidth	78	69.15	○
1.1.6 Internet access in schools	NA	NA	
2nd sub-pillar: Content	21	46.35	
1.2.1 GitHub commits	19	55.84	●
1.2.2 Internet domain registrations	20	43.24	
1.2.3 Mobile apps development	27	75.17	
1.2.4 AI scientific publications	43	11.14	
3rd sub-pillar: Future Technologies	32	45.92	
1.3.1 Adoption of emerging technologies	24	72.11	
1.3.2 Investment in emerging technologies	36	55.00	
1.3.3 Robot density	17	25.79	
1.3.4 Computer software spending	34	30.77	
B. People pillar	**40**	**50.37**	
1st sub-pillar: Individuals	87	42.20	
2.1.1 Mobile broadband internet traffic within the country	57	10.93	
2.1.2 ICT skills in the education system	33	67.34	
2.1.3 Use of virtual social networks	42	72.53	
2.1.4 Tertiary enrollment	44	44.10	
2.1.5 Adult literacy rate	NA	NA	
2.1.6 AI talent concentration	27	16.09	
2nd sub-pillar: Businesses	30	60.76	
2.2.1 Firms with website	13	84.73	●
2.2.2 GERD financed by business enterprise	51	44.60	
2.2.3 Knowledge intensive employment	29	60.76	
2.2.4 Annual investment in telecommunication services	44	81.62	
2.2.5 GERD performed by business enterprise	19	32.11	
3rd sub-pillar: Governments	39	48.13	
2.3.1 Government online services	72	63.45	
2.3.2 Publication and use of open data	35	44.12	
2.3.3 Government promotion of investment in emerging tech	40	49.16	
2.3.4 R&D expenditure by governments and higher education	19	35.80	

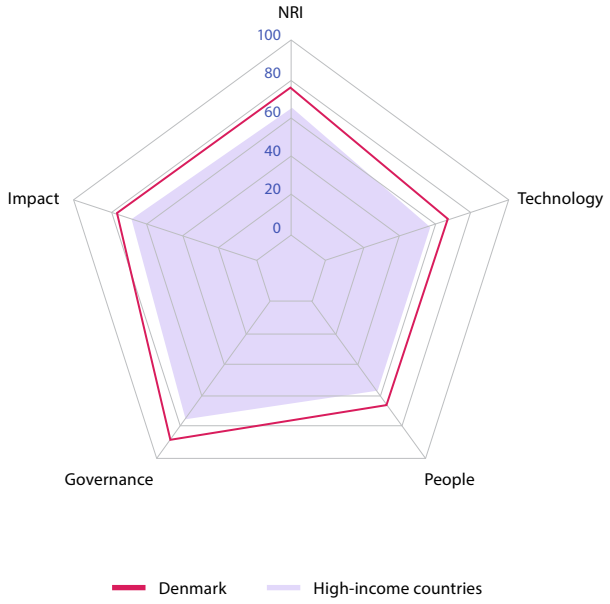
Indicator	Rank	Score	
C. Governance pillar	**22**	**79.76**	
1st sub-pillar: Trust	15	81.11	
3.1.1 Secure Internet servers	12	88.74	●
3.1.2 Cybersecurity	76	73.92	○
3.1.3 Online access to financial account	12	75.65	●
3.1.4 Internet shopping	10	86.12	●
2nd sub-pillar: Regulation	21	83.18	
3.2.1 Regulatory quality	21	80.06	
3.2.2 ICT regulatory environment	45	87.06	
3.2.3 Regulation of emerging technologies	36	62.86	
3.2.4 E-commerce legislation	1	100.00	●
3.2.5 Privacy protection by law content	19	85.93	●
3rd sub-pillar: Inclusion	36	74.99	
3.3.1 E-Participation	57	59.31	
3.3.2 Socioeconomic gap in use of digital payments	14	96.86	●
3.3.3 Availability of local online content	19	86.30	●
3.3.4 Gender gap in Internet use	80	62.44	○
3.3.5 Rural gap in use of digital payments	49	70.07	
D. Impact pillar	**20**	**69.27**	
1st sub-pillar: Economy	24	43.44	
4.1.1 High-tech and medium-high-tech manufacturing	4	75.43	●
4.1.2 High-tech exports	23	36.57	
4.1.3 PCT patent applications	33	17.30	
4.1.4 Domestic market size	47	60.48	
4.1.5 Prevalence of gig economy	53	45.35	
4.1.6 ICT services exports	38	25.49	
2nd sub-pillar: Quality of Life	9	87.35	
4.2.1 Happiness	NA	NA	
4.2.2 Freedom to make life choices	NA	NA	
4.2.3 Income inequality	9	92.46	●
4.2.4 Healthy life expectancy at birth	36	82.23	
3rd sub-pillar: SDG Contribution	31	77.04	
4.3.1 SDG 3: Good Health and Well-Being	35	82.04	
4.3.2 SDG 4: Quality Education	23	65.89	
4.3.3 SDG 5: Women's economic opportunity	29	91.15	
4.3.4 SDG 7: Affordable and Clean Energy	77	68.79	○
4.3.5 SDG 11: Sustainable Cities and Communities	42	77.34	

NOTE: ● Indicates a strength and ○ a weakness.

Denmark

	Rank (Out of 134)	Score
Network Readiness Index	**8**	**74.06**

Pillar/sub-pillar	Rank	Score
A. Technology pillar	**11**	**65.42**
1st sub-pillar: Access	17	76.71
2nd sub-pillar: Content	9	57.26
3rd sub-pillar: Future Technologies	10	62.30
B. People pillar	**11**	**65.26**
1st sub-pillar: Individuals	64	47.92
2nd sub-pillar: Businesses	9	74.89
3rd sub-pillar: Governments	8	72.96
C. Governance pillar	**3**	**89.53**
1st sub-pillar: Trust	1	97.41
2nd sub-pillar: Regulation	8	88.14
3rd sub-pillar: Inclusion	12	83.05
D. Impact pillar	**8**	**76.04**
1st sub-pillar: Economy	19	48.59
2nd sub-pillar: Quality of Life	3	91.97
3rd sub-pillar: SDG Contribution	3	87.56



The Network Readiness Index in detail

Indicator	Rank	Score	
A. Technology pillar	**11**	**65.42**	
1st sub-pillar: Access	17	76.71	
1.1.1 Mobile tariffs	8	91.37	
1.1.2 Handset prices	28	70.91	
1.1.3 FTTH/building Internet subscriptions	66	28.94	○
1.1.4 Population covered by at least a 3G mobile network	1	100.00	●
1.1.5 International Internet bandwidth	80	69.03	○
1.1.6 Internet access in schools	1	100.00	●
2nd sub-pillar: Content	9	57.26	
1.2.1 GitHub commits	14	60.87	
1.2.2 Internet domain registrations	6	82.93	●
1.2.3 Mobile apps development	16	76.44	
1.2.4 AI scientific publications	50	8.79	
3rd sub-pillar: Future Technologies	10	62.30	
1.3.1 Adoption of emerging technologies	13	84.22	
1.3.2 Investment in emerging technologies	14	76.75	
1.3.3 Robot density	11	37.40	
1.3.4 Computer software spending	22	50.82	
B. People pillar	**11**	**65.26**	
1st sub-pillar: Individuals	64	47.92	
2.1.1 Mobile broadband internet traffic within the country	46	17.33	
2.1.2 ICT skills in the education system	20	74.12	
2.1.3 Use of virtual social networks	18	79.28	
2.1.4 Tertiary enrollment	20	54.08	
2.1.5 Adult literacy rate	NA	NA	
2.1.6 AI talent concentration	29	14.81	○
2nd sub-pillar: Businesses	9	74.89	
2.2.1 Firms with website	2	96.20	●
2.2.2 GERD financed by business enterprise	15	73.73	
2.2.3 Knowledge intensive employment	13	75.17	
2.2.4 Annual investment in telecommunication services	32	84.59	
2.2.5 GERD performed by business enterprise	14	44.80	
3rd sub-pillar: Governments	8	72.96	
2.3.1 Government online services	4	97.76	●
2.3.2 Publication and use of open data	14	70.59	
2.3.3 Government promotion of investment in emerging tech	NA	NA	
2.3.4 R&D expenditure by governments and higher education	12	50.53	

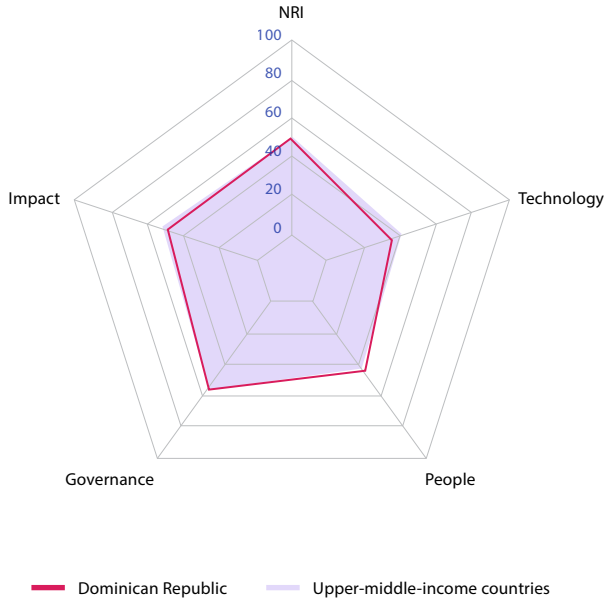
Indicator	Rank	Score	
C. Governance pillar	**3**	**89.53**	
1st sub-pillar: Trust	1	97.41	
3.1.1 Secure Internet servers	1	100.00	●
3.1.2 Cybersecurity	39	92.47	
3.1.3 Online access to financial account	2	97.24	●
3.1.4 Internet shopping	2	99.93	●
2nd sub-pillar: Regulation	8	88.14	
3.2.1 Regulatory quality	5	90.46	●
3.2.2 ICT regulatory environment	9	95.29	
3.2.3 Regulation of emerging technologies	17	77.92	
3.2.4 E-commerce legislation	1	100.00	●
3.2.5 Privacy protection by law content	37	77.02	
3rd sub-pillar: Inclusion	12	83.05	
3.3.1 E-Participation	12	88.38	
3.3.2 Socioeconomic gap in use of digital payments	7	99.19	●
3.3.3 Availability of local online content	34	79.09	
3.3.4 Gender gap in Internet use	24	72.05	
3.3.5 Rural gap in use of digital payments	15	76.53	
D. Impact pillar	**8**	**76.04**	
1st sub-pillar: Economy	19	48.59	
4.1.1 High-tech and medium-high-tech manufacturing	10	63.46	
4.1.2 High-tech exports	39	24.55	
4.1.3 PCT patent applications	7	68.05	●
4.1.4 Domestic market size	51	58.28	○
4.1.5 Prevalence of gig economy	NA	NA	
4.1.6 ICT services exports	33	28.60	
2nd sub-pillar: Quality of Life	3	91.97	
4.2.1 Happiness	3	96.58	●
4.2.2 Freedom to make life choices	12	92.37	
4.2.3 Income inequality	11	89.20	
4.2.4 Healthy life expectancy at birth	18	89.75	
3rd sub-pillar: SDG Contribution	3	87.56	
4.3.1 SDG 3: Good Health and Well-Being	17	92.69	
4.3.2 SDG 4: Quality Education	17	68.16	
4.3.3 SDG 5: Women's economic opportunity	1	100.00	●
4.3.4 SDG 7: Affordable and Clean Energy	11	84.18	
4.3.5 SDG 11: Sustainable Cities and Communities	15	92.79	

NOTE: ● Indicates a strength and ○ a weakness.

Dominican Republic

	Rank (Out of 134)	Score
Network Readiness Index	**84**	**43.49**

Pillar/sub-pillar	Rank	Score
A. Technology pillar	**95**	**31.58**
1st sub-pillar: Access	94	54.13
2nd sub-pillar: Content	104	14.48
3rd sub-pillar: Future Technologies	96	26.13
B. People pillar	**65**	**43.73**
1st sub-pillar: Individuals	75	45.21
2nd sub-pillar: Businesses	64	45.43
3rd sub-pillar: Governments	62	40.54
C. Governance pillar	**75**	**53.39**
1st sub-pillar: Trust	91	33.57
2nd sub-pillar: Regulation	42	73.43
3rd sub-pillar: Inclusion	89	53.17
D. Impact pillar	**97**	**45.27**
1st sub-pillar: Economy	89	21.48
2nd sub-pillar: Quality of Life	75	66.56
3rd sub-pillar: SDG Contribution	116	47.77



The Network Readiness Index in detail

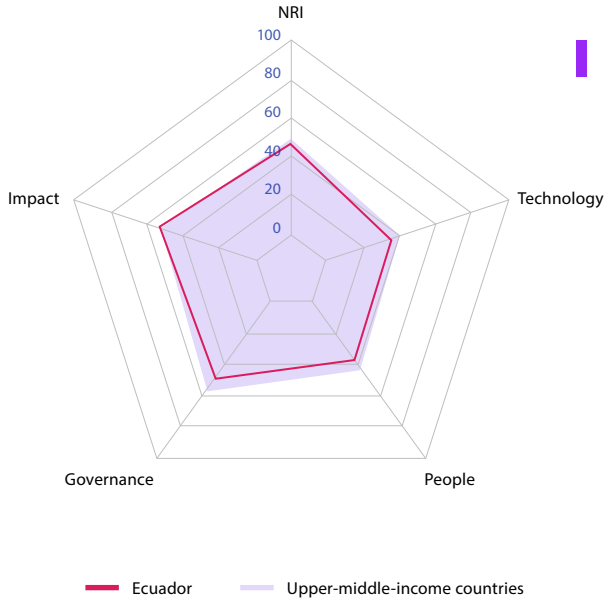
Indicator	Rank	Score	
A. Technology pillar	**95**	**31.58**	
1st sub-pillar: Access	94	54.13	
1.1.1 Mobile tariffs	81	52.94	
1.1.2 Handset prices	65	46.97	
1.1.3 FTTH/building Internet subscriptions	64	29.20	
1.1.4 Population covered by at least a 3G mobile network	50	99.84	●
1.1.5 International Internet bandwidth	60	72.66	●
1.1.6 Internet access in schools	66	23.16	
2nd sub-pillar: Content	104	14.48	
1.2.1 GitHub commits	87	3.25	
1.2.2 Internet domain registrations	81	2.00	
1.2.3 Mobile apps development	101	52.59	
1.2.4 AI scientific publications	128	0.09	○
3rd sub-pillar: Future Technologies	96	26.13	
1.3.1 Adoption of emerging technologies	62	48.00	
1.3.2 Investment in emerging technologies	99	29.00	
1.3.3 Robot density	NA	NA	
1.3.4 Computer software spending	120	1.38	○
B. People pillar	**65**	**43.73**	
1st sub-pillar: Individuals	75	45.21	
2.1.1 Mobile broadband internet traffic within the country	87	4.59	
2.1.2 ICT skills in the education system	91	28.07	○
2.1.3 Use of virtual social networks	72	61.39	
2.1.4 Tertiary enrollment	52	38.60	●
2.1.5 Adult literacy rate	50	93.41	
2.1.6 AI talent concentration	NA	NA	
2nd sub-pillar: Businesses	64	45.43	
2.2.1 Firms with website	80	37.55	
2.2.2 GERD financed by business enterprise	NA	NA	
2.2.3 Knowledge intensive employment	86	20.26	
2.2.4 Annual investment in telecommunication services	61	78.48	
2.2.5 GERD performed by business enterprise	NA	NA	
3rd sub-pillar: Governments	62	40.54	
2.3.1 Government online services	79	57.81	
2.3.2 Publication and use of open data	55	32.35	
2.3.3 Government promotion of investment in emerging tech	85	31.46	
2.3.4 R&D expenditure by governments and higher education	NA	NA	

Indicator	Rank	Score	
C. Governance pillar	**75**	**53.39**	
1st sub-pillar: Trust	91	33.57	
3.1.1 Secure Internet servers	99	38.51	
3.1.2 Cybersecurity	74	74.61	
3.1.3 Online access to financial account	100	12.98	
3.1.4 Internet shopping	100	8.19	
2nd sub-pillar: Regulation	42	73.43	
3.2.1 Regulatory quality	66	51.61	
3.2.2 ICT regulatory environment	3	97.65	●
3.2.3 Regulation of emerging technologies	92	27.53	
3.2.4 E-commerce legislation	1	100.00	●
3.2.5 Privacy protection by law content	10	90.37	●
3rd sub-pillar: Inclusion	89	53.17	
3.3.1 E-Participation	82	44.18	
3.3.2 Socioeconomic gap in use of digital payments	112	43.97	
3.3.3 Availability of local online content	68	60.10	
3.3.4 Gender gap in Internet use	15	74.08	●
3.3.5 Rural gap in use of digital payments	98	43.53	
D. Impact pillar	**97**	**45.27**	
1st sub-pillar: Economy	89	21.48	
4.1.1 High-tech and medium-high-tech manufacturing	NA	NA	
4.1.2 High-tech exports	57	15.14	●
4.1.3 PCT patent applications	82	0.96	
4.1.4 Domestic market size	62	53.65	
4.1.5 Prevalence of gig economy	79	35.47	
4.1.6 ICT services exports	114	2.20	
2nd sub-pillar: Quality of Life	75	66.56	
4.2.1 Happiness	79	58.88	
4.2.2 Freedom to make life choices	51	79.68	●
4.2.3 Income inequality	69	61.56	
4.2.4 Healthy life expectancy at birth	87	66.11	
3rd sub-pillar: SDG Contribution	116	47.77	
4.3.1 SDG 3: Good Health and Well-Being	86	61.36	
4.3.2 SDG 4: Quality Education	76	0.00	○
4.3.3 SDG 5: Women's economic opportunity	56	80.53	●
4.3.4 SDG 7: Affordable and Clean Energy	8	85.19	●
4.3.5 SDG 11: Sustainable Cities and Communities	132	11.76	○

NOTE: ● Indicates a strength and ○ a weakness.

Ecuador

	Rank (Out of 134)	Score
Network Readiness Index	**85**	**43.05**
Pillar/sub-pillar	**Rank**	**Score**
A. Technology pillar	**87**	**34.53**
1st sub-pillar: Access	82	58.62
2nd sub-pillar: Content	94	17.59
3rd sub-pillar: Future Technologies	89	27.37
B. People pillar	**87**	**37.74**
1st sub-pillar: Individuals	74	46.19
2nd sub-pillar: Businesses	92	35.63
3rd sub-pillar: Governments	90	31.40
C. Governance pillar	**96**	**46.86**
1st sub-pillar: Trust	108	24.26
2nd sub-pillar: Regulation	93	58.96
3rd sub-pillar: Inclusion	76	57.36
D. Impact pillar	**68**	**53.08**
1st sub-pillar: Economy	116	15.07
2nd sub-pillar: Quality of Life	83	63.52
3rd sub-pillar: SDG Contribution	23	80.64



The Network Readiness Index in detail

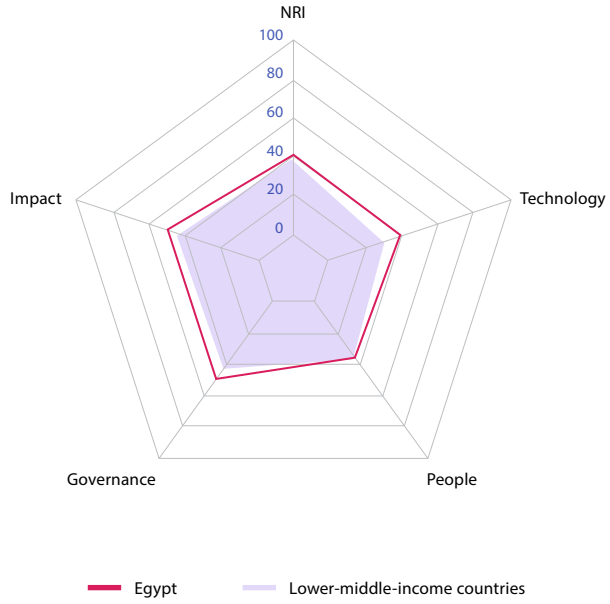
Indicator	Rank	Score	
A. Technology pillar	**87**	**34.53**	
1st sub-pillar: Access	82	58.62	
1.1.1 Mobile tariffs	82	52.83	
1.1.2 Handset prices	64	47.02	
1.1.3 FTTH/building Internet subscriptions	20	48.18	●
1.1.4 Population covered by at least a 3G mobile network	90	98.54	
1.1.5 International Internet bandwidth	104	63.55	
1.1.6 Internet access in schools	55	41.59	
2nd sub-pillar: Content	94	17.59	
1.2.1 GitHub commits	80	4.13	
1.2.2 Internet domain registrations	85	1.62	
1.2.3 Mobile apps development	91	57.79	
1.2.4 AI scientific publications	61	6.83	
3rd sub-pillar: Future Technologies	89	27.37	
1.3.1 Adoption of emerging technologies	83	38.94	
1.3.2 Investment in emerging technologies	114	23.25	○
1.3.3 Robot density	NA	NA	
1.3.4 Computer software spending	69	19.93	
B. People pillar	**87**	**37.74**	
1st sub-pillar: Individuals	74	46.19	
2.1.1 Mobile broadband internet traffic within the country	67	9.40	
2.1.2 ICT skills in the education system	94	26.23	○
2.1.3 Use of virtual social networks	49	69.21	●
2.1.4 Tertiary enrollment	66	33.66	
2.1.5 Adult literacy rate	55	92.47	
2.1.6 AI talent concentration	NA	NA	
2nd sub-pillar: Businesses	92	35.63	
2.2.1 Firms with website	22	79.48	●
2.2.2 GERD financed by business enterprise	98	0.25	○
2.2.3 Knowledge intensive employment	97	15.85	
2.2.4 Annual investment in telecommunication services	67	77.82	
2.2.5 GERD performed by business enterprise	55	4.78	
3rd sub-pillar: Governments	90	31.40	
2.3.1 Government online services	50	74.04	●
2.3.2 Publication and use of open data	69	22.06	
2.3.3 Government promotion of investment in emerging tech	102	21.70	
2.3.4 R&D expenditure by governments and higher education	65	7.80	

Indicator	Rank	Score	
C. Governance pillar	**96**	**46.86**	
1st sub-pillar: Trust	108	24.26	
3.1.1 Secure Internet servers	80	47.43	
3.1.2 Cybersecurity	112	25.00	
3.1.3 Online access to financial account	110	9.80	○
3.1.4 Internet shopping	82	14.79	
2nd sub-pillar: Regulation	93	58.96	
3.2.1 Regulatory quality	110	33.73	
3.2.2 ICT regulatory environment	79	76.47	
3.2.3 Regulation of emerging technologies	98	24.42	
3.2.4 E-commerce legislation	1	100.00	●
3.2.5 Privacy protection by law content	80	60.21	
3rd sub-pillar: Inclusion	76	57.36	
3.3.1 E-Participation	41	69.76	●
3.3.2 Socioeconomic gap in use of digital payments	100	54.30	
3.3.3 Availability of local online content	100	39.18	
3.3.4 Gender gap in Internet use	33	71.07	●
3.3.5 Rural gap in use of digital payments	88	52.47	
D. Impact pillar	**68**	**53.08**	
1st sub-pillar: Economy	116	15.07	
4.1.1 High-tech and medium-high-tech manufacturing	87	11.05	
4.1.2 High-tech exports	77	8.53	
4.1.3 PCT patent applications	81	1.08	
4.1.4 Domestic market size	65	52.57	
4.1.5 Prevalence of gig economy	115	14.53	○
4.1.6 ICT services exports	108	2.65	
2nd sub-pillar: Quality of Life	83	63.52	
4.2.1 Happiness	65	65.74	
4.2.2 Freedom to make life choices	90	63.92	
4.2.3 Income inequality	99	43.22	
4.2.4 Healthy life expectancy at birth	42	81.20	●
3rd sub-pillar: SDG Contribution	23	80.64	
4.3.1 SDG 3: Good Health and Well-Being	29	85.26	●
4.3.2 SDG 4: Quality Education	NA	NA	
4.3.3 SDG 5: Women's economic opportunity	42	84.96	●
4.3.4 SDG 7: Affordable and Clean Energy	37	77.60	●
4.3.5 SDG 11: Sustainable Cities and Communities	50	74.75	

NOTE: ● Indicates a strength and ○ a weakness.

Egypt

	Rank (Out of 134)	Score
Network Readiness Index	**81**	**44.07**
Pillar/sub-pillar	**Rank**	**Score**
A. Technology pillar	**69**	**39.94**
1st sub-pillar: Access	47	70.59
2nd sub-pillar: Content	75	21.48
3rd sub-pillar: Future Technologies	88	27.74
B. People pillar	**93**	**35.37**
1st sub-pillar: Individuals	92	40.96
2nd sub-pillar: Businesses	100	32.43
3rd sub-pillar: Governments	86	32.73
C. Governance pillar	**82**	**50.25**
1st sub-pillar: Trust	94	32.79
2nd sub-pillar: Regulation	91	59.85
3rd sub-pillar: Inclusion	74	58.11
D. Impact pillar	**78**	**50.73**
1st sub-pillar: Economy	50	34.10
2nd sub-pillar: Quality of Life	97	57.88
3rd sub-pillar: SDG Contribution	80	60.22



The Network Readiness Index in detail

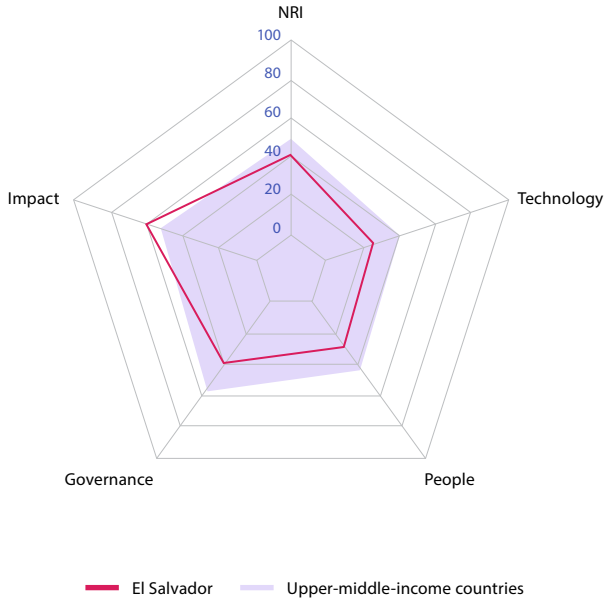
Indicator	Rank	Score	
A. Technology pillar	**69**	**39.94**	
1st sub-pillar: Access	47	70.59	
1.1.1 Mobile tariffs	29	79.18	●
1.1.2 Handset prices	60	52.03	
1.1.3 FTTH/building Internet subscriptions	36	39.08	●
1.1.4 Population covered by at least a 3G mobile network	46	99.90	
1.1.5 International Internet bandwidth	18	82.05	●
1.1.6 Internet access in schools	45	71.28	
2nd sub-pillar: Content	75	21.48	
1.2.1 GitHub commits	96	2.57	
1.2.2 Internet domain registrations	107	0.54	
1.2.3 Mobile apps development	85	60.36	
1.2.4 AI scientific publications	24	22.44	●
3rd sub-pillar: Future Technologies	88	27.74	
1.3.1 Adoption of emerging technologies	48	54.92	
1.3.2 Investment in emerging technologies	75	37.00	
1.3.3 Robot density	54	0.12	○
1.3.4 Computer software spending	72	18.94	
B. People pillar	**93**	**35.37**	
1st sub-pillar: Individuals	92	40.96	
2.1.1 Mobile broadband internet traffic within the country	37	20.87	
2.1.2 ICT skills in the education system	48	55.84	
2.1.3 Use of virtual social networks	96	37.83	
2.1.4 Tertiary enrollment	75	27.00	
2.1.5 Adult literacy rate	90	63.26	
2.1.6 AI talent concentration	NA	NA	
2nd sub-pillar: Businesses	100	32.43	
2.2.1 Firms with website	78	38.01	
2.2.2 GERD financed by business enterprise	83	4.86	
2.2.3 Knowledge intensive employment	62	32.60	
2.2.4 Annual investment in telecommunication services	21	85.97	●
2.2.5 GERD performed by business enterprise	76	0.70	
3rd sub-pillar: Governments	86	32.73	
2.3.1 Government online services	86	52.81	
2.3.2 Publication and use of open data	82	13.24	
2.3.3 Government promotion of investment in emerging tech	43	47.77	
2.3.4 R&D expenditure by governments and higher education	42	17.09	

Indicator	Rank	Score	
C. Governance pillar	**82**	**50.25**	
1st sub-pillar: Trust	94	32.79	
3.1.1 Secure Internet servers	115	29.76	
3.1.2 Cybersecurity	30	95.40	●
3.1.3 Online access to financial account	125	3.38	○
3.1.4 Internet shopping	120	2.61	○
2nd sub-pillar: Regulation	91	59.85	
3.2.1 Regulatory quality	97	38.16	
3.2.2 ICT regulatory environment	64	84.12	
3.2.3 Regulation of emerging technologies	84	32.47	
3.2.4 E-commerce legislation	1	100.00	●
3.2.5 Privacy protection by law content	110	44.51	
3rd sub-pillar: Inclusion	74	58.11	
3.3.1 E-Participation	95	33.73	
3.3.2 Socioeconomic gap in use of digital payments	114	42.95	
3.3.3 Availability of local online content	35	78.61	●
3.3.4 Gender gap in Internet use	72	65.51	
3.3.5 Rural gap in use of digital payments	51	69.77	
D. Impact pillar	**78**	**50.73**	
1st sub-pillar: Economy	50	34.10	
4.1.1 High-tech and medium-high-tech manufacturing	56	27.11	
4.1.2 High-tech exports	88	4.90	
4.1.3 PCT patent applications	77	1.55	
4.1.4 Domestic market size	18	71.90	●
4.1.5 Prevalence of gig economy	7	85.17	●
4.1.6 ICT services exports	65	13.96	
2nd sub-pillar: Quality of Life	97	57.88	
4.2.1 Happiness	115	31.08	○
4.2.2 Freedom to make life choices	97	59.58	
4.2.3 Income inequality	31	78.14	●
4.2.4 Healthy life expectancy at birth	93	62.73	
3rd sub-pillar: SDG Contribution	80	60.22	
4.3.1 SDG 3: Good Health and Well-Being	71	68.03	
4.3.2 SDG 4: Quality Education	NA	NA	
4.3.3 SDG 5: Women's economic opportunity	125	30.09	○
4.3.4 SDG 7: Affordable and Clean Energy	58	74.13	
4.3.5 SDG 11: Sustainable Cities and Communities	58	68.63	

NOTE: ● Indicates a strength and ○ a weakness.

El Salvador

	Rank (Out of 134)	Score
Network Readiness Index	**100**	**38.07**
Pillar/sub-pillar	**Rank**	**Score**
A. Technology pillar	**108**	**27.14**
1st sub-pillar: Access	108	46.31
2nd sub-pillar: Content	101	15.37
3rd sub-pillar: Future Technologies	111	19.74
B. People pillar	**105**	**30.05**
1st sub-pillar: Individuals	96	38.62
2nd sub-pillar: Businesses	91	35.77
3rd sub-pillar: Governments	121	15.76
C. Governance pillar	**111**	**38.75**
1st sub-pillar: Trust	118	19.14
2nd sub-pillar: Regulation	95	57.51
3rd sub-pillar: Inclusion	116	39.60
D. Impact pillar	**49**	**56.36**
1st sub-pillar: Economy	97	19.01
2nd sub-pillar: Quality of Life	47	74.05
3rd sub-pillar: SDG Contribution	34	76.02



The Network Readiness Index in detail

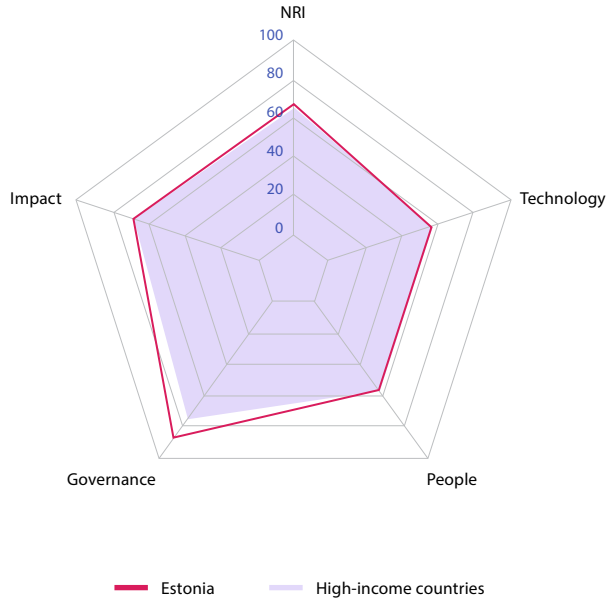
Indicator	Rank	Score	
A. Technology pillar	**108**	**27.14**	
1st sub-pillar: Access	108	46.31	
1.1.1 Mobile tariffs	105	35.73	
1.1.2 Handset prices	68	46.04	●
1.1.3 FTTH/building Internet subscriptions	111	6.88	
1.1.4 Population covered by at least a 3G mobile network	103	97.23	
1.1.5 International Internet bandwidth	83	68.76	
1.1.6 Internet access in schools	65	23.24	
2nd sub-pillar: Content	101	15.37	
1.2.1 GitHub commits	77	4.22	
1.2.2 Internet domain registrations	87	1.58	
1.2.3 Mobile apps development	96	55.52	
1.2.4 AI scientific publications	124	0.18	○
3rd sub-pillar: Future Technologies	111	19.74	
1.3.1 Adoption of emerging technologies	92	36.60	
1.3.2 Investment in emerging technologies	121	19.00	
1.3.3 Robot density	NA	NA	
1.3.4 Computer software spending	106	3.63	
B. People pillar	**105**	**30.05**	
1st sub-pillar: Individuals	96	38.62	
2.1.1 Mobile broadband internet traffic within the country	104	1.62	
2.1.2 ICT skills in the education system	92	27.84	
2.1.3 Use of virtual social networks	75	58.94	
2.1.4 Tertiary enrollment	87	18.36	
2.1.5 Adult literacy rate	64	86.33	
2.1.6 AI talent concentration	NA	NA	
2nd sub-pillar: Businesses	91	35.77	
2.2.1 Firms with website	77	38.12	
2.2.2 GERD financed by business enterprise	53	43.42	
2.2.3 Knowledge intensive employment	88	19.62	
2.2.4 Annual investment in telecommunication services	76	76.36	
2.2.5 GERD performed by business enterprise	69	1.31	
3rd sub-pillar: Governments	121	15.76	
2.3.1 Government online services	105	41.09	
2.3.2 Publication and use of open data	82	13.24	
2.3.3 Government promotion of investment in emerging tech	123	5.90	○
2.3.4 R&D expenditure by governments and higher education	95	2.80	

Indicator	Rank	Score	
C. Governance pillar	**111**	**38.75**	
1st sub-pillar: Trust	118	19.14	
3.1.1 Secure Internet servers	96	39.37	
3.1.2 Cybersecurity	124	11.77	○
3.1.3 Online access to financial account	92	16.25	
3.1.4 Internet shopping	96	9.16	
2nd sub-pillar: Regulation	95	57.51	
3.2.1 Regulatory quality	89	41.83	
3.2.2 ICT regulatory environment	104	66.47	
3.2.3 Regulation of emerging technologies	104	20.00	
3.2.4 E-commerce legislation	87	66.67	
3.2.5 Privacy protection by law content	5	92.60	●
3rd sub-pillar: Inclusion	116	39.60	
3.3.1 E-Participation	95	33.73	
3.3.2 Socioeconomic gap in use of digital payments	127	30.53	○
3.3.3 Availability of local online content	106	35.82	
3.3.4 Gender gap in Internet use	87	57.69	
3.3.5 Rural gap in use of digital payments	102	40.24	
D. Impact pillar	**49**	**56.36**	
1st sub-pillar: Economy	97	19.01	
4.1.1 High-tech and medium-high-tech manufacturing	NA	NA	
4.1.2 High-tech exports	61	13.12	●
4.1.3 PCT patent applications	99	0.00	○
4.1.4 Domestic market size	99	40.55	
4.1.5 Prevalence of gig economy	111	19.19	
4.1.6 ICT services exports	48	22.19	●
2nd sub-pillar: Quality of Life	47	74.05	
4.2.1 Happiness	29	77.00	●
4.2.2 Freedom to make life choices	18	89.79	●
4.2.3 Income inequality	75	60.30	
4.2.4 Healthy life expectancy at birth	76	69.10	
3rd sub-pillar: SDG Contribution	34	76.02	
4.3.1 SDG 3: Good Health and Well-Being	47	77.37	●
4.3.2 SDG 4: Quality Education	NA	NA	
4.3.3 SDG 5: Women's economic opportunity	44	84.07	●
4.3.4 SDG 7: Affordable and Clean Energy	44	76.37	●
4.3.5 SDG 11: Sustainable Cities and Communities	68	66.27	●

NOTE: ● Indicates a strength and ○ a weakness.

Estonia

	Rank (Out of 134)	Score
Network Readiness Index	**22**	**66.11**
Pillar/sub-pillar	**Rank**	**Score**
A. Technology pillar	**31**	**51.33**
1st sub-pillar: Access	41	72.00
2nd sub-pillar: Content	24	45.15
3rd sub-pillar: Future Technologies	54	36.84
B. People pillar	**22**	**57.59**
1st sub-pillar: Individuals	31	54.56
2nd sub-pillar: Businesses	25	62.83
3rd sub-pillar: Governments	26	55.38
C. Governance pillar	**6**	**87.71**
1st sub-pillar: Trust	7	87.92
2nd sub-pillar: Regulation	7	88.74
3rd sub-pillar: Inclusion	3	86.46
D. Impact pillar	**25**	**67.80**
1st sub-pillar: Economy	25	42.43
2nd sub-pillar: Quality of Life	20	81.87
3rd sub-pillar: SDG Contribution	27	79.10



The Network Readiness Index in detail

Indicator	Rank	Score	
A. Technology pillar	**31**	**51.33**	
1st sub-pillar: Access	41	72.00	
1.1.1 Mobile tariffs	38	75.63	
1.1.2 Handset prices	19	77.12	
1.1.3 FTTH/building Internet subscriptions	92	17.53	○
1.1.4 Population covered by at least a 3G mobile network	1	100.00	●
1.1.5 International Internet bandwidth	110	62.48	○
1.1.6 Internet access in schools	30	99.24	
2nd sub-pillar: Content	24	45.15	
1.2.1 GitHub commits	16	60.05	
1.2.2 Internet domain registrations	25	34.69	
1.2.3 Mobile apps development	5	84.06	●
1.2.4 AI scientific publications	89	1.80	
3rd sub-pillar: Future Technologies	54	36.84	
1.3.1 Adoption of emerging technologies	22	73.19	
1.3.2 Investment in emerging technologies	35	58.75	
1.3.3 Robot density	37	5.15	
1.3.4 Computer software spending	89	10.26	
B. People pillar	**22**	**57.59**	
1st sub-pillar: Individuals	31	54.56	
2.1.1 Mobile broadband internet traffic within the country	66	9.45	
2.1.2 ICT skills in the education system	32	67.79	
2.1.3 Use of virtual social networks	30	76.34	
2.1.4 Tertiary enrollment	42	44.77	
2.1.5 Adult literacy rate	4	99.82	●
2.1.6 AI talent concentration	14	29.18	
2nd sub-pillar: Businesses	25	62.83	
2.2.1 Firms with website	19	81.21	
2.2.2 GERD financed by business enterprise	29	62.01	
2.2.3 Knowledge intensive employment	17	71.81	
2.2.4 Annual investment in telecommunication services	93	74.05	○
2.2.5 GERD performed by business enterprise	23	25.06	
3rd sub-pillar: Governments	26	55.38	
2.3.1 Government online services	1	100.00	●
2.3.2 Publication and use of open data	41	38.24	
2.3.3 Government promotion of investment in emerging tech	35	51.86	
2.3.4 R&D expenditure by governments and higher education	22	31.41	

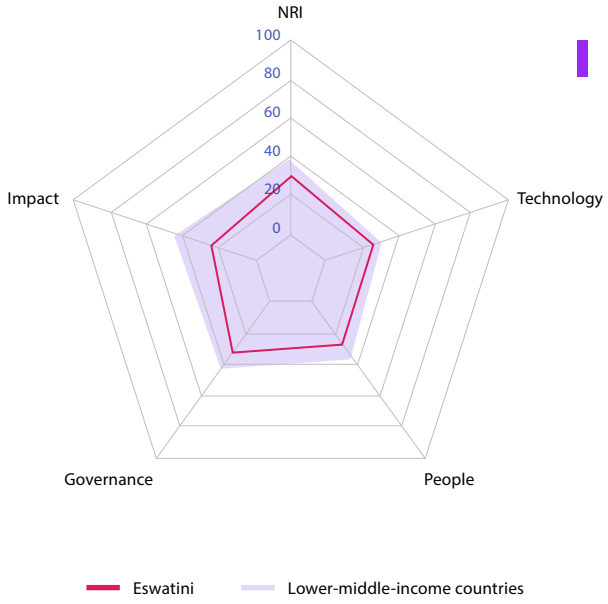
Indicator	Rank	Score	
C. Governance pillar	**6**	**87.71**	
1st sub-pillar: Trust	7	87.92	
3.1.1 Secure Internet servers	8	90.51	●
3.1.2 Cybersecurity	4	99.47	●
3.1.3 Online access to financial account	8	82.82	●
3.1.4 Internet shopping	15	78.87	
2nd sub-pillar: Regulation	7	88.74	
3.2.1 Regulatory quality	15	84.82	
3.2.2 ICT regulatory environment	31	90.00	
3.2.3 Regulation of emerging technologies	11	81.56	
3.2.4 E-commerce legislation	1	100.00	●
3.2.5 Privacy protection by law content	15	87.33	
3rd sub-pillar: Inclusion	3	86.46	
3.3.1 E-Participation	3	97.68	●
3.3.2 Socioeconomic gap in use of digital payments	13	97.51	●
3.3.3 Availability of local online content	20	86.06	
3.3.4 Gender gap in Internet use	13	74.48	
3.3.5 Rural gap in use of digital payments	14	76.59	
D. Impact pillar	**25**	**67.80**	
1st sub-pillar: Economy	25	42.43	
4.1.1 High-tech and medium-high-tech manufacturing	37	36.63	
4.1.2 High-tech exports	22	37.17	
4.1.3 PCT patent applications	30	18.80	
4.1.4 Domestic market size	102	39.31	○
4.1.5 Prevalence of gig economy	27	63.37	
4.1.6 ICT services exports	8	59.30	●
2nd sub-pillar: Quality of Life	20	81.87	
4.2.1 Happiness	36	74.48	
4.2.2 Freedom to make life choices	22	88.11	
4.2.3 Income inequality	25	81.16	
4.2.4 Healthy life expectancy at birth	33	83.73	
3rd sub-pillar: SDG Contribution	27	79.10	
4.3.1 SDG 3: Good Health and Well-Being	41	80.73	
4.3.2 SDG 4: Quality Education	4	78.15	●
4.3.3 SDG 5: Women's economic opportunity	15	96.46	
4.3.4 SDG 7: Affordable and Clean Energy	104	59.39	○
4.3.5 SDG 11: Sustainable Cities and Communities	35	80.79	

NOTE: ● Indicates a strength and ○ a weakness.

Eswatini

	Rank (Out of 134)	Score
Network Readiness Index	**125**	**27.50**

Pillar/sub-pillar	Rank	Score
A. Technology pillar	**103**	**27.80**
1st sub-pillar: Access	109	44.97
2nd sub-pillar: Content	76	21.17
3rd sub-pillar: Future Technologies	122	17.26
B. People pillar	**117**	**26.19**
1st sub-pillar: Individuals	97	37.57
2nd sub-pillar: Businesses	114	28.43
3rd sub-pillar: Governments	127	12.56
C. Governance pillar	**126**	**32.00**
1st sub-pillar: Trust	114	21.17
2nd sub-pillar: Regulation	126	36.47
3rd sub-pillar: Inclusion	119	38.35
D. Impact pillar	**134**	**24.04**
1st sub-pillar: Economy	134	6.56
2nd sub-pillar: Quality of Life	134	20.29
3rd sub-pillar: SDG Contribution	119	45.25



The Network Readiness Index in detail

Indicator	Rank	Score	
A. Technology pillar	**103**	**27.80**	
1st sub-pillar: Access	109	44.97	
1.1.1 Mobile tariffs	111	29.66	
1.1.2 Handset prices	100	32.39	
1.1.3 FTTH/building Internet subscriptions	NA	NA	
1.1.4 Population covered by at least a 3G mobile network	56	99.71	●
1.1.5 International Internet bandwidth	134	0.00	○
1.1.6 Internet access in schools	49	63.11	●
2nd sub-pillar: Content	76	21.17	
1.2.1 GitHub commits	116	0.75	
1.2.2 Internet domain registrations	103	0.73	
1.2.3 Mobile apps development	6	83.10	●
1.2.4 AI scientific publications	126	0.11	
3rd sub-pillar: Future Technologies	122	17.26	
1.3.1 Adoption of emerging technologies	115	22.76	
1.3.2 Investment in emerging technologies	130	11.75	○
1.3.3 Robot density	NA	NA	
1.3.4 Computer software spending	NA	NA	
B. People pillar	**117**	**26.19**	
1st sub-pillar: Individuals	97	37.57	
2.1.1 Mobile broadband internet traffic within the country	NA	NA	
2.1.2 ICT skills in the education system	NA	NA	
2.1.3 Use of virtual social networks	105	24.63	
2.1.4 Tertiary enrollment	121	2.72	
2.1.5 Adult literacy rate	67	85.36	●
2.1.6 AI talent concentration	NA	NA	
2nd sub-pillar: Businesses	114	28.43	
2.2.1 Firms with website	47	61.23	●
2.2.2 GERD financed by business enterprise	63	27.63	●
2.2.3 Knowledge intensive employment	79	24.83	●
2.2.4 Annual investment in telecommunication services	NA	NA	
2.2.5 GERD performed by business enterprise	89	0.03	
3rd sub-pillar: Governments	127	12.56	
2.3.1 Government online services	125	25.29	
2.3.2 Publication and use of open data	105	0.00	○
2.3.3 Government promotion of investment in emerging tech	104	20.31	
2.3.4 R&D expenditure by governments and higher education	83	4.64	

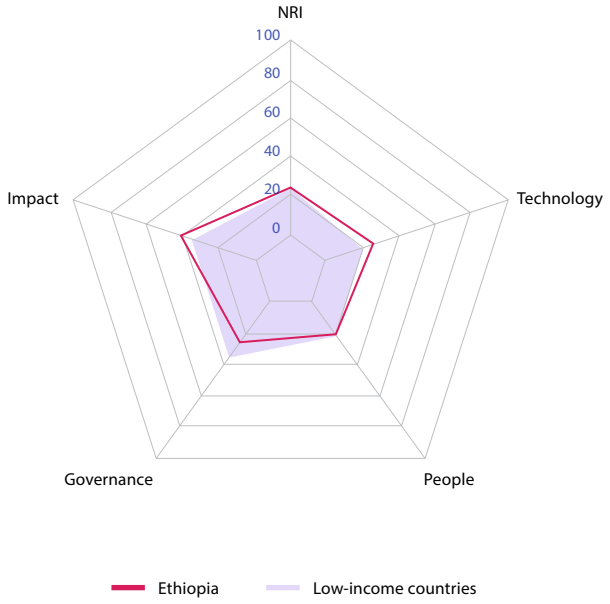
Indicator	Rank	Score	
C. Governance pillar	**126**	**32.00**	
1st sub-pillar: Trust	114	21.17	
3.1.1 Secure Internet servers	101	37.37	
3.1.2 Cybersecurity	120	16.79	
3.1.3 Online access to financial account	NA	NA	
3.1.4 Internet shopping	93	9.36	●
2nd sub-pillar: Regulation	126	36.47	
3.2.1 Regulatory quality	103	36.44	
3.2.2 ICT regulatory environment	114	62.00	
3.2.3 Regulation of emerging technologies	NA	NA	
3.2.4 E-commerce legislation	129	0.00	○
3.2.5 Privacy protection by law content	102	47.42	
3rd sub-pillar: Inclusion	119	38.35	
3.3.1 E-Participation	130	12.79	○
3.3.2 Socioeconomic gap in use of digital payments	57	80.87	●
3.3.3 Availability of local online content	126	21.39	
3.3.4 Gender gap in Internet use	NA	NA	
3.3.5 Rural gap in use of digital payments	NA	NA	
D. Impact pillar	**134**	**24.04**	
1st sub-pillar: Economy	134	6.56	
4.1.1 High-tech and medium-high-tech manufacturing	NA	NA	
4.1.2 High-tech exports	124	0.37	
4.1.3 PCT patent applications	99	0.00	○
4.1.4 Domestic market size	130	21.20	○
4.1.5 Prevalence of gig economy	120	10.17	
4.1.6 ICT services exports	126	1.08	
2nd sub-pillar: Quality of Life	134	20.29	
4.2.1 Happiness	NA	NA	
4.2.2 Freedom to make life choices	NA	NA	
4.2.3 Income inequality	113	21.11	
4.2.4 Healthy life expectancy at birth	132	19.48	○
3rd sub-pillar: SDG Contribution	119	45.25	
4.3.1 SDG 3: Good Health and Well-Being	100	48.90	
4.3.2 SDG 4: Quality Education	NA	NA	
4.3.3 SDG 5: Women's economic opportunity	130	23.89	○
4.3.4 SDG 7: Affordable and Clean Energy	81	67.85	●
4.3.5 SDG 11: Sustainable Cities and Communities	111	40.37	

NOTE: ● Indicates a strength and ○ a weakness.

Ethiopia

	Rank (Out of 134)	Score
Network Readiness Index	**126**	**27.36**

Pillar/sub-pillar	Rank	Score
A. Technology pillar	**106**	**27.58**
1st sub-pillar: Access	107	46.45
2nd sub-pillar: Content	87	18.27
3rd sub-pillar: Future Technologies	118	18.01
B. People pillar	**127**	**17.80**
1st sub-pillar: Individuals	132	12.02
2nd sub-pillar: Businesses	126	21.08
3rd sub-pillar: Governments	113	20.29
C. Governance pillar	**132**	**24.76**
1st sub-pillar: Trust	133	10.22
2nd sub-pillar: Regulation	130	32.40
3rd sub-pillar: Inclusion	123	31.67
D. Impact pillar	**111**	**39.28**
1st sub-pillar: Economy	71	26.61
2nd sub-pillar: Quality of Life	112	49.07
3rd sub-pillar: SDG Contribution	126	42.17



The Network Readiness Index in detail

Indicator	Rank	Score	
A. Technology pillar	**106**	**27.58**	
1st sub-pillar: Access	107	46.45	
1.1.1 Mobile tariffs	103	36.59	
1.1.2 Handset prices	120	19.80	
1.1.3 FTTH/building Internet subscriptions	105	11.53	
1.1.4 Population covered by at least a 3G mobile network	100	97.74	
1.1.5 International Internet bandwidth	92	66.60	●
1.1.6 Internet access in schools	NA	NA	
2nd sub-pillar: Content	87	18.27	
1.2.1 GitHub commits	111	1.18	
1.2.2 Internet domain registrations	134	0.00	○
1.2.3 Mobile apps development	94	56.82	
1.2.4 AI scientific publications	35	15.09	●
3rd sub-pillar: Future Technologies	118	18.01	
1.3.1 Adoption of emerging technologies	113	25.79	
1.3.2 Investment in emerging technologies	102	28.25	
1.3.3 Robot density	NA	NA	
1.3.4 Computer software spending	128	0.00	○
B. People pillar	**127**	**17.80**	
1st sub-pillar: Individuals	132	12.02	
2.1.1 Mobile broadband internet traffic within the country	80	6.38	●
2.1.2 ICT skills in the education system	NA	NA	
2.1.3 Use of virtual social networks	130	2.35	○
2.1.4 Tertiary enrollment	111	5.20	
2.1.5 Adult literacy rate	101	34.15	
2.1.6 AI talent concentration	NA	NA	
2nd sub-pillar: Businesses	126	21.08	
2.2.1 Firms with website	90	29.23	
2.2.2 GERD financed by business enterprise	90	1.87	
2.2.3 Knowledge intensive employment	121	2.68	
2.2.4 Annual investment in telecommunication services	107	71.49	
2.2.5 GERD performed by business enterprise	84	0.14	
3rd sub-pillar: Governments	113	20.29	
2.3.1 Government online services	117	30.70	
2.3.2 Publication and use of open data	77	16.18	
2.3.3 Government promotion of investment in emerging tech	92	29.51	
2.3.4 R&D expenditure by governments and higher education	82	4.76	●

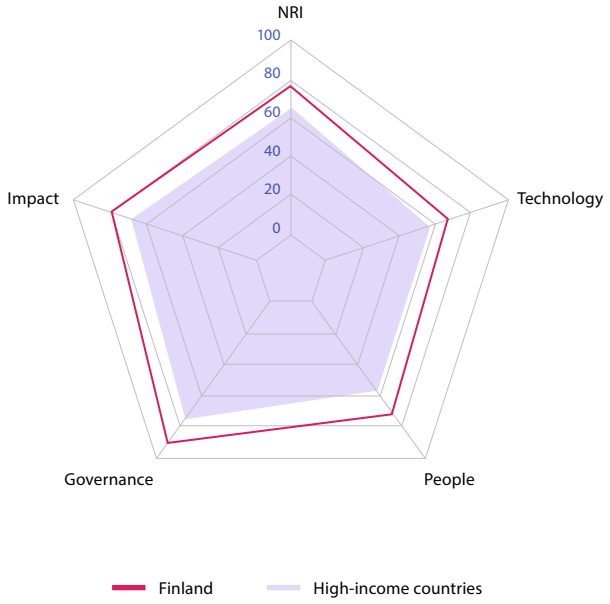
Indicator	Rank	Score	
C. Governance pillar	**132**	**24.76**	
1st sub-pillar: Trust	133	10.22	
3.1.1 Secure Internet servers	132	13.34	○
3.1.2 Cybersecurity	110	26.47	
3.1.3 Online access to financial account	126	0.00	○
3.1.4 Internet shopping	125	1.06	
2nd sub-pillar: Regulation	130	32.40	
3.2.1 Regulatory quality	122	28.64	
3.2.2 ICT regulatory environment	131	22.35	○
3.2.3 Regulation of emerging technologies	NA	NA	
3.2.4 E-commerce legislation	121	33.33	
3.2.5 Privacy protection by law content	107	45.26	
3rd sub-pillar: Inclusion	123	31.67	
3.3.1 E-Participation	125	17.45	
3.3.2 Socioeconomic gap in use of digital payments	119	38.94	
3.3.3 Availability of local online content	112	30.53	
3.3.4 Gender gap in Internet use	102	21.26	
3.3.5 Rural gap in use of digital payments	90	50.20	●
D. Impact pillar	**111**	**39.28**	
1st sub-pillar: Economy	71	26.61	
4.1.1 High-tech and medium-high-tech manufacturing	79	15.25	
4.1.2 High-tech exports	40	23.51	●
4.1.3 PCT patent applications	NA	NA	
4.1.4 Domestic market size	55	56.64	●
4.1.5 Prevalence of gig economy	96	27.91	
4.1.6 ICT services exports	80	9.72	●
2nd sub-pillar: Quality of Life	112	49.07	
4.2.1 Happiness	120	23.73	
4.2.2 Freedom to make life choices	114	49.78	
4.2.3 Income inequality	49	70.35	●
4.2.4 Healthy life expectancy at birth	104	52.43	
3rd sub-pillar: SDG Contribution	126	42.17	
4.3.1 SDG 3: Good Health and Well-Being	130	16.26	○
4.3.2 SDG 4: Quality Education	NA	NA	
4.3.3 SDG 5: Women's economic opportunity	96	67.26	●
4.3.4 SDG 7: Affordable and Clean Energy	123	42.99	
4.3.5 SDG 11: Sustainable Cities and Communities	108	42.15	

NOTE: ● Indicates a strength and ○ a weakness.

Finland

	Rank (Out of 134)	Score
Network Readiness Index	**3**	**76.19**

Pillar/sub-pillar	Rank	Score
A. Technology pillar	**10**	**65.50**
1st sub-pillar: Access	13	78.60
2nd sub-pillar: Content	15	51.55
3rd sub-pillar: Future Technologies	7	66.35
B. People pillar	**7**	**69.42**
1st sub-pillar: Individuals	13	60.11
2nd sub-pillar: Businesses	8	75.08
3rd sub-pillar: Governments	7	73.08
C. Governance pillar	**1**	**89.94**
1st sub-pillar: Trust	6	90.25
2nd sub-pillar: Regulation	2	93.75
3rd sub-pillar: Inclusion	6	85.80
D. Impact pillar	**2**	**79.90**
1st sub-pillar: Economy	6	61.61
2nd sub-pillar: Quality of Life	1	94.26
3rd sub-pillar: SDG Contribution	19	83.82



The Network Readiness Index in detail

Indicator	Rank	Score	
A. Technology pillar	**10**	**65.50**	
1st sub-pillar: Access	13	78.60	
1.1.1 Mobile tariffs	17	84.75	
1.1.2 Handset prices	8	88.47	
1.1.3 FTTH/building Internet subscriptions	59	30.28	○
1.1.4 Population covered by at least a 3G mobile network	22	100.00	
1.1.5 International Internet bandwidth	86	68.07	○
1.1.6 Internet access in schools	1	100.00	●
2nd sub-pillar: Content	15	51.55	
1.2.1 GitHub commits	10	75.17	
1.2.2 Internet domain registrations	23	39.49	
1.2.3 Mobile apps development	9	81.17	
1.2.4 AI scientific publications	46	10.37	
3rd sub-pillar: Future Technologies	7	66.35	
1.3.1 Adoption of emerging technologies	3	96.95	●
1.3.2 Investment in emerging technologies	5	87.75	
1.3.3 Robot density	20	22.90	
1.3.4 Computer software spending	14	57.79	
B. People pillar	**7**	**69.42**	
1st sub-pillar: Individuals	13	60.11	
2.1.1 Mobile broadband internet traffic within the country	28	28.99	
2.1.2 ICT skills in the education system	1	100.00	●
2.1.3 Use of virtual social networks	20	78.79	
2.1.4 Tertiary enrollment	7	62.32	
2.1.5 Adult literacy rate	NA	NA	
2.1.6 AI talent concentration	13	30.47	
2nd sub-pillar: Businesses	8	75.08	
2.2.1 Firms with website	1	100.00	●
2.2.2 GERD financed by business enterprise	20	69.22	
2.2.3 Knowledge intensive employment	15	72.77	
2.2.4 Annual investment in telecommunication services	49	80.69	
2.2.5 GERD performed by business enterprise	11	52.70	
3rd sub-pillar: Governments	7	73.08	
2.3.1 Government online services	2	98.15	●
2.3.2 Publication and use of open data	23	57.35	
2.3.3 Government promotion of investment in emerging tech	7	83.09	
2.3.4 R&D expenditure by governments and higher education	10	53.71	

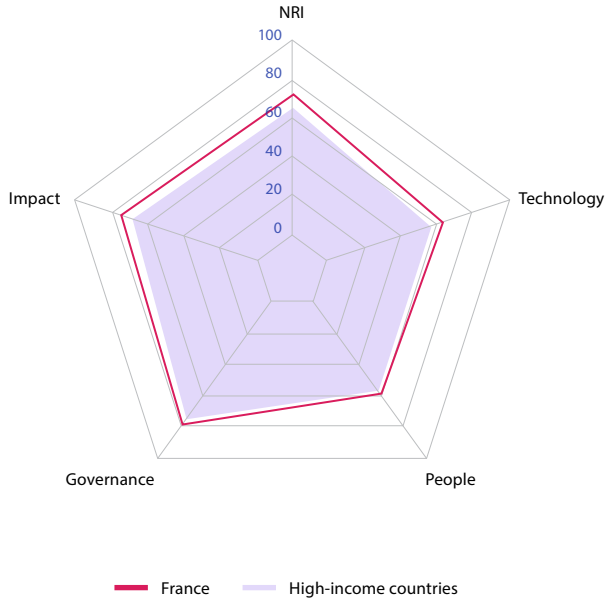
Indicator	Rank	Score	
C. Governance pillar	**1**	**89.94**	
1st sub-pillar: Trust	6	90.25	
3.1.1 Secure Internet servers	9	90.25	
3.1.2 Cybersecurity	29	95.71	
3.1.3 Online access to financial account	3	93.95	●
3.1.4 Internet shopping	13	81.10	
2nd sub-pillar: Regulation	2	93.75	
3.2.1 Regulatory quality	3	92.48	●
3.2.2 ICT regulatory environment	3	97.65	●
3.2.3 Regulation of emerging technologies	2	94.55	●
3.2.4 E-commerce legislation	1	100.00	●
3.2.5 Privacy protection by law content	22	84.09	
3rd sub-pillar: Inclusion	6	85.80	
3.3.1 E-Participation	6	95.34	
3.3.2 Socioeconomic gap in use of digital payments	22	95.97	
3.3.3 Availability of local online content	13	90.14	
3.3.4 Gender gap in Internet use	34	70.84	
3.3.5 Rural gap in use of digital payments	13	76.73	
D. Impact pillar	**2**	**79.90**	
1st sub-pillar: Economy	6	61.61	
4.1.1 High-tech and medium-high-tech manufacturing	28	47.24	
4.1.2 High-tech exports	46	18.43	
4.1.3 PCT patent applications	5	83.21	
4.1.4 Domestic market size	57	55.97	○
4.1.5 Prevalence of gig economy	23	64.83	
4.1.6 ICT services exports	1	100.00	●
2nd sub-pillar: Quality of Life	1	94.26	
4.2.1 Happiness	1	100.00	●
4.2.2 Freedom to make life choices	3	97.20	●
4.2.3 Income inequality	10	90.20	
4.2.4 Healthy life expectancy at birth	19	89.62	
3rd sub-pillar: SDG Contribution	19	83.82	
4.3.1 SDG 3: Good Health and Well-Being	22	89.99	
4.3.2 SDG 4: Quality Education	8	74.44	
4.3.3 SDG 5: Women's economic opportunity	15	96.46	
4.3.4 SDG 7: Affordable and Clean Energy	99	61.34	○
4.3.5 SDG 11: Sustainable Cities and Communities	5	96.88	

NOTE: ● Indicates a strength and ○ a weakness.

France

	Rank (Out of 134)	Score
Network Readiness Index	**15**	**70.17**

Pillar/sub-pillar	Rank	Score
A. Technology pillar	**12**	**62.96**
1st sub-pillar: Access	9	80.33
2nd sub-pillar: Content	19	48.68
3rd sub-pillar: Future Technologies	15	59.87
B. People pillar	**12**	**64.68**
1st sub-pillar: Individuals	47	51.63
2nd sub-pillar: Businesses	16	68.68
3rd sub-pillar: Governments	6	73.74
C. Governance pillar	**21**	**80.12**
1st sub-pillar: Trust	26	75.58
2nd sub-pillar: Regulation	17	85.42
3rd sub-pillar: Inclusion	23	79.35
D. Impact pillar	**12**	**72.92**
1st sub-pillar: Economy	16	52.75
2nd sub-pillar: Quality of Life	22	81.05
3rd sub-pillar: SDG Contribution	14	84.95



The Network Readiness Index in detail

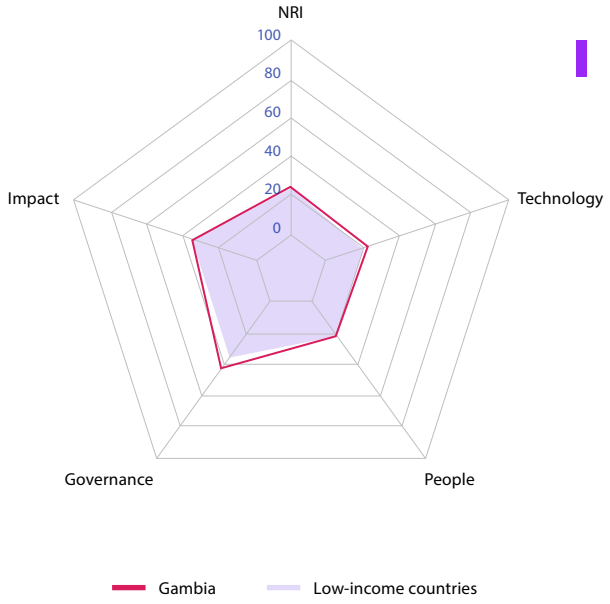
Indicator	Rank	Score	
A. Technology pillar	**12**	**62.96**	
1st sub-pillar: Access	9	80.33	
1.1.1 Mobile tariffs	47	71.87	
1.1.2 Handset prices	9	84.30	●
1.1.3 FTTH/building Internet subscriptions	18	48.76	
1.1.4 Population covered by at least a 3G mobile network	57	99.67	○
1.1.5 International Internet bandwidth	30	78.39	
1.1.6 Internet access in schools	31	99.00	
2nd sub-pillar: Content	19	48.68	
1.2.1 GitHub commits	26	44.96	
1.2.2 Internet domain registrations	24	37.59	
1.2.3 Mobile apps development	19	76.17	
1.2.4 AI scientific publications	11	36.01	●
3rd sub-pillar: Future Technologies	15	59.87	
1.3.1 Adoption of emerging technologies	14	83.82	
1.3.2 Investment in emerging technologies	22	67.25	
1.3.3 Robot density	18	24.54	
1.3.4 Computer software spending	7	63.87	●
B. People pillar	**12**	**64.68**	
1st sub-pillar: Individuals	47	51.63	
2.1.1 Mobile broadband internet traffic within the country	10	45.27	●
2.1.2 ICT skills in the education system	28	68.69	
2.1.3 Use of virtual social networks	31	76.05	
2.1.4 Tertiary enrollment	40	44.97	
2.1.5 Adult literacy rate	NA	NA	
2.1.6 AI talent concentration	18	23.18	○
2nd sub-pillar: Businesses	16	68.68	
2.2.1 Firms with website	32	70.47	
2.2.2 GERD financed by business enterprise	19	70.22	
2.2.3 Knowledge intensive employment	14	73.29	
2.2.4 Annual investment in telecommunication services	6	92.23	●
2.2.5 GERD performed by business enterprise	17	37.18	
3rd sub-pillar: Governments	6	73.74	
2.3.1 Government online services	20	86.38	
2.3.2 Publication and use of open data	4	94.12	●
2.3.3 Government promotion of investment in emerging tech	12	74.77	
2.3.4 R&D expenditure by governments and higher education	17	39.70	

Indicator	Rank	Score	
C. Governance pillar	**21**	**80.12**	
1st sub-pillar: Trust	26	75.58	
3.1.1 Secure Internet servers	21	83.74	
3.1.2 Cybersecurity	14	97.56	
3.1.3 Online access to financial account	21	60.62	
3.1.4 Internet shopping	31	60.40	
2nd sub-pillar: Regulation	17	85.42	
3.2.1 Regulatory quality	24	77.51	
3.2.2 ICT regulatory environment	7	95.88	●
3.2.3 Regulation of emerging technologies	9	82.08	●
3.2.4 E-commerce legislation	1	100.00	●
3.2.5 Privacy protection by law content	49	71.63	
3rd sub-pillar: Inclusion	23	79.35	
3.3.1 E-Participation	37	70.93	
3.3.2 Socioeconomic gap in use of digital payments	17	96.60	
3.3.3 Availability of local online content	28	83.65	
3.3.4 Gender gap in Internet use	46	69.43	○
3.3.5 Rural gap in use of digital payments	18	76.15	
D. Impact pillar	**12**	**72.92**	
1st sub-pillar: Economy	16	52.75	
4.1.1 High-tech and medium-high-tech manufacturing	12	61.20	
4.1.2 High-tech exports	20	39.52	
4.1.3 PCT patent applications	15	49.65	
4.1.4 Domestic market size	10	79.64	●
4.1.5 Prevalence of gig economy	21	66.86	
4.1.6 ICT services exports	50	19.63	
2nd sub-pillar: Quality of Life	22	81.05	
4.2.1 Happiness	26	79.26	
4.2.2 Freedom to make life choices	73	70.52	○
4.2.3 Income inequality	25	81.16	
4.2.4 Healthy life expectancy at birth	8	93.27	●
3rd sub-pillar: SDG Contribution	14	84.95	
4.3.1 SDG 3: Good Health and Well-Being	20	91.09	
4.3.2 SDG 4: Quality Education	25	65.14	
4.3.3 SDG 5: Women's economic opportunity	1	100.00	●
4.3.4 SDG 7: Affordable and Clean Energy	49	75.58	
4.3.5 SDG 11: Sustainable Cities and Communities	14	92.93	

NOTE: ● Indicates a strength and ○ a weakness.

Gambia

	Rank (Out of 134)	Score
Network Readiness Index	**120**	**29.76**
Pillar/sub-pillar	**Rank**	**Score**
A. Technology pillar	**120**	**23.04**
1st sub-pillar: Access	127	32.83
2nd sub-pillar: Content	132	0.39
3rd sub-pillar: Future Technologies	57	35.91
B. People pillar	**130**	**17.26**
1st sub-pillar: Individuals	125	17.70
2nd sub-pillar: Businesses	125	21.47
3rd sub-pillar: Governments	126	12.60
C. Governance pillar	**102**	**43.30**
1st sub-pillar: Trust	122	16.57
2nd sub-pillar: Regulation	50	71.24
3rd sub-pillar: Inclusion	112	42.09
D. Impact pillar	**121**	**35.43**
1st sub-pillar: Economy	125	11.57
2nd sub-pillar: Quality of Life	119	44.22
3rd sub-pillar: SDG Contribution	109	50.50



The Network Readiness Index in detail

Indicator	Rank	Score	
A. Technology pillar	**120**	**23.04**	
1st sub-pillar: Access	127	32.83	
1.1.1 Mobile tariffs	130	6.55	○
1.1.2 Handset prices	130	9.55	○
1.1.3 FTTH/building Internet subscriptions	125	0.00	○
1.1.4 Population covered by at least a 3G mobile network	108	95.70	
1.1.5 International Internet bandwidth	128	52.37	○
1.1.6 Internet access in schools	NA	NA	
2nd sub-pillar: Content	132	0.39	
1.2.1 GitHub commits	117	0.69	
1.2.2 Internet domain registrations	118	0.23	
1.2.3 Mobile apps development	NA	NA	
1.2.4 AI scientific publications	123	0.24	
3rd sub-pillar: Future Technologies	57	35.91	
1.3.1 Adoption of emerging technologies	95	35.57	
1.3.2 Investment in emerging technologies	77	36.25	●
1.3.3 Robot density	NA	NA	
1.3.4 Computer software spending	NA	NA	
B. People pillar	**130**	**17.26**	
1st sub-pillar: Individuals	125	17.70	
2.1.1 Mobile broadband internet traffic within the country	NA	NA	
2.1.2 ICT skills in the education system	NA	NA	
2.1.3 Use of virtual social networks	117	10.36	
2.1.4 Tertiary enrollment	131	0.00	○
2.1.5 Adult literacy rate	98	42.74	
2.1.6 AI talent concentration	NA	NA	
2nd sub-pillar: Businesses	125	21.47	
2.2.1 Firms with website	104	14.90	
2.2.2 GERD financed by business enterprise	NA	NA	
2.2.3 Knowledge intensive employment	105	12.15	
2.2.4 Annual investment in telecommunication services	120	58.82	
2.2.5 GERD performed by business enterprise	91	0.00	○
3rd sub-pillar: Governments	126	12.60	
2.3.1 Government online services	132	5.56	○
2.3.2 Publication and use of open data	NA	NA	
2.3.3 Government promotion of investment in emerging tech	86	31.18	●
2.3.4 R&D expenditure by governments and higher education	109	1.07	

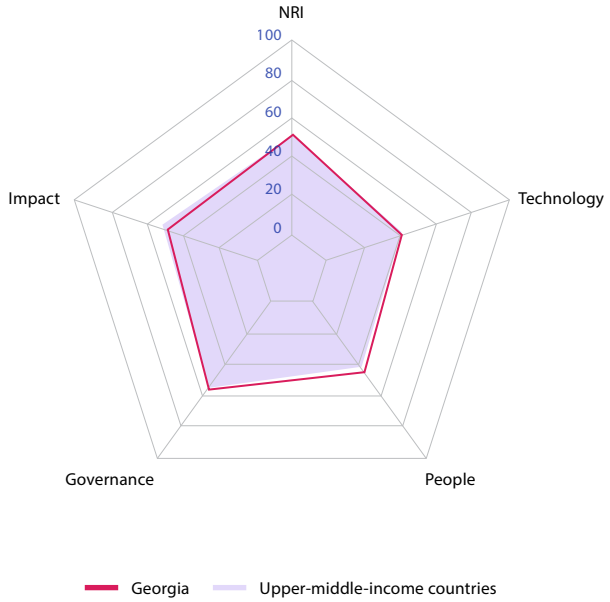
Indicator	Rank	Score	
C. Governance pillar	**102**	**43.30**	
1st sub-pillar: Trust	122	16.57	
3.1.1 Secure Internet servers	120	26.28	
3.1.2 Cybersecurity	107	30.93	
3.1.3 Online access to financial account	114	8.45	
3.1.4 Internet shopping	127	0.61	
2nd sub-pillar: Regulation	50	71.24	
3.2.1 Regulatory quality	118	29.87	
3.2.2 ICT regulatory environment	96	69.06	●
3.2.3 Regulation of emerging technologies	NA	NA	
3.2.4 E-commerce legislation	1	100.00	●
3.2.5 Privacy protection by law content	18	86.02	●
3rd sub-pillar: Inclusion	112	42.09	
3.3.1 E-Participation	120	22.09	
3.3.2 Socioeconomic gap in use of digital payments	78	66.67	●
3.3.3 Availability of local online content	103	37.50	
3.3.4 Gender gap in Internet use	NA	NA	
3.3.5 Rural gap in use of digital payments	NA	NA	
D. Impact pillar	**121**	**35.43**	
1st sub-pillar: Economy	125	11.57	
4.1.1 High-tech and medium-high-tech manufacturing	NA	NA	
4.1.2 High-tech exports	116	1.36	
4.1.3 PCT patent applications	99	0.00	○
4.1.4 Domestic market size	132	10.50	○
4.1.5 Prevalence of gig economy	71	37.50	●
4.1.6 ICT services exports	87	8.49	●
2nd sub-pillar: Quality of Life	119	44.22	
4.2.1 Happiness	107	35.84	
4.2.2 Freedom to make life choices	121	37.37	
4.2.3 Income inequality	73	60.80	●
4.2.4 Healthy life expectancy at birth	113	42.87	
3rd sub-pillar: SDG Contribution	109	50.50	
4.3.1 SDG 3: Good Health and Well-Being	115	32.03	
4.3.2 SDG 4: Quality Education	NA	NA	
4.3.3 SDG 5: Women's economic opportunity	112	56.64	
4.3.4 SDG 7: Affordable and Clean Energy	31	78.61	●
4.3.5 SDG 11: Sustainable Cities and Communities	118	34.70	

NOTE: ● Indicates a strength and ○ a weakness.

Georgia

	Rank (Out of 134)	Score
Network Readiness Index	**78**	**45.25**

Pillar/sub-pillar	Rank	Score
A. Technology pillar	**81**	**37.65**
1st sub-pillar: Access	50	69.76
2nd sub-pillar: Content	58	25.11
3rd sub-pillar: Future Technologies	117	18.07
B. People pillar	**70**	**42.80**
1st sub-pillar: Individuals	27	55.95
2nd sub-pillar: Businesses	83	39.74
3rd sub-pillar: Governments	87	32.71
C. Governance pillar	**66**	**55.39**
1st sub-pillar: Trust	68	44.60
2nd sub-pillar: Regulation	86	61.31
3rd sub-pillar: Inclusion	69	60.26
D. Impact pillar	**98**	**45.15**
1st sub-pillar: Economy	113	15.61
2nd sub-pillar: Quality of Life	71	67.45
3rd sub-pillar: SDG Contribution	103	52.38



The Network Readiness Index in detail

Indicator	Rank	Score	
A. Technology pillar	**81**	**37.65**	
1st sub-pillar: Access	50	69.76	
1.1.1 Mobile tariffs	46	72.14	
1.1.2 Handset prices	93	36.55	
1.1.3 FTTH/building Internet subscriptions	37	38.99	●
1.1.4 Population covered by at least a 3G mobile network	25	99.99	●
1.1.5 International Internet bandwidth	65	70.91	
1.1.6 Internet access in schools	1	100.00	●
2nd sub-pillar: Content	58	25.11	
1.2.1 GitHub commits	35	28.76	●
1.2.2 Internet domain registrations	62	4.64	
1.2.3 Mobile apps development	69	65.00	
1.2.4 AI scientific publications	87	2.05	
3rd sub-pillar: Future Technologies	117	18.07	
1.3.1 Adoption of emerging technologies	NA	NA	
1.3.2 Investment in emerging technologies	98	30.00	
1.3.3 Robot density	NA	NA	
1.3.4 Computer software spending	96	6.14	
B. People pillar	**70**	**42.80**	
1st sub-pillar: Individuals	27	55.95	
2.1.1 Mobile broadband internet traffic within the country	79	6.62	
2.1.2 ICT skills in the education system	64	49.66	
2.1.3 Use of virtual social networks	26	77.22	●
2.1.4 Tertiary enrollment	29	47.12	●
2.1.5 Adult literacy rate	16	99.13	●
2.1.6 AI talent concentration	NA	NA	
2nd sub-pillar: Businesses	83	39.74	
2.2.1 Firms with website	63	48.18	
2.2.2 GERD financed by business enterprise	88	2.11	○
2.2.3 Knowledge intensive employment	54	35.78	
2.2.4 Annual investment in telecommunication services	100	72.89	○
2.2.5 GERD performed by business enterprise	NA	NA	
3rd sub-pillar: Governments	87	32.71	
2.3.1 Government online services	82	57.02	
2.3.2 Publication and use of open data	45	36.76	
2.3.3 Government promotion of investment in emerging tech	NA	NA	
2.3.4 R&D expenditure by governments and higher education	84	4.35	

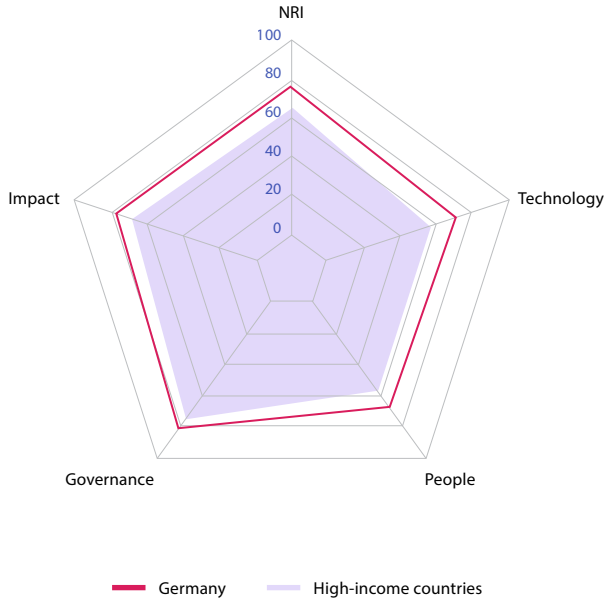
Indicator	Rank	Score	
C. Governance pillar	**66**	**55.39**	
1st sub-pillar: Trust	68	44.60	
3.1.1 Secure Internet servers	50	65.11	
3.1.2 Cybersecurity	63	80.73	
3.1.3 Online access to financial account	94	15.90	
3.1.4 Internet shopping	77	16.67	
2nd sub-pillar: Regulation	86	61.31	
3.2.1 Regulatory quality	29	73.56	●
3.2.2 ICT regulatory environment	31	90.00	●
3.2.3 Regulation of emerging technologies	58	46.49	
3.2.4 E-commerce legislation	121	33.33	○
3.2.5 Privacy protection by law content	68	63.16	
3rd sub-pillar: Inclusion	69	60.26	
3.3.1 E-Participation	71	52.33	
3.3.2 Socioeconomic gap in use of digital payments	68	73.20	
3.3.3 Availability of local online content	81	51.68	
3.3.4 Gender gap in Internet use	32	71.13	●
3.3.5 Rural gap in use of digital payments	86	52.98	
D. Impact pillar	**98**	**45.15**	
1st sub-pillar: Economy	113	15.61	
4.1.1 High-tech and medium-high-tech manufacturing	86	11.21	
4.1.2 High-tech exports	103	2.68	
4.1.3 PCT patent applications	59	4.33	
4.1.4 Domestic market size	95	41.17	
4.1.5 Prevalence of gig economy	NA	NA	
4.1.6 ICT services exports	53	18.68	
2nd sub-pillar: Quality of Life	71	67.45	
4.2.1 Happiness	85	54.69	
4.2.2 Freedom to make life choices	66	74.29	
4.2.3 Income inequality	44	72.36	
4.2.4 Healthy life expectancy at birth	79	68.46	
3rd sub-pillar: SDG Contribution	103	52.38	
4.3.1 SDG 3: Good Health and Well-Being	88	60.44	
4.3.2 SDG 4: Quality Education	67	21.46	○
4.3.3 SDG 5: Women's economic opportunity	48	83.19	
4.3.4 SDG 7: Affordable and Clean Energy	65	72.33	
4.3.5 SDG 11: Sustainable Cities and Communities	129	24.47	○

NOTE: ● Indicates a strength and ○ a weakness.

Germany

	Rank (Out of 134)	Score
Network Readiness Index	**9**	**74.00**

Pillar/sub-pillar	Rank	Score
A. Technology pillar	**6**	**69.45**
1st sub-pillar: Access	22	75.84
2nd sub-pillar: Content	7	60.88
3rd sub-pillar: Future Technologies	4	71.65
B. People pillar	**8**	**68.25**
1st sub-pillar: Individuals	22	57.41
2nd sub-pillar: Businesses	5	77.31
3rd sub-pillar: Governments	12	70.03
C. Governance pillar	**14**	**83.16**
1st sub-pillar: Trust	13	82.21
2nd sub-pillar: Regulation	12	87.46
3rd sub-pillar: Inclusion	20	79.80
D. Impact pillar	**10**	**75.13**
1st sub-pillar: Economy	13	56.21
2nd sub-pillar: Quality of Life	15	83.43
3rd sub-pillar: SDG Contribution	11	85.75



The Network Readiness Index in detail

Indicator	Rank	Score	
A. Technology pillar	**6**	**69.45**	
1st sub-pillar: Access	22	75.84	
1.1.1 Mobile tariffs	18	84.73	
1.1.2 Handset prices	20	77.10	
1.1.3 FTTH/building Internet subscriptions	41	37.54	
1.1.4 Population covered by at least a 3G mobile network	28	99.97	
1.1.5 International Internet bandwidth	26	79.84	
1.1.6 Internet access in schools	NA	NA	
2nd sub-pillar: Content	7	60.88	
1.2.1 GitHub commits	18	56.48	
1.2.2 Internet domain registrations	7	78.18	●
1.2.3 Mobile apps development	49	70.88	○
1.2.4 AI scientific publications	9	37.96	●
3rd sub-pillar: Future Technologies	4	71.65	
1.3.1 Adoption of emerging technologies	9	85.48	●
1.3.2 Investment in emerging technologies	7	86.75	●
1.3.3 Robot density	3	56.82	●
1.3.4 Computer software spending	15	57.56	
B. People pillar	**8**	**68.25**	
1st sub-pillar: Individuals	22	57.41	
2.1.1 Mobile broadband internet traffic within the country	20	37.09	
2.1.2 ICT skills in the education system	38	60.61	○
2.1.3 Use of virtual social networks	12	80.55	
2.1.4 Tertiary enrollment	28	47.43	
2.1.5 Adult literacy rate	NA	NA	
2.1.6 AI talent concentration	5	61.37	
2nd sub-pillar: Businesses	5	77.31	
2.2.1 Firms with website	6	92.28	●
2.2.2 GERD financed by business enterprise	11	77.45	
2.2.3 Knowledge intensive employment	20	70.67	
2.2.4 Annual investment in telecommunication services	5	92.66	●
2.2.5 GERD performed by business enterprise	9	53.51	
3rd sub-pillar: Governments	12	70.03	
2.3.1 Government online services	44	76.85	
2.3.2 Publication and use of open data	11	73.53	
2.3.3 Government promotion of investment in emerging tech	14	73.42	
2.3.4 R&D expenditure by governments and higher education	9	56.31	

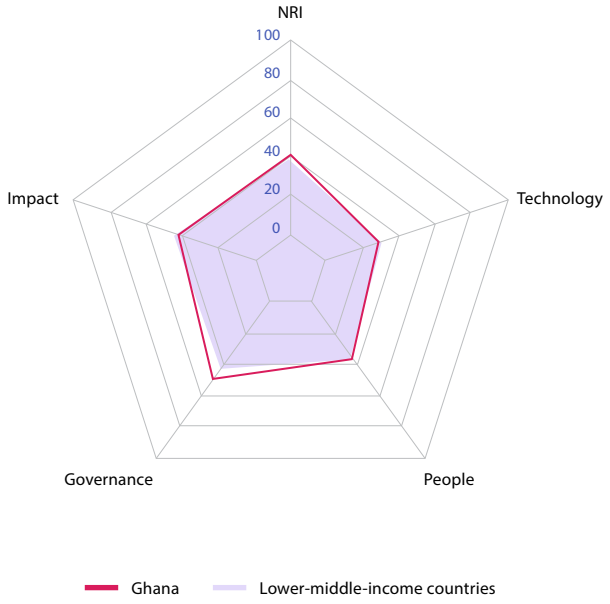
Indicator	Rank	Score	
C. Governance pillar	**14**	**83.16**	
1st sub-pillar: Trust	13	82.21	
3.1.1 Secure Internet servers	7	91.67	●
3.1.2 Cybersecurity	18	97.36	
3.1.3 Online access to financial account	14	71.20	
3.1.4 Internet shopping	24	68.62	
2nd sub-pillar: Regulation	12	87.46	
3.2.1 Regulatory quality	11	86.46	
3.2.2 ICT regulatory environment	21	93.53	
3.2.3 Regulation of emerging technologies	21	74.55	
3.2.4 E-commerce legislation	1	100.00	●
3.2.5 Privacy protection by law content	26	82.77	
3rd sub-pillar: Inclusion	20	79.80	
3.3.1 E-Participation	32	72.10	
3.3.2 Socioeconomic gap in use of digital payments	2	99.90	●
3.3.3 Availability of local online content	26	84.38	
3.3.4 Gender gap in Internet use	63	67.46	○
3.3.5 Rural gap in use of digital payments	27	75.20	
D. Impact pillar	**10**	**75.13**	
1st sub-pillar: Economy	13	56.21	
4.1.1 High-tech and medium-high-tech manufacturing	9	66.52	
4.1.2 High-tech exports	34	27.37	
4.1.3 PCT patent applications	10	64.49	
4.1.4 Domestic market size	5	83.19	●
4.1.5 Prevalence of gig economy	12	78.20	
4.1.6 ICT services exports	56	17.51	○
2nd sub-pillar: Quality of Life	15	83.43	
4.2.1 Happiness	27	79.15	
4.2.2 Freedom to make life choices	27	86.66	
4.2.3 Income inequality	29	78.64	
4.2.4 Healthy life expectancy at birth	23	89.27	
3rd sub-pillar: SDG Contribution	11	85.75	
4.3.1 SDG 3: Good Health and Well-Being	11	94.24	
4.3.2 SDG 4: Quality Education	18	67.91	
4.3.3 SDG 5: Women's economic opportunity	1	100.00	●
4.3.4 SDG 7: Affordable and Clean Energy	29	79.48	
4.3.5 SDG 11: Sustainable Cities and Communities	26	87.12	

NOTE: ● Indicates a strength and ○ a weakness.

Ghana

	Rank (Out of 134)	Score
Network Readiness Index	**98**	**38.83**

Pillar/sub-pillar	Rank	Score
A. Technology pillar	**102**	**29.02**
1st sub-pillar: Access	105	47.41
2nd sub-pillar: Content	111	12.29
3rd sub-pillar: Future Technologies	90	27.37
B. People pillar	**95**	**34.58**
1st sub-pillar: Individuals	107	31.68
2nd sub-pillar: Businesses	84	38.58
3rd sub-pillar: Governments	84	33.50
C. Governance pillar	**76**	**51.68**
1st sub-pillar: Trust	75	40.08
2nd sub-pillar: Regulation	55	68.36
3rd sub-pillar: Inclusion	101	46.61
D. Impact pillar	**109**	**40.03**
1st sub-pillar: Economy	103	17.89
2nd sub-pillar: Quality of Life	111	49.44
3rd sub-pillar: SDG Contribution	101	52.77



The Network Readiness Index in detail

Indicator	Rank	Score	
A. Technology pillar	**102**	**29.02**	
1st sub-pillar: Access	105	47.41	
1.1.1 Mobile tariffs	78	54.35	
1.1.2 Handset prices	112	27.46	
1.1.3 FTTH/building Internet subscriptions	84	22.75	
1.1.4 Population covered by at least a 3G mobile network	89	98.60	
1.1.5 International Internet bandwidth	58	72.91	●
1.1.6 Internet access in schools	74	8.41	
2nd sub-pillar: Content	111	12.29	
1.2.1 GitHub commits	90	2.98	
1.2.2 Internet domain registrations	116	0.30	
1.2.3 Mobile apps development	115	37.61	○
1.2.4 AI scientific publications	51	8.26	●
3rd sub-pillar: Future Technologies	90	27.37	
1.3.1 Adoption of emerging technologies	99	32.17	
1.3.2 Investment in emerging technologies	44	49.25	●
1.3.3 Robot density	NA	NA	
1.3.4 Computer software spending	125	0.68	○
B. People pillar	**95**	**34.58**	
1st sub-pillar: Individuals	107	31.68	
2.1.1 Mobile broadband internet traffic within the country	47	15.89	●
2.1.2 ICT skills in the education system	76	41.51	
2.1.3 Use of virtual social networks	108	16.42	
2.1.4 Tertiary enrollment	99	11.35	
2.1.5 Adult literacy rate	81	73.21	
2.1.6 AI talent concentration	NA	NA	
2nd sub-pillar: Businesses	84	38.58	
2.2.1 Firms with website	92	27.38	
2.2.2 GERD financed by business enterprise	NA	NA	
2.2.3 Knowledge intensive employment	107	11.12	
2.2.4 Annual investment in telecommunication services	71	77.23	●
2.2.5 GERD performed by business enterprise	NA	NA	
3rd sub-pillar: Governments	84	33.50	
2.3.1 Government online services	92	48.73	
2.3.2 Publication and use of open data	65	25.00	
2.3.3 Government promotion of investment in emerging tech	98	26.77	
2.3.4 R&D expenditure by governments and higher education	NA	NA	

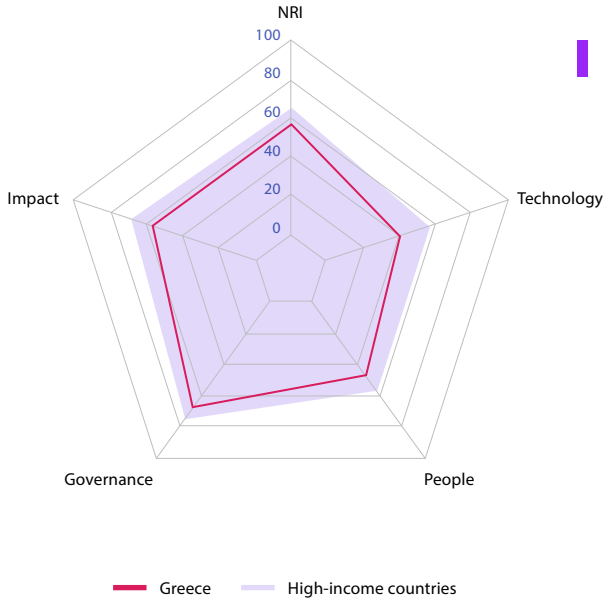
Indicator	Rank	Score	
C. Governance pillar	**76**	**51.68**	
1st sub-pillar: Trust	75	40.08	
3.1.1 Secure Internet servers	111	32.28	
3.1.2 Cybersecurity	51	86.46	●
3.1.3 Online access to financial account	58	32.31	●
3.1.4 Internet shopping	94	9.28	
2nd sub-pillar: Regulation	55	68.36	
3.2.1 Regulatory quality	80	45.08	
3.2.2 ICT regulatory environment	79	76.47	
3.2.3 Regulation of emerging technologies	83	32.73	
3.2.4 E-commerce legislation	1	100.00	●
3.2.5 Privacy protection by law content	14	87.53	●
3rd sub-pillar: Inclusion	101	46.61	
3.3.1 E-Participation	82	44.18	
3.3.2 Socioeconomic gap in use of digital payments	82	64.96	
3.3.3 Availability of local online content	103	37.50	
3.3.4 Gender gap in Internet use	NA	NA	
3.3.5 Rural gap in use of digital payments	103	39.78	
D. Impact pillar	**109**	**40.03**	
1st sub-pillar: Economy	103	17.89	
4.1.1 High-tech and medium-high-tech manufacturing	84	11.89	
4.1.2 High-tech exports	109	1.82	
4.1.3 PCT patent applications	99	0.00	○
4.1.4 Domestic market size	66	52.03	●
4.1.5 Prevalence of gig economy	75	36.63	
4.1.6 ICT services exports	95	4.99	
2nd sub-pillar: Quality of Life	111	49.44	
4.2.1 Happiness	113	34.19	○
4.2.2 Freedom to make life choices	79	68.55	
4.2.3 Income inequality	94	48.99	
4.2.4 Healthy life expectancy at birth	109	46.02	
3rd sub-pillar: SDG Contribution	101	52.77	
4.3.1 SDG 3: Good Health and Well-Being	119	27.64	○
4.3.2 SDG 4: Quality Education	NA	NA	
4.3.3 SDG 5: Women's economic opportunity	101	64.60	
4.3.4 SDG 7: Affordable and Clean Energy	23	80.71	●
4.3.5 SDG 11: Sustainable Cities and Communities	114	38.13	

NOTE: ● Indicates a strength and ○ a weakness.

Greece

	Rank (Out of 134)	Score
Network Readiness Index	**49**	**53.02**

Pillar/sub-pillar	Rank	Score
A. Technology pillar	**64**	**40.87**
1st sub-pillar: Access	77	61.25
2nd sub-pillar: Content	45	29.83
3rd sub-pillar: Future Technologies	70	31.53
B. People pillar	**47**	**47.99**
1st sub-pillar: Individuals	38	52.98
2nd sub-pillar: Businesses	50	50.95
3rd sub-pillar: Governments	64	40.03
C. Governance pillar	**41**	**68.73**
1st sub-pillar: Trust	42	65.07
2nd sub-pillar: Regulation	44	72.87
3rd sub-pillar: Inclusion	53	68.24
D. Impact pillar	**60**	**54.50**
1st sub-pillar: Economy	82	22.84
2nd sub-pillar: Quality of Life	80	65.09
3rd sub-pillar: SDG Contribution	35	75.57



The Network Readiness Index in detail

Indicator	Rank	Score	
A. Technology pillar	**64**	**40.87**	
1st sub-pillar: Access	77	61.25	
1.1.1 Mobile tariffs	58	66.18	
1.1.2 Handset prices	48	59.68	
1.1.3 FTTH/building Internet subscriptions	121	3.78	○
1.1.4 Population covered by at least a 3G mobile network	46	99.90	
1.1.5 International Internet bandwidth	35	76.70	
1.1.6 Internet access in schools	NA	NA	
2nd sub-pillar: Content	45	29.83	
1.2.1 GitHub commits	44	20.45	
1.2.2 Internet domain registrations	34	19.65	
1.2.3 Mobile apps development	79	62.69	
1.2.4 AI scientific publications	33	16.54	●
3rd sub-pillar: Future Technologies	70	31.53	
1.3.1 Adoption of emerging technologies	86	38.50	
1.3.2 Investment in emerging technologies	112	23.50	○
1.3.3 Robot density	41	2.89	
1.3.4 Computer software spending	13	61.22	●
B. People pillar	**47**	**47.99**	
1st sub-pillar: Individuals	38	52.98	
2.1.1 Mobile broadband internet traffic within the country	69	8.65	
2.1.2 ICT skills in the education system	62	50.69	
2.1.3 Use of virtual social networks	59	68.04	
2.1.4 Tertiary enrollment	1	100.00	●
2.1.5 Adult literacy rate	NA	NA	
2.1.6 AI talent concentration	7	37.55	●
2nd sub-pillar: Businesses	50	50.95	
2.2.1 Firms with website	50	60.02	
2.2.2 GERD financed by business enterprise	44	47.56	
2.2.3 Knowledge intensive employment	44	47.59	
2.2.4 Annual investment in telecommunication services	40	82.01	
2.2.5 GERD performed by business enterprise	34	17.55	
3rd sub-pillar: Governments	64	40.03	
2.3.1 Government online services	48	75.17	
2.3.2 Publication and use of open data	38	41.18	
2.3.3 Government promotion of investment in emerging tech	108	17.80	○
2.3.4 R&D expenditure by governments and higher education	28	25.97	●

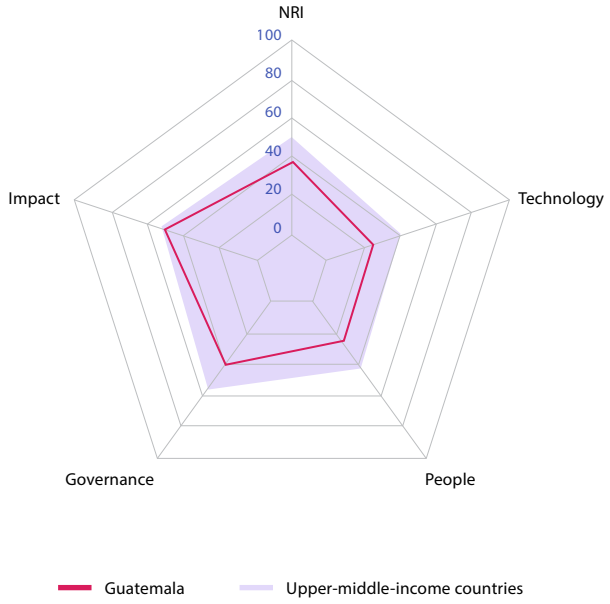
Indicator	Rank	Score	
C. Governance pillar	**41**	**68.73**	
1st sub-pillar: Trust	42	65.07	
3.1.1 Secure Internet servers	44	72.57	
3.1.2 Cybersecurity	35	93.87	
3.1.3 Online access to financial account	75	23.33	
3.1.4 Internet shopping	22	70.53	●
2nd sub-pillar: Regulation	44	72.87	
3.2.1 Regulatory quality	49	59.58	
3.2.2 ICT regulatory environment	28	90.59	●
3.2.3 Regulation of emerging technologies	66	43.64	
3.2.4 E-commerce legislation	1	100.00	●
3.2.5 Privacy protection by law content	55	70.56	
3rd sub-pillar: Inclusion	53	68.24	
3.3.1 E-Participation	55	60.46	
3.3.2 Socioeconomic gap in use of digital payments	43	86.52	
3.3.3 Availability of local online content	63	61.30	
3.3.4 Gender gap in Internet use	49	69.18	
3.3.5 Rural gap in use of digital payments	66	63.76	
D. Impact pillar	**60**	**54.50**	
1st sub-pillar: Economy	82	22.84	
4.1.1 High-tech and medium-high-tech manufacturing	70	19.86	
4.1.2 High-tech exports	69	10.84	
4.1.3 PCT patent applications	34	13.06	
4.1.4 Domestic market size	53	57.71	
4.1.5 Prevalence of gig economy	105	23.26	○
4.1.6 ICT services exports	69	12.34	
2nd sub-pillar: Quality of Life	80	65.09	
4.2.1 Happiness	62	65.99	
4.2.2 Freedom to make life choices	124	31.29	○
4.2.3 Income inequality	42	73.87	
4.2.4 Healthy life expectancy at birth	24	89.21	●
3rd sub-pillar: SDG Contribution	35	75.57	
4.3.1 SDG 3: Good Health and Well-Being	40	80.83	
4.3.2 SDG 4: Quality Education	42	48.73	
4.3.3 SDG 5: Women's economic opportunity	1	100.00	●
4.3.4 SDG 7: Affordable and Clean Energy	31	78.61	●
4.3.5 SDG 11: Sustainable Cities and Communities	57	69.65	

NOTE: ● Indicates a strength and ○ a weakness.

Guatemala

	Rank (Out of 134)	Score
Network Readiness Index	**105**	**35.84**

Pillar/sub-pillar	Rank	Score
A. Technology pillar	**113**	**26.66**
1st sub-pillar: Access	115	41.72
2nd sub-pillar: Content	112	11.71
3rd sub-pillar: Future Technologies	93	26.53
B. People pillar	**111**	**28.15**
1st sub-pillar: Individuals	84	42.96
2nd sub-pillar: Businesses	127	20.13
3rd sub-pillar: Governments	112	21.37
C. Governance pillar	**108**	**40.84**
1st sub-pillar: Trust	124	16.43
2nd sub-pillar: Regulation	100	56.30
3rd sub-pillar: Inclusion	93	49.79
D. Impact pillar	**88**	**47.72**
1st sub-pillar: Economy	93	20.99
2nd sub-pillar: Quality of Life	86	62.06
3rd sub-pillar: SDG Contribution	81	60.12



The Network Readiness Index in detail

Indicator	Rank	Score	
A. Technology pillar	**113**	**26.66**	
1st sub-pillar: Access	115	41.72	
1.1.1 Mobile tariffs	113	28.58	
1.1.2 Handset prices	77	42.21	
1.1.3 FTTH/building Internet subscriptions	106	10.18	
1.1.4 Population covered by at least a 3G mobile network	93	98.31	
1.1.5 International Internet bandwidth	111	61.93	
1.1.6 Internet access in schools	72	9.12	
2nd sub-pillar: Content	112	11.71	
1.2.1 GitHub commits	98	2.18	
1.2.2 Internet domain registrations	77	2.31	
1.2.3 Mobile apps development	111	41.95	
1.2.4 AI scientific publications	117	0.40	
3rd sub-pillar: Future Technologies	93	26.53	
1.3.1 Adoption of emerging technologies	79	41.14	
1.3.2 Investment in emerging technologies	73	37.50	●
1.3.3 Robot density	NA	NA	
1.3.4 Computer software spending	123	0.96	○
B. People pillar	**111**	**28.15**	
1st sub-pillar: Individuals	84	42.96	
2.1.1 Mobile broadband internet traffic within the country	NA	NA	
2.1.2 ICT skills in the education system	82	36.81	
2.1.3 Use of virtual social networks	91	44.67	
2.1.4 Tertiary enrollment	97	13.11	
2.1.5 Adult literacy rate	74	77.27	
2.1.6 AI talent concentration	NA	NA	
2nd sub-pillar: Businesses	127	20.13	
2.2.1 Firms with website	54	56.03	●
2.2.2 GERD financed by business enterprise	74	13.72	
2.2.3 Knowledge intensive employment	109	10.71	
2.2.4 Annual investment in telecommunication services	NA	NA	
2.2.5 GERD performed by business enterprise	88	0.05	○
3rd sub-pillar: Governments	112	21.37	
2.3.1 Government online services	91	49.26	
2.3.2 Publication and use of open data	61	26.47	
2.3.3 Government promotion of investment in emerging tech	118	8.88	○
2.3.4 R&D expenditure by governments and higher education	111	0.87	○

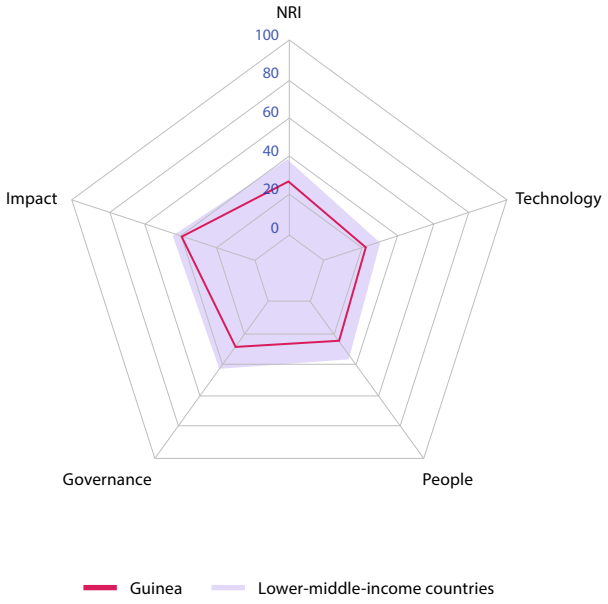
Indicator	Rank	Score	
C. Governance pillar	**108**	**40.84**	
1st sub-pillar: Trust	124	16.43	
3.1.1 Secure Internet servers	102	37.24	
3.1.2 Cybersecurity	125	11.60	○
3.1.3 Online access to financial account	116	7.65	
3.1.4 Internet shopping	95	9.22	
2nd sub-pillar: Regulation	100	56.30	
3.2.1 Regulatory quality	88	42.48	
3.2.2 ICT regulatory environment	121	57.29	
3.2.3 Regulation of emerging technologies	103	21.30	
3.2.4 E-commerce legislation	1	100.00	●
3.2.5 Privacy protection by law content	79	60.42	
3rd sub-pillar: Inclusion	93	49.79	
3.3.1 E-Participation	101	31.39	
3.3.2 Socioeconomic gap in use of digital payments	90	58.29	
3.3.3 Availability of local online content	101	38.70	
3.3.4 Gender gap in Internet use	89	56.71	
3.3.5 Rural gap in use of digital payments	65	63.86	●
D. Impact pillar	**88**	**47.72**	
1st sub-pillar: Economy	93	20.99	
4.1.1 High-tech and medium-high-tech manufacturing	NA	NA	
4.1.2 High-tech exports	75	9.13	●
4.1.3 PCT patent applications	95	0.22	
4.1.4 Domestic market size	72	50.47	●
4.1.5 Prevalence of gig economy	110	19.77	
4.1.6 ICT services exports	39	25.37	●
2nd sub-pillar: Quality of Life	86	62.06	
4.2.1 Happiness	46	70.64	●
4.2.2 Freedom to make life choices	46	80.15	●
4.2.3 Income inequality	104	36.93	
4.2.4 Healthy life expectancy at birth	95	60.50	
3rd sub-pillar: SDG Contribution	81	60.12	
4.3.1 SDG 3: Good Health and Well-Being	101	47.29	
4.3.2 SDG 4: Quality Education	NA	NA	
4.3.3 SDG 5: Women's economic opportunity	105	62.83	
4.3.4 SDG 7: Affordable and Clean Energy	75	69.29	●
4.3.5 SDG 11: Sustainable Cities and Communities	76	61.06	●

NOTE: ● Indicates a strength and ○ a weakness.

Guinea

	Rank (Out of 134)	Score
Network Readiness Index	**122**	**28.77**

Pillar/sub-pillar	Rank	Score
A. Technology pillar	**122**	**22.01**
1st sub-pillar: Access	130	31.20
2nd sub-pillar: Content	119	6.42
3rd sub-pillar: Future Technologies	84	28.42
B. People pillar	**118**	**25.99**
1st sub-pillar: Individuals	130	13.00
2nd sub-pillar: Businesses	109	29.79
3rd sub-pillar: Governments	79	35.17
C. Governance pillar	**128**	**28.17**
1st sub-pillar: Trust	129	13.71
2nd sub-pillar: Regulation	111	50.09
3rd sub-pillar: Inclusion	133	20.71
D. Impact pillar	**113**	**38.91**
1st sub-pillar: Economy	95	19.35
2nd sub-pillar: Quality of Life	99	57.13
3rd sub-pillar: SDG Contribution	130	40.27



The Network Readiness Index in detail

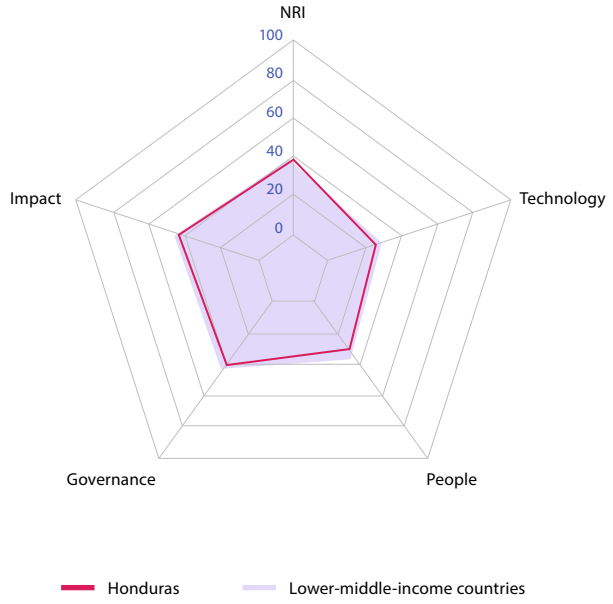
Indicator	Rank	Score	
A. Technology pillar	**122**	**22.01**	
1st sub-pillar: Access	130	31.20	
1.1.1 Mobile tariffs	117	25.29	
1.1.2 Handset prices	115	24.61	
1.1.3 FTTH/building Internet subscriptions	NA	NA	
1.1.4 Population covered by at least a 3G mobile network	133	50.29	○
1.1.5 International Internet bandwidth	125	55.83	
1.1.6 Internet access in schools	84	0.00	○
2nd sub-pillar: Content	119	6.42	
1.2.1 GitHub commits	133	0.05	○
1.2.2 Internet domain registrations	132	0.04	○
1.2.3 Mobile apps development	118	25.59	
1.2.4 AI scientific publications	132	0.00	○
3rd sub-pillar: Future Technologies	84	28.42	
1.3.1 Adoption of emerging technologies	94	36.01	
1.3.2 Investment in emerging technologies	53	45.75	
1.3.3 Robot density	NA	NA	
1.3.4 Computer software spending	108	3.49	
B. People pillar	**118**	**25.99**	
1st sub-pillar: Individuals	130	13.00	
2.1.1 Mobile broadband internet traffic within the country	NA	NA	
2.1.2 ICT skills in the education system	NA	NA	
2.1.3 Use of virtual social networks	115	10.95	
2.1.4 Tertiary enrollment	122	2.70	
2.1.5 Adult literacy rate	104	25.35	
2.1.6 AI talent concentration	NA	NA	
2nd sub-pillar: Businesses	109	29.79	
2.2.1 Firms with website	108	10.98	
2.2.2 GERD financed by business enterprise	NA	NA	
2.2.3 Knowledge intensive employment	114	7.58	
2.2.4 Annual investment in telecommunication services	112	70.81	
2.2.5 GERD performed by business enterprise	NA	NA	
3rd sub-pillar: Governments	79	35.17	
2.3.1 Government online services	107	38.34	
2.3.2 Publication and use of open data	NA	NA	
2.3.3 Government promotion of investment in emerging tech	83	32.01	
2.3.4 R&D expenditure by governments and higher education	NA	NA	

Indicator	Rank	Score	
C. Governance pillar	**128**	**28.17**	
1st sub-pillar: Trust	129	13.71	
3.1.1 Secure Internet servers	130	14.91	○
3.1.2 Cybersecurity	116	19.13	
3.1.3 Online access to financial account	87	16.91	
3.1.4 Internet shopping	116	3.88	
2nd sub-pillar: Regulation	111	50.09	
3.2.1 Regulatory quality	124	27.82	
3.2.2 ICT regulatory environment	122	56.82	
3.2.3 Regulation of emerging technologies	110	10.13	
3.2.4 E-commerce legislation	87	66.67	
3.2.5 Privacy protection by law content	11	89.04	
3rd sub-pillar: Inclusion	133	20.71	
3.3.1 E-Participation	106	26.75	
3.3.2 Socioeconomic gap in use of digital payments	107	49.14	
3.3.3 Availability of local online content	130	10.58	○
3.3.4 Gender gap in Internet use	105	0.00	○
3.3.5 Rural gap in use of digital payments	121	17.10	
D. Impact pillar	**113**	**38.91**	
1st sub-pillar: Economy	95	19.35	
4.1.1 High-tech and medium-high-tech manufacturing	NA	NA	
4.1.2 High-tech exports	115	1.38	
4.1.3 PCT patent applications	84	0.94	
4.1.4 Domestic market size	115	35.80	
4.1.5 Prevalence of gig economy	35	58.43	
4.1.6 ICT services exports	131	0.18	○
2nd sub-pillar: Quality of Life	99	57.13	
4.2.1 Happiness	84	55.15	
4.2.2 Freedom to make life choices	98	59.03	
4.2.3 Income inequality	21	83.92	
4.2.4 Healthy life expectancy at birth	128	30.41	○
3rd sub-pillar: SDG Contribution	130	40.27	
4.3.1 SDG 3: Good Health and Well-Being	131	14.73	○
4.3.2 SDG 4: Quality Education	NA	NA	
4.3.3 SDG 5: Women's economic opportunity	105	62.83	
4.3.4 SDG 7: Affordable and Clean Energy	102	60.12	
4.3.5 SDG 11: Sustainable Cities and Communities	130	23.41	○

NOTE: ● Indicates a strength and ○ a weakness.

Honduras

	Rank (Out of 134)	Score
Network Readiness Index	**107**	**35.70**
Pillar/sub-pillar	**Rank**	**Score**
A. Technology pillar	**109**	**27.12**
1st sub-pillar: Access	117	40.80
2nd sub-pillar: Content	110	12.38
3rd sub-pillar: Future Technologies	86	28.19
B. People pillar	**114**	**27.85**
1st sub-pillar: Individuals	80	43.66
2nd sub-pillar: Businesses	104	31.35
3rd sub-pillar: Governments	133	8.54
C. Governance pillar	**107**	**40.97**
1st sub-pillar: Trust	128	13.87
2nd sub-pillar: Regulation	87	61.21
3rd sub-pillar: Inclusion	97	47.82
D. Impact pillar	**92**	**46.86**
1st sub-pillar: Economy	119	13.67
2nd sub-pillar: Quality of Life	89	61.47
3rd sub-pillar: SDG Contribution	62	65.46



The Network Readiness Index in detail

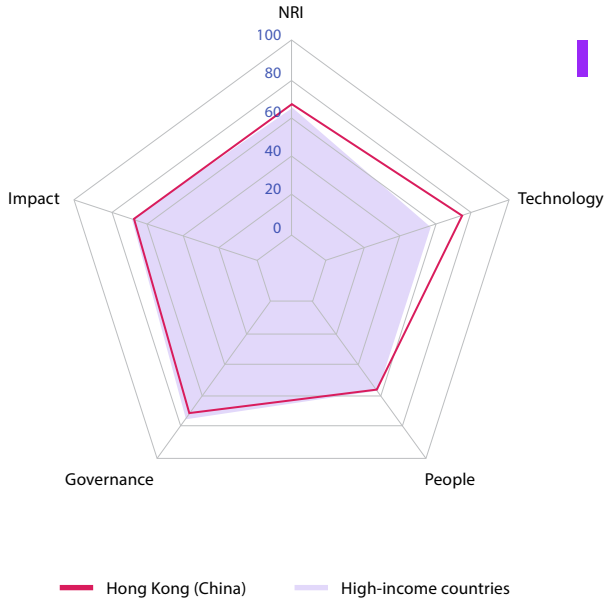
Indicator	Rank	Score	
A. Technology pillar	**109**	**27.12**	
1st sub-pillar: Access	117	40.80	
1.1.1 Mobile tariffs	125	12.72	
1.1.2 Handset prices	102	31.23	
1.1.3 FTTH/building Internet subscriptions	87	20.68	
1.1.4 Population covered by at least a 3G mobile network	120	93.20	
1.1.5 International Internet bandwidth	67	70.83	●
1.1.6 Internet access in schools	70	16.14	
2nd sub-pillar: Content	110	12.38	
1.2.1 GitHub commits	102	1.81	
1.2.2 Internet domain registrations	109	0.46	
1.2.3 Mobile apps development	105	46.90	
1.2.4 AI scientific publications	120	0.35	
3rd sub-pillar: Future Technologies	86	28.19	
1.3.1 Adoption of emerging technologies	NA	NA	
1.3.2 Investment in emerging technologies	79	35.75	
1.3.3 Robot density	NA	NA	
1.3.4 Computer software spending	66	20.63	●
B. People pillar	**114**	**27.85**	
1st sub-pillar: Individuals	80	43.66	
2.1.1 Mobile broadband internet traffic within the country	65	9.51	●
2.1.2 ICT skills in the education system	96	23.88	
2.1.3 Use of virtual social networks	7	85.24	●
2.1.4 Tertiary enrollment	90	15.34	
2.1.5 Adult literacy rate	69	84.31	
2.1.6 AI talent concentration	NA	NA	
2nd sub-pillar: Businesses	104	31.35	
2.2.1 Firms with website	75	39.28	
2.2.2 GERD financed by business enterprise	66	26.06	
2.2.3 Knowledge intensive employment	98	15.49	
2.2.4 Annual investment in telecommunication services	82	75.77	
2.2.5 GERD performed by business enterprise	86	0.13	○
3rd sub-pillar: Governments	133	8.54	
2.3.1 Government online services	130	16.19	○
2.3.2 Publication and use of open data	NA	NA	
2.3.3 Government promotion of investment in emerging tech	NA	NA	
2.3.4 R&D expenditure by governments and higher education	110	0.89	○

Indicator	Rank	Score	
C. Governance pillar	**107**	**40.97**	
1st sub-pillar: Trust	128	13.87	
3.1.1 Secure Internet servers	103	36.51	
3.1.2 Cybersecurity	132	0.48	○
3.1.3 Online access to financial account	109	9.92	
3.1.4 Internet shopping	99	8.58	
2nd sub-pillar: Regulation	87	61.21	
3.2.1 Regulatory quality	98	37.81	
3.2.2 ICT regulatory environment	79	76.47	
3.2.3 Regulation of emerging technologies	106	17.40	
3.2.4 E-commerce legislation	1	100.00	●
3.2.5 Privacy protection by law content	41	74.35	●
3rd sub-pillar: Inclusion	97	47.82	
3.3.1 E-Participation	132	8.14	○
3.3.2 Socioeconomic gap in use of digital payments	108	49.12	
3.3.3 Availability of local online content	96	43.51	
3.3.4 Gender gap in Internet use	3	83.28	●
3.3.5 Rural gap in use of digital payments	82	55.03	
D. Impact pillar	**92**	**46.86**	
1st sub-pillar: Economy	119	13.67	
4.1.1 High-tech and medium-high-tech manufacturing	NA	NA	
4.1.2 High-tech exports	99	3.31	
4.1.3 PCT patent applications	93	0.59	
4.1.4 Domestic market size	98	40.61	
4.1.5 Prevalence of gig economy	NA	NA	
4.1.6 ICT services exports	77	10.15	●
2nd sub-pillar: Quality of Life	89	61.47	
4.2.1 Happiness	60	66.57	●
4.2.2 Freedom to make life choices	52	79.33	●
4.2.3 Income inequality	103	37.19	
4.2.4 Healthy life expectancy at birth	92	62.78	
3rd sub-pillar: SDG Contribution	62	65.46	
4.3.1 SDG 3: Good Health and Well-Being	92	56.85	
4.3.2 SDG 4: Quality Education	NA	NA	
4.3.3 SDG 5: Women's economic opportunity	101	64.60	
4.3.4 SDG 7: Affordable and Clean Energy	87	66.84	
4.3.5 SDG 11: Sustainable Cities and Communities	52	73.53	●

NOTE: ● Indicates a strength and ○ a weakness.

Hong Kong (China)

	Rank (Out of 134)	Score
Network Readiness Index	**25**	**65.01**
Pillar/sub-pillar	**Rank**	**Score**
A. Technology pillar	**3**	**72.52**
1st sub-pillar: Access	4	82.63
2nd sub-pillar: Content	1	77.12
3rd sub-pillar: Future Technologies	17	57.81
B. People pillar	**35**	**53.49**
1st sub-pillar: Individuals	17	59.03
2nd sub-pillar: Businesses	41	53.65
3rd sub-pillar: Governments	42	47.80
C. Governance pillar	**38**	**70.69**
1st sub-pillar: Trust	31	70.55
2nd sub-pillar: Regulation	79	62.09
3rd sub-pillar: Inclusion	22	79.44
D. Impact pillar	**34**	**63.35**
1st sub-pillar: Economy	17	51.52
2nd sub-pillar: Quality of Life	105	52.08
3rd sub-pillar: SDG Contribution	6	86.46



The Network Readiness Index in detail

Indicator	Rank	Score	
A. Technology pillar	**3**	**72.52**	
1st sub-pillar: Access	4	82.63	
1.1.1 Mobile tariffs	11	89.37	●
1.1.2 Handset prices	27	70.93	
1.1.3 FTTH/building Internet subscriptions	47	35.78	
1.1.4 Population covered by at least a 3G mobile network	57	99.67	
1.1.5 International Internet bandwidth	1	100.00	●
1.1.6 Internet access in schools	1	100.00	●
2nd sub-pillar: Content	1	77.12	
1.2.1 GitHub commits	1	100.00	●
1.2.2 Internet domain registrations	19	45.28	
1.2.3 Mobile apps development	3	86.07	●
1.2.4 AI scientific publications	NA	NA	
3rd sub-pillar: Future Technologies	17	57.81	
1.3.1 Adoption of emerging technologies	19	76.65	
1.3.2 Investment in emerging technologies	15	74.75	
1.3.3 Robot density	7	45.49	
1.3.4 Computer software spending	26	34.36	
B. People pillar	**35**	**53.49**	
1st sub-pillar: Individuals	17	59.03	
2.1.1 Mobile broadband internet traffic within the country	45	17.47	
2.1.2 ICT skills in the education system	17	75.57	
2.1.3 Use of virtual social networks	7	85.24	●
2.1.4 Tertiary enrollment	13	57.86	
2.1.5 Adult literacy rate	NA	NA	
2.1.6 AI talent concentration	NA	NA	
2nd sub-pillar: Businesses	41	53.65	
2.2.1 Firms with website	NA	NA	
2.2.2 GERD financed by business enterprise	32	60.91	
2.2.3 Knowledge intensive employment	28	61.82	
2.2.4 Annual investment in telecommunication services	41	81.94	
2.2.5 GERD performed by business enterprise	45	9.92	
3rd sub-pillar: Governments	42	47.80	
2.3.1 Government online services	NA	NA	
2.3.2 Publication and use of open data	NA	NA	
2.3.3 Government promotion of investment in emerging tech	9	78.30	●
2.3.4 R&D expenditure by governments and higher education	41	17.30	

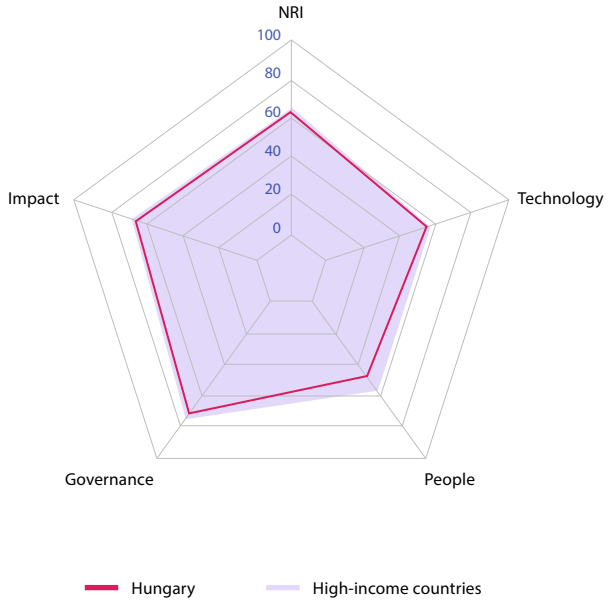
Indicator	Rank	Score	
C. Governance pillar	**38**	**70.69**	
1st sub-pillar: Trust	31	70.55	
3.1.1 Secure Internet servers	11	89.09	
3.1.2 Cybersecurity	NA	NA	
3.1.3 Online access to financial account	29	52.51	
3.1.4 Internet shopping	23	70.06	
2nd sub-pillar: Regulation	79	62.09	
3.2.1 Regulatory quality	13	85.38	
3.2.2 ICT regulatory environment	64	84.12	
3.2.3 Regulation of emerging technologies	28	67.79	
3.2.4 E-commerce legislation	NA	NA	
3.2.5 Privacy protection by law content	133	11.09	○
3rd sub-pillar: Inclusion	22	79.44	
3.3.1 E-Participation	NA	NA	
3.3.2 Socioeconomic gap in use of digital payments	44	85.93	
3.3.3 Availability of local online content	8	93.27	●
3.3.4 Gender gap in Internet use	57	68.30	
3.3.5 Rural gap in use of digital payments	48	70.25	
D. Impact pillar	**34**	**63.35**	
1st sub-pillar: Economy	17	51.52	
4.1.1 High-tech and medium-high-tech manufacturing	62	23.70	○
4.1.2 High-tech exports	1	100.00	●
4.1.3 PCT patent applications	NA	NA	
4.1.4 Domestic market size	46	60.56	
4.1.5 Prevalence of gig economy	18	68.90	
4.1.6 ICT services exports	100	4.44	○
2nd sub-pillar: Quality of Life	105	52.08	
4.2.1 Happiness	83	55.22	○
4.2.2 Freedom to make life choices	115	48.94	○
4.2.3 Income inequality	NA	NA	
4.2.4 Healthy life expectancy at birth	NA	NA	
3rd sub-pillar: SDG Contribution	6	86.46	
4.3.1 SDG 3: Good Health and Well-Being	NA	NA	
4.3.2 SDG 4: Quality Education	3	80.27	●
4.3.3 SDG 5: Women's economic opportunity	34	88.50	
4.3.4 SDG 7: Affordable and Clean Energy	2	90.61	●
4.3.5 SDG 11: Sustainable Cities and Communities	NA	NA	

NOTE: ● Indicates a strength and ○ a weakness.

Hungary

	Rank (Out of 134)	Score
Network Readiness Index	**36**	**58.21**

Pillar/sub-pillar	Rank	Score
A. Technology pillar	**30**	**51.36**
1st sub-pillar: Access	34	73.97
2nd sub-pillar: Content	16	50.29
3rd sub-pillar: Future Technologies	77	29.81
B. People pillar	**42**	**49.48**
1st sub-pillar: Individuals	68	46.99
2nd sub-pillar: Businesses	35	58.94
3rd sub-pillar: Governments	55	42.51
C. Governance pillar	**37**	**70.88**
1st sub-pillar: Trust	30	70.60
2nd sub-pillar: Regulation	33	77.03
3rd sub-pillar: Inclusion	57	65.01
D. Impact pillar	**37**	**61.11**
1st sub-pillar: Economy	38	36.39
2nd sub-pillar: Quality of Life	49	73.13
3rd sub-pillar: SDG Contribution	38	73.81



The Network Readiness Index in detail

Indicator	Rank	Score	
A. Technology pillar	**30**	**51.36**	
1st sub-pillar: Access	34	73.97	
1.1.1 Mobile tariffs	33	77.46	
1.1.2 Handset prices	41	63.13	
1.1.3 FTTH/building Internet subscriptions	49	34.78	
1.1.4 Population covered by at least a 3G mobile network	55	99.74	
1.1.5 International Internet bandwidth	84	68.69	
1.1.6 Internet access in schools	1	100.00	●
2nd sub-pillar: Content	16	50.29	
1.2.1 GitHub commits	1	100.00	●
1.2.2 Internet domain registrations	29	25.88	
1.2.3 Mobile apps development	60	67.33	
1.2.4 AI scientific publications	57	7.95	
3rd sub-pillar: Future Technologies	77	29.81	
1.3.1 Adoption of emerging technologies	63	47.82	
1.3.2 Investment in emerging technologies	102	28.25	○
1.3.3 Robot density	22	17.20	
1.3.4 Computer software spending	51	25.98	
B. People pillar	**42**	**49.48**	
1st sub-pillar: Individuals	68	46.99	
2.1.1 Mobile broadband internet traffic within the country	51	13.35	
2.1.2 ICT skills in the education system	75	43.32	○
2.1.3 Use of virtual social networks	60	67.94	
2.1.4 Tertiary enrollment	61	35.39	
2.1.5 Adult literacy rate	20	98.77	●
2.1.6 AI talent concentration	18	23.18	
2nd sub-pillar: Businesses	35	58.94	
2.2.1 Firms with website	46	62.29	
2.2.2 GERD financed by business enterprise	28	62.13	
2.2.3 Knowledge intensive employment	31	58.62	
2.2.4 Annual investment in telecommunication services	51	79.85	
2.2.5 GERD performed by business enterprise	20	31.83	●
3rd sub-pillar: Governments	55	42.51	
2.3.1 Government online services	56	71.98	
2.3.2 Publication and use of open data	69	22.06	○
2.3.3 Government promotion of investment in emerging tech	47	46.51	
2.3.4 R&D expenditure by governments and higher education	24	29.50	●

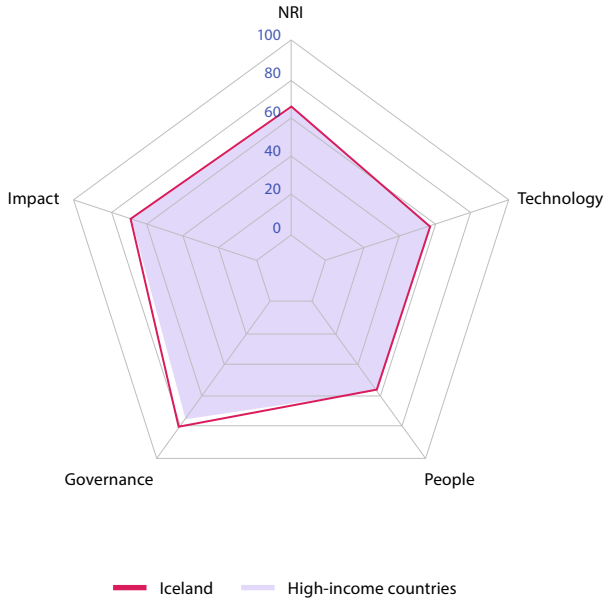
Indicator	Rank	Score	
C. Governance pillar	**37**	**70.88**	
1st sub-pillar: Trust	30	70.60	
3.1.1 Secure Internet servers	23	82.98	●
3.1.2 Cybersecurity	43	91.13	
3.1.3 Online access to financial account	40	43.79	
3.1.4 Internet shopping	28	64.52	
2nd sub-pillar: Regulation	33	77.03	
3.2.1 Regulatory quality	46	60.81	
3.2.2 ICT regulatory environment	14	94.12	●
3.2.3 Regulation of emerging technologies	46	56.10	
3.2.4 E-commerce legislation	1	100.00	●
3.2.5 Privacy protection by law content	42	74.14	
3rd sub-pillar: Inclusion	57	65.01	
3.3.1 E-Participation	75	50.01	
3.3.2 Socioeconomic gap in use of digital payments	55	81.42	
3.3.3 Availability of local online content	58	65.38	
3.3.4 Gender gap in Internet use	22	72.83	●
3.3.5 Rural gap in use of digital payments	80	55.43	
D. Impact pillar	**37**	**61.11**	
1st sub-pillar: Economy	38	36.39	
4.1.1 High-tech and medium-high-tech manufacturing	5	74.27	●
4.1.2 High-tech exports	29	29.25	
4.1.3 PCT patent applications	35	12.83	
4.1.4 Domestic market size	52	58.25	
4.1.5 Prevalence of gig economy	99	27.33	○
4.1.6 ICT services exports	60	16.41	
2nd sub-pillar: Quality of Life	49	73.13	
4.2.1 Happiness	69	65.26	
4.2.2 Freedom to make life choices	82	66.73	
4.2.3 Income inequality	23	83.67	●
4.2.4 Healthy life expectancy at birth	47	76.88	
3rd sub-pillar: SDG Contribution	38	73.81	
4.3.1 SDG 3: Good Health and Well-Being	59	72.65	
4.3.2 SDG 4: Quality Education	33	59.29	
4.3.3 SDG 5: Women's economic opportunity	20	95.58	●
4.3.4 SDG 7: Affordable and Clean Energy	63	73.34	
4.3.5 SDG 11: Sustainable Cities and Communities	62	68.19	

NOTE: ● Indicates a strength and ○ a weakness.

Iceland

	Rank (Out of 134)	Score
Network Readiness Index	**24**	**65.70**

Pillar/sub-pillar	Rank	Score
A. Technology pillar	**24**	**56.36**
1st sub-pillar: Access	61	66.69
2nd sub-pillar: Content	10	56.48
3rd sub-pillar: Future Technologies	33	45.92
B. People pillar	**27**	**56.62**
1st sub-pillar: Individuals	73	46.24
2nd sub-pillar: Businesses	20	67.16
3rd sub-pillar: Governments	24	56.47
C. Governance pillar	**17**	**81.02**
1st sub-pillar: Trust	12	84.07
2nd sub-pillar: Regulation	34	76.63
3rd sub-pillar: Inclusion	13	82.35
D. Impact pillar	**22**	**68.80**
1st sub-pillar: Economy	29	40.51
2nd sub-pillar: Quality of Life	2	93.45
3rd sub-pillar: SDG Contribution	43	72.44



The Network Readiness Index in detail

Indicator	Rank	Score	
A. Technology pillar	**24**	**56.36**	
1st sub-pillar: Access	61	66.69	
1.1.1 Mobile tariffs	26	81.24	
1.1.2 Handset prices	16	79.11	
1.1.3 FTTH/building Internet subscriptions	108	9.93	○
1.1.4 Population covered by at least a 3G mobile network	25	99.99	
1.1.5 International Internet bandwidth	105	63.17	
1.1.6 Internet access in schools	NA	NA	
2nd sub-pillar: Content	10	56.48	
1.2.1 GitHub commits	13	66.41	
1.2.2 Internet domain registrations	1	100.00	●
1.2.3 Mobile apps development	89	59.02	
1.2.4 AI scientific publications	115	0.49	○
3rd sub-pillar: Future Technologies	33	45.92	
1.3.1 Adoption of emerging technologies	16	78.69	
1.3.2 Investment in emerging technologies	24	65.75	
1.3.3 Robot density	29	9.43	
1.3.4 Computer software spending	39	29.79	
B. People pillar	**27**	**56.62**	
1st sub-pillar: Individuals	73	46.24	
2.1.1 Mobile broadband internet traffic within the country	99	2.16	
2.1.2 ICT skills in the education system	11	82.26	
2.1.3 Use of virtual social networks	22	78.01	
2.1.4 Tertiary enrollment	19	55.04	
2.1.5 Adult literacy rate	NA	NA	
2.1.6 AI talent concentration	30	13.73	
2nd sub-pillar: Businesses	20	67.16	
2.2.1 Firms with website	15	84.42	
2.2.2 GERD financed by business enterprise	43	47.76	
2.2.3 Knowledge intensive employment	6	80.54	●
2.2.4 Annual investment in telecommunication services	106	71.65	
2.2.5 GERD performed by business enterprise	12	51.42	
3rd sub-pillar: Governments	24	56.47	
2.3.1 Government online services	16	87.48	
2.3.2 Publication and use of open data	38	41.18	
2.3.3 Government promotion of investment in emerging tech	46	46.93	
2.3.4 R&D expenditure by governments and higher education	13	50.30	

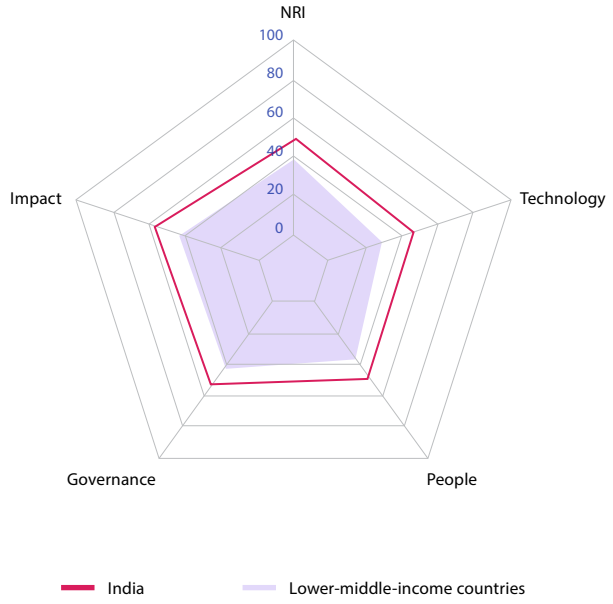
Indicator	Rank	Score	
C. Governance pillar	**17**	**81.02**	
1st sub-pillar: Trust	12	84.07	
3.1.1 Secure Internet servers	10	89.63	
3.1.2 Cybersecurity	66	79.45	
3.1.3 Online access to financial account	NA	NA	
3.1.4 Internet shopping	11	83.12	
2nd sub-pillar: Regulation	34	76.63	
3.2.1 Regulatory quality	16	84.27	
3.2.2 ICT regulatory environment	45	87.06	
3.2.3 Regulation of emerging technologies	23	74.03	
3.2.4 E-commerce legislation	87	66.67	○
3.2.5 Privacy protection by law content	51	71.14	
3rd sub-pillar: Inclusion	13	82.35	
3.3.1 E-Participation	17	79.08	
3.3.2 Socioeconomic gap in use of digital payments	4	99.45	●
3.3.3 Availability of local online content	33	79.33	
3.3.4 Gender gap in Internet use	26	71.55	
3.3.5 Rural gap in use of digital payments	NA	NA	
D. Impact pillar	**22**	**68.80**	
1st sub-pillar: Economy	29	40.51	
4.1.1 High-tech and medium-high-tech manufacturing	78	15.97	
4.1.2 High-tech exports	7	60.50	●
4.1.3 PCT patent applications	18	42.44	
4.1.4 Domestic market size	128	29.56	○
4.1.5 Prevalence of gig economy	29	62.21	
4.1.6 ICT services exports	27	32.36	
2nd sub-pillar: Quality of Life	2	93.45	
4.2.1 Happiness	4	94.79	●
4.2.2 Freedom to make life choices	9	93.39	●
4.2.3 Income inequality	8	92.71	●
4.2.4 Healthy life expectancy at birth	9	92.92	●
3rd sub-pillar: SDG Contribution	43	72.44	
4.3.1 SDG 3: Good Health and Well-Being	7	95.84	●
4.3.2 SDG 4: Quality Education	30	60.14	
4.3.3 SDG 5: Women's economic opportunity	1	100.00	●
4.3.4 SDG 7: Affordable and Clean Energy	133	6.21	○
4.3.5 SDG 11: Sustainable Cities and Communities	1	100.00	●

NOTE: ● Indicates a strength and ○ a weakness.

India

	Rank (Out of 134)	Score
Network Readiness Index	**60**	**49.93**

Pillar/sub-pillar	Rank	Score
A. Technology pillar	**41**	**48.44**
1st sub-pillar: Access	49	69.85
2nd sub-pillar: Content	29	40.46
3rd sub-pillar: Future Technologies	58	35.02
B. People pillar	**51**	**46.95**
1st sub-pillar: Individuals	37	53.26
2nd sub-pillar: Businesses	78	41.84
3rd sub-pillar: Governments	46	45.74
C. Governance pillar	**83**	**49.41**
1st sub-pillar: Trust	72	40.37
2nd sub-pillar: Regulation	75	62.84
3rd sub-pillar: Inclusion	103	45.01
D. Impact pillar	**56**	**54.90**
1st sub-pillar: Economy	18	49.56
2nd sub-pillar: Quality of Life	95	59.54
3rd sub-pillar: SDG Contribution	92	55.62



The Network Readiness Index in detail

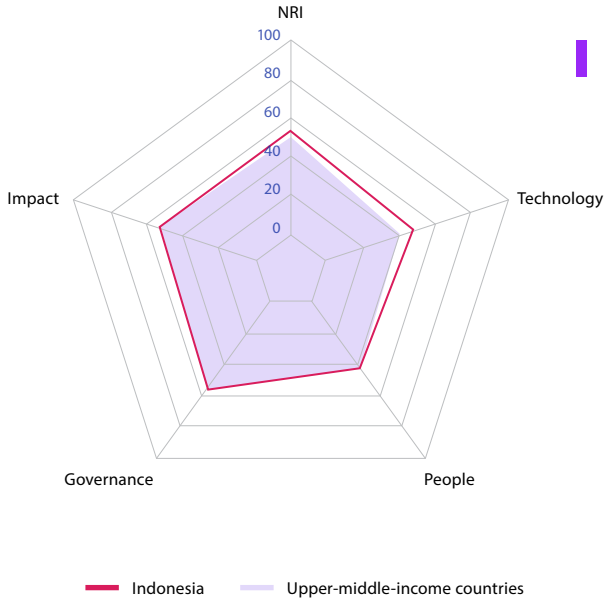
Indicator	Rank	Score	
A. Technology pillar	**41**	**48.44**	
1st sub-pillar: Access	49	69.85	
1.1.1 Mobile tariffs	53	68.66	
1.1.2 Handset prices	51	56.73	
1.1.3 FTTH/building Internet subscriptions	2	76.53	●
1.1.4 Population covered by at least a 3G mobile network	68	99.61	
1.1.5 International Internet bandwidth	2	96.96	●
1.1.6 Internet access in schools	68	20.60	
2nd sub-pillar: Content	29	40.46	
1.2.1 GitHub commits	73	4.48	
1.2.2 Internet domain registrations	100	0.91	
1.2.3 Mobile apps development	34	73.58	
1.2.4 AI scientific publications	2	82.87	●
3rd sub-pillar: Future Technologies	58	35.02	
1.3.1 Adoption of emerging technologies	53	51.54	
1.3.2 Investment in emerging technologies	26	64.25	●
1.3.3 Robot density	49	0.93	
1.3.4 Computer software spending	56	23.35	
B. People pillar	**51**	**46.95**	
1st sub-pillar: Individuals	37	53.26	
2.1.1 Mobile broadband internet traffic within the country	2	92.67	●
2.1.2 ICT skills in the education system	100	19.58	○
2.1.3 Use of virtual social networks	102	29.42	
2.1.4 Tertiary enrollment	85	19.81	
2.1.5 Adult literacy rate	93	58.09	
2.1.6 AI talent concentration	1	100.00	●
2nd sub-pillar: Businesses	78	41.84	
2.2.1 Firms with website	72	42.86	
2.2.2 GERD financed by business enterprise	40	50.17	
2.2.3 Knowledge intensive employment	96	16.64	
2.2.4 Annual investment in telecommunication services	3	93.47	●
2.2.5 GERD performed by business enterprise	49	6.04	
3rd sub-pillar: Governments	46	45.74	
2.3.1 Government online services	42	77.17	
2.3.2 Publication and use of open data	22	58.82	
2.3.3 Government promotion of investment in emerging tech	70	35.50	
2.3.4 R&D expenditure by governments and higher education	55	11.49	

Indicator	Rank	Score	
C. Governance pillar	**83**	**49.41**	
1st sub-pillar: Trust	72	40.37	
3.1.1 Secure Internet servers	70	49.16	
3.1.2 Cybersecurity	15	97.46	●
3.1.3 Online access to financial account	119	5.99	○
3.1.4 Internet shopping	97	8.89	
2nd sub-pillar: Regulation	75	62.84	
3.2.1 Regulatory quality	75	47.82	
3.2.2 ICT regulatory environment	70	83.53	
3.2.3 Regulation of emerging technologies	34	64.42	
3.2.4 E-commerce legislation	87	66.67	○
3.2.5 Privacy protection by law content	91	51.79	
3rd sub-pillar: Inclusion	103	45.01	
3.3.1 E-Participation	61	58.14	
3.3.2 Socioeconomic gap in use of digital payments	99	54.30	
3.3.3 Availability of local online content	72	58.17	
3.3.4 Gender gap in Internet use	104	4.84	○
3.3.5 Rural gap in use of digital payments	92	49.60	
D. Impact pillar	**56**	**54.90**	
1st sub-pillar: Economy	18	49.56	
4.1.1 High-tech and medium-high-tech manufacturing	35	42.23	
4.1.2 High-tech exports	47	18.28	
4.1.3 PCT patent applications	43	8.53	
4.1.4 Domestic market size	3	90.81	●
4.1.5 Prevalence of gig economy	71	37.50	
4.1.6 ICT services exports	1	100.00	●
2nd sub-pillar: Quality of Life	95	59.54	
4.2.1 Happiness	117	29.34	○
4.2.2 Freedom to make life choices	29	86.31	
4.2.3 Income inequality	54	68.59	
4.2.4 Healthy life expectancy at birth	101	53.91	
3rd sub-pillar: SDG Contribution	92	55.62	
4.3.1 SDG 3: Good Health and Well-Being	96	53.96	
4.3.2 SDG 4: Quality Education	NA	NA	
4.3.3 SDG 5: Women's economic opportunity	103	63.72	
4.3.4 SDG 7: Affordable and Clean Energy	79	68.35	
4.3.5 SDG 11: Sustainable Cities and Communities	115	36.45	

NOTE: ● Indicates a strength and ○ a weakness.

Indonesia

	Rank (Out of 134)	Score
Network Readiness Index	**59**	**50.26**
Pillar/sub-pillar	**Rank**	**Score**
A. Technology pillar	**37**	**49.35**
1st sub-pillar: Access	18	76.59
2nd sub-pillar: Content	43	31.79
3rd sub-pillar: Future Technologies	45	39.66
B. People pillar	**73**	**41.94**
1st sub-pillar: Individuals	29	55.35
2nd sub-pillar: Businesses	118	25.01
3rd sub-pillar: Governments	47	45.46
C. Governance pillar	**64**	**57.59**
1st sub-pillar: Trust	64	47.60
2nd sub-pillar: Regulation	72	63.44
3rd sub-pillar: Inclusion	66	61.72
D. Impact pillar	**75**	**52.16**
1st sub-pillar: Economy	48	34.29
2nd sub-pillar: Quality of Life	65	68.36
3rd sub-pillar: SDG Contribution	99	53.83



The Network Readiness Index in detail

Indicator	Rank	Score	
A. Technology pillar	**37**	**49.35**	
1st sub-pillar: Access	18	76.59	
1.1.1 Mobile tariffs	39	75.32	
1.1.2 Handset prices	61	50.22	
1.1.3 FTTH/building Internet subscriptions	7	67.28	●
1.1.4 Population covered by at least a 3G mobile network	83	98.99	
1.1.5 International Internet bandwidth	5	91.10	●
1.1.6 Internet access in schools	NA	NA	
2nd sub-pillar: Content	43	31.79	
1.2.1 GitHub commits	59	8.42	
1.2.2 Internet domain registrations	91	1.40	
1.2.3 Mobile apps development	61	67.17	
1.2.4 AI scientific publications	4	50.18	●
3rd sub-pillar: Future Technologies	45	39.66	
1.3.1 Adoption of emerging technologies	41	59.47	
1.3.2 Investment in emerging technologies	28	62.75	
1.3.3 Robot density	51	0.70	○
1.3.4 Computer software spending	25	35.74	●
B. People pillar	**73**	**41.94**	
1st sub-pillar: Individuals	29	55.35	
2.1.1 Mobile broadband internet traffic within the country	4	61.91	●
2.1.2 ICT skills in the education system	5	87.76	●
2.1.3 Use of virtual social networks	79	56.40	
2.1.4 Tertiary enrollment	80	22.67	
2.1.5 Adult literacy rate	43	94.54	
2.1.6 AI talent concentration	37	8.80	
2nd sub-pillar: Businesses	118	25.01	
2.2.1 Firms with website	106	12.71	○
2.2.2 GERD financed by business enterprise	78	9.86	
2.2.3 Knowledge intensive employment	103	13.22	
2.2.4 Annual investment in telecommunication services	14	88.88	●
2.2.5 GERD performed by business enterprise	81	0.40	
3rd sub-pillar: Governments	47	45.46	
2.3.1 Government online services	51	73.96	
2.3.2 Publication and use of open data	36	42.65	
2.3.3 Government promotion of investment in emerging tech	25	60.36	
2.3.4 R&D expenditure by governments and higher education	81	4.88	

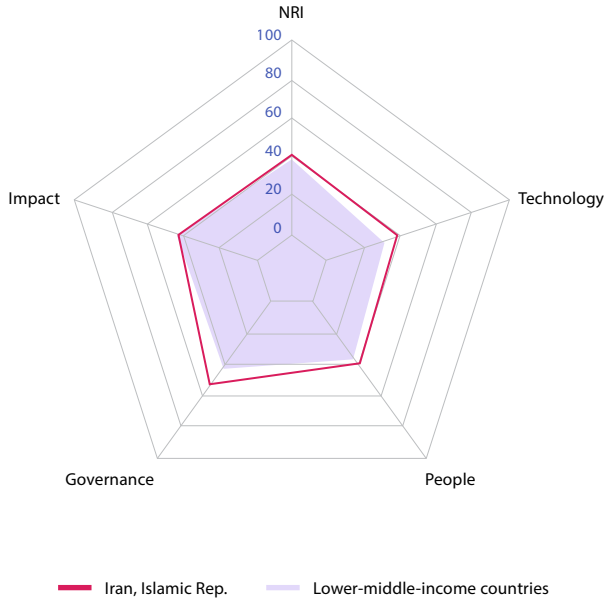
Indicator	Rank	Score	
C. Governance pillar	**64**	**57.59**	
1st sub-pillar: Trust	64	47.60	
3.1.1 Secure Internet servers	57	60.20	
3.1.2 Cybersecurity	31	94.79	
3.1.3 Online access to financial account	95	14.96	
3.1.4 Internet shopping	69	20.45	
2nd sub-pillar: Regulation	72	63.44	
3.2.1 Regulatory quality	55	56.34	
3.2.2 ICT regulatory environment	123	56.47	○
3.2.3 Regulation of emerging technologies	37	62.60	
3.2.4 E-commerce legislation	1	100.00	●
3.2.5 Privacy protection by law content	114	41.77	
3rd sub-pillar: Inclusion	66	61.72	
3.3.1 E-Participation	37	70.93	
3.3.2 Socioeconomic gap in use of digital payments	60	78.99	
3.3.3 Availability of local online content	46	70.19	
3.3.4 Gender gap in Internet use	88	57.51	
3.3.5 Rural gap in use of digital payments	111	30.99	○
D. Impact pillar	**75**	**52.16**	
1st sub-pillar: Economy	48	34.29	
4.1.1 High-tech and medium-high-tech manufacturing	39	36.43	
4.1.2 High-tech exports	62	12.82	
4.1.3 PCT patent applications	98	0.09	
4.1.4 Domestic market size	7	80.48	●
4.1.5 Prevalence of gig economy	17	69.77	●
4.1.6 ICT services exports	93	6.16	
2nd sub-pillar: Quality of Life	65	68.36	
4.2.1 Happiness	77	60.12	
4.2.2 Freedom to make life choices	23	87.99	●
4.2.3 Income inequality	66	63.07	
4.2.4 Healthy life expectancy at birth	94	62.27	
3rd sub-pillar: SDG Contribution	99	53.83	
4.3.1 SDG 3: Good Health and Well-Being	99	49.89	
4.3.2 SDG 4: Quality Education	69	19.51	○
4.3.3 SDG 5: Women's economic opportunity	110	58.41	
4.3.4 SDG 7: Affordable and Clean Energy	41	77.02	
4.3.5 SDG 11: Sustainable Cities and Communities	70	64.30	

NOTE: ● Indicates a strength and ○ a weakness.

Iran, Islamic Rep.

	Rank (Out of 134)	Score
Network Readiness Index	**87**	**42.83**

Pillar/sub-pillar	Rank	Score
A. Technology pillar	**73**	**38.86**
1st sub-pillar: Access	103	47.66
2nd sub-pillar: Content	52	27.39
3rd sub-pillar: Future Technologies	42	41.52
B. People pillar	**78**	**39.99**
1st sub-pillar: Individuals	49	51.41
2nd sub-pillar: Businesses	80	40.70
3rd sub-pillar: Governments	96	27.87
C. Governance pillar	**78**	**51.58**
1st sub-pillar: Trust	49	57.26
2nd sub-pillar: Regulation	123	37.54
3rd sub-pillar: Inclusion	72	59.93
D. Impact pillar	**108**	**40.91**
1st sub-pillar: Economy	79	23.96
2nd sub-pillar: Quality of Life	104	52.66
3rd sub-pillar: SDG Contribution	118	46.10



The Network Readiness Index in detail

Indicator	Rank	Score	
A. Technology pillar	**73**	**38.86**	
1st sub-pillar: Access	103	47.66	
1.1.1 Mobile tariffs	79	54.10	
1.1.2 Handset prices	118	21.62	
1.1.3 FTTH/building Internet subscriptions	80	24.28	
1.1.4 Population covered by at least a 3G mobile network	114	94.47	
1.1.5 International Internet bandwidth	20	80.92	●
1.1.6 Internet access in schools	71	10.55	
2nd sub-pillar: Content	52	27.39	
1.2.1 GitHub commits	104	1.80	
1.2.2 Internet domain registrations	61	4.87	
1.2.3 Mobile apps development	90	58.57	
1.2.4 AI scientific publications	5	44.33	●
3rd sub-pillar: Future Technologies	42	41.52	
1.3.1 Adoption of emerging technologies	82	39.26	
1.3.2 Investment in emerging technologies	104	27.75	
1.3.3 Robot density	NA	NA	
1.3.4 Computer software spending	16	57.55	●
B. People pillar	**78**	**39.99**	
1st sub-pillar: Individuals	49	51.41	
2.1.1 Mobile broadband internet traffic within the country	14	44.46	●
2.1.2 ICT skills in the education system	78	40.37	
2.1.3 Use of virtual social networks	86	50.15	
2.1.4 Tertiary enrollment	54	37.46	
2.1.5 Adult literacy rate	68	84.63	
2.1.6 AI talent concentration	NA	NA	
2nd sub-pillar: Businesses	80	40.70	
2.2.1 Firms with website	NA	NA	
2.2.2 GERD financed by business enterprise	NA	NA	
2.2.3 Knowledge intensive employment	73	27.99	
2.2.4 Annual investment in telecommunication services	15	88.78	●
2.2.5 GERD performed by business enterprise	52	5.32	
3rd sub-pillar: Governments	96	27.87	
2.3.1 Government online services	111	35.85	
2.3.2 Publication and use of open data	NA	NA	
2.3.3 Government promotion of investment in emerging tech	76	33.74	
2.3.4 R&D expenditure by governments and higher education	46	14.03	

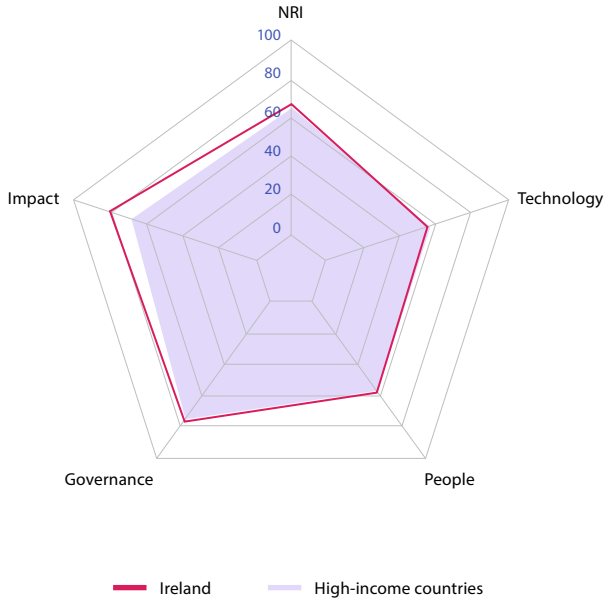
Indicator	Rank	Score	
C. Governance pillar	**78**	**51.58**	
1st sub-pillar: Trust	49	57.26	
3.1.1 Secure Internet servers	55	61.87	
3.1.2 Cybersecurity	62	80.74	
3.1.3 Online access to financial account	33	50.73	●
3.1.4 Internet shopping	55	35.68	
2nd sub-pillar: Regulation	123	37.54	
3.2.1 Regulatory quality	133	12.95	○
3.2.2 ICT regulatory environment	58	84.71	
3.2.3 Regulation of emerging technologies	101	23.38	
3.2.4 E-commerce legislation	87	66.67	
3.2.5 Privacy protection by law content	134	0.00	○
3rd sub-pillar: Inclusion	72	59.93	
3.3.1 E-Participation	127	16.28	○
3.3.2 Socioeconomic gap in use of digital payments	39	88.98	●
3.3.3 Availability of local online content	91	47.84	
3.3.4 Gender gap in Internet use	60	67.81	
3.3.5 Rural gap in use of digital payments	9	78.75	●
D. Impact pillar	**108**	**40.91**	
1st sub-pillar: Economy	79	23.96	
4.1.1 High-tech and medium-high-tech manufacturing	43	34.91	
4.1.2 High-tech exports	119	1.07	
4.1.3 PCT patent applications	41	8.84	
4.1.4 Domestic market size	20	71.52	●
4.1.5 Prevalence of gig economy	101	26.16	
4.1.6 ICT services exports	124	1.28	
2nd sub-pillar: Quality of Life	104	52.66	
4.2.1 Happiness	90	48.81	
4.2.2 Freedom to make life choices	123	32.56	
4.2.3 Income inequality	84	55.53	
4.2.4 Healthy life expectancy at birth	61	73.75	
3rd sub-pillar: SDG Contribution	118	46.10	
4.3.1 SDG 3: Good Health and Well-Being	43	79.11	●
4.3.2 SDG 4: Quality Education	NA	NA	
4.3.3 SDG 5: Women's economic opportunity	133	2.65	○
4.3.4 SDG 7: Affordable and Clean Energy	129	34.39	○
4.3.5 SDG 11: Sustainable Cities and Communities	61	68.25	

NOTE: ● Indicates a strength and ○ a weakness.

Ireland

	Rank (Out of 134)	Score
Network Readiness Index	**19**	**67.51**

Pillar/sub-pillar	Rank	Score
A. Technology pillar	**23**	**56.58**
1st sub-pillar: Access	27	75.36
2nd sub-pillar: Content	27	42.93
3rd sub-pillar: Future Technologies	22	51.46
B. People pillar	**30**	**55.58**
1st sub-pillar: Individuals	58	49.10
2nd sub-pillar: Businesses	18	67.45
3rd sub-pillar: Governments	33	50.20
C. Governance pillar	**25**	**78.29**
1st sub-pillar: Trust	19	78.03
2nd sub-pillar: Regulation	29	79.21
3rd sub-pillar: Inclusion	27	77.64
D. Impact pillar	**3**	**79.58**
1st sub-pillar: Economy	5	63.15
2nd sub-pillar: Quality of Life	12	86.36
3rd sub-pillar: SDG Contribution	1	89.21



The Network Readiness Index in detail

Indicator	Rank	Score	
A. Technology pillar	**23**	**56.58**	
1st sub-pillar: Access	27	75.36	
1.1.1 Mobile tariffs	1	100.00	●
1.1.2 Handset prices	2	97.58	●
1.1.3 FTTH/building Internet subscriptions	99	14.18	○
1.1.4 Population covered by at least a 3G mobile network	93	98.31	○
1.1.5 International Internet bandwidth	91	66.74	○
1.1.6 Internet access in schools	NA	NA	
2nd sub-pillar: Content	27	42.93	
1.2.1 GitHub commits	21	53.14	
1.2.2 Internet domain registrations	21	40.90	
1.2.3 Mobile apps development	29	74.37	
1.2.4 AI scientific publications	76	3.29	
3rd sub-pillar: Future Technologies	22	51.46	
1.3.1 Adoption of emerging technologies	26	71.34	
1.3.2 Investment in emerging technologies	18	70.50	
1.3.3 Robot density	31	8.68	
1.3.4 Computer software spending	17	55.34	
B. People pillar	**30**	**55.58**	
1st sub-pillar: Individuals	58	49.10	
2.1.1 Mobile broadband internet traffic within the country	78	6.67	
2.1.2 ICT skills in the education system	7	84.01	●
2.1.3 Use of virtual social networks	33	75.37	
2.1.4 Tertiary enrollment	27	48.57	
2.1.5 Adult literacy rate	NA	NA	
2.1.6 AI talent concentration	12	30.90	
2nd sub-pillar: Businesses	18	67.45	
2.2.1 Firms with website	16	84.18	
2.2.2 GERD financed by business enterprise	10	77.66	
2.2.3 Knowledge intensive employment	16	72.41	
2.2.4 Annual investment in telecommunication services	46	81.46	
2.2.5 GERD performed by business enterprise	29	21.56	
3rd sub-pillar: Governments	33	50.20	
2.3.1 Government online services	45	75.64	
2.3.2 Publication and use of open data	30	48.53	
2.3.3 Government promotion of investment in emerging tech	27	57.76	
2.3.4 R&D expenditure by governments and higher education	38	18.86	

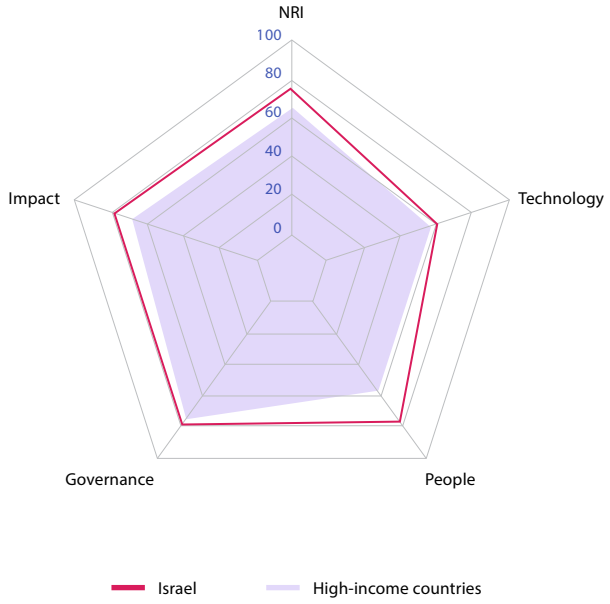
Indicator	Rank	Score	
C. Governance pillar	**25**	**78.29**	
1st sub-pillar: Trust	19	78.03	
3.1.1 Secure Internet servers	6	93.04	●
3.1.2 Cybersecurity	54	85.61	
3.1.3 Online access to financial account	32	50.93	
3.1.4 Internet shopping	12	82.53	●
2nd sub-pillar: Regulation	29	79.21	
3.2.1 Regulatory quality	14	84.89	
3.2.2 ICT regulatory environment	3	97.65	●
3.2.3 Regulation of emerging technologies	35	63.38	
3.2.4 E-commerce legislation	1	100.00	●
3.2.5 Privacy protection by law content	97	50.16	○
3rd sub-pillar: Inclusion	27	77.64	
3.3.1 E-Participation	47	67.44	
3.3.2 Socioeconomic gap in use of digital payments	25	93.94	
3.3.3 Availability of local online content	38	77.16	
3.3.4 Gender gap in Internet use	12	75.18	
3.3.5 Rural gap in use of digital payments	31	74.48	
D. Impact pillar	**3**	**79.58**	
1st sub-pillar: Economy	5	63.15	
4.1.1 High-tech and medium-high-tech manufacturing	6	73.90	●
4.1.2 High-tech exports	14	46.06	
4.1.3 PCT patent applications	22	34.33	
4.1.4 Domestic market size	39	63.00	
4.1.5 Prevalence of gig economy	31	61.63	
4.1.6 ICT services exports	1	100.00	●
2nd sub-pillar: Quality of Life	12	86.36	
4.2.1 Happiness	17	84.02	
4.2.2 Freedom to make life choices	28	86.62	
4.2.3 Income inequality	18	84.92	
4.2.4 Healthy life expectancy at birth	17	89.89	
3rd sub-pillar: SDG Contribution	1	89.21	
4.3.1 SDG 3: Good Health and Well-Being	24	89.29	
4.3.2 SDG 4: Quality Education	10	69.61	
4.3.3 SDG 5: Women's economic opportunity	1	100.00	●
4.3.4 SDG 7: Affordable and Clean Energy	5	89.81	●
4.3.5 SDG 11: Sustainable Cities and Communities	4	97.34	●

NOTE: ● Indicates a strength and ○ a weakness.

Israel

	Rank (Out of 134)	Score
Network Readiness Index	**12**	**71.82**

Pillar/sub-pillar	Rank	Score
A. Technology pillar	**19**	**59.03**
1st sub-pillar: Access	39	72.14
2nd sub-pillar: Content	18	48.80
3rd sub-pillar: Future Technologies	18	56.15
B. People pillar	**2**	**74.78**
1st sub-pillar: Individuals	4	70.83
2nd sub-pillar: Businesses	11	74.40
3rd sub-pillar: Governments	2	79.11
C. Governance pillar	**27**	**77.37**
1st sub-pillar: Trust	29	70.68
2nd sub-pillar: Regulation	20	83.76
3rd sub-pillar: Inclusion	26	77.67
D. Impact pillar	**7**	**76.12**
1st sub-pillar: Economy	2	69.36
2nd sub-pillar: Quality of Life	26	80.24
3rd sub-pillar: SDG Contribution	28	78.75



The Network Readiness Index in detail

Indicator	Rank	Score	
A. Technology pillar	**19**	**59.03**	
1st sub-pillar: Access	39	72.14	
1.1.1 Mobile tariffs	16	86.26	
1.1.2 Handset prices	29	70.84	
1.1.3 FTTH/building Internet subscriptions	83	23.26	○
1.1.4 Population covered by at least a 3G mobile network	57	99.67	
1.1.5 International Internet bandwidth	89	67.80	○
1.1.6 Internet access in schools	39	85.00	
2nd sub-pillar: Content	18	48.80	
1.2.1 GitHub commits	8	76.70	
1.2.2 Internet domain registrations	35	18.76	
1.2.3 Mobile apps development	2	86.90	●
1.2.4 AI scientific publications	40	12.83	
3rd sub-pillar: Future Technologies	18	56.15	
1.3.1 Adoption of emerging technologies	4	96.84	●
1.3.2 Investment in emerging technologies	2	96.25	●
1.3.3 Robot density	26	11.30	
1.3.4 Computer software spending	68	20.20	
B. People pillar	**2**	**74.78**	
1st sub-pillar: Individuals	4	70.83	
2.1.1 Mobile broadband internet traffic within the country	NA	NA	
2.1.2 ICT skills in the education system	NA	NA	
2.1.3 Use of virtual social networks	40	73.12	
2.1.4 Tertiary enrollment	51	39.38	
2.1.5 Adult literacy rate	NA	NA	
2.1.6 AI talent concentration	1	100.00	●
2nd sub-pillar: Businesses	11	74.40	
2.2.1 Firms with website	48	60.94	
2.2.2 GERD financed by business enterprise	42	49.52	
2.2.3 Knowledge intensive employment	7	80.05	
2.2.4 Annual investment in telecommunication services	45	81.48	
2.2.5 GERD performed by business enterprise	1	100.00	●
3rd sub-pillar: Governments	2	79.11	
2.3.1 Government online services	21	86.13	
2.3.2 Publication and use of open data	31	47.06	
2.3.3 Government promotion of investment in emerging tech	6	83.27	
2.3.4 R&D expenditure by governments and higher education	1	100.00	●

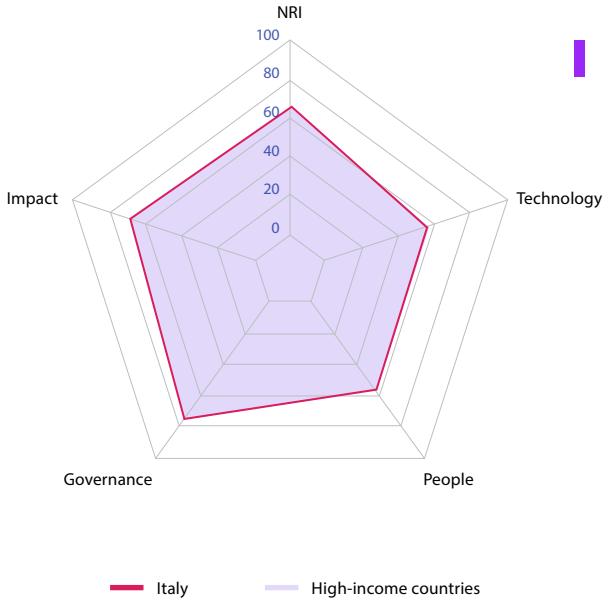
Indicator	Rank	Score	
C. Governance pillar	**27**	**77.37**	
1st sub-pillar: Trust	29	70.68	
3.1.1 Secure Internet servers	41	75.18	
3.1.2 Cybersecurity	44	90.77	
3.1.3 Online access to financial account	25	58.49	
3.1.4 Internet shopping	37	58.28	
2nd sub-pillar: Regulation	20	83.76	
3.2.1 Regulatory quality	26	76.91	
3.2.2 ICT regulatory environment	92	70.00	○
3.2.3 Regulation of emerging technologies	4	91.69	●
3.2.4 E-commerce legislation	1	100.00	●
3.2.5 Privacy protection by law content	32	80.21	
3rd sub-pillar: Inclusion	26	77.67	
3.3.1 E-Participation	37	70.93	
3.3.2 Socioeconomic gap in use of digital payments	37	89.70	
3.3.3 Availability of local online content	5	95.91	●
3.3.4 Gender gap in Internet use	48	69.19	
3.3.5 Rural gap in use of digital payments	68	62.61	
D. Impact pillar	**7**	**76.12**	
1st sub-pillar: Economy	2	69.36	
4.1.1 High-tech and medium-high-tech manufacturing	29	47.13	
4.1.2 High-tech exports	11	53.44	
4.1.3 PCT patent applications	6	71.17	
4.1.4 Domestic market size	48	60.13	
4.1.5 Prevalence of gig economy	8	84.30	
4.1.6 ICT services exports	1	100.00	●
2nd sub-pillar: Quality of Life	26	80.24	
4.2.1 Happiness	2	98.76	●
4.2.2 Freedom to make life choices	83	66.64	○
4.2.3 Income inequality	71	61.31	
4.2.4 Healthy life expectancy at birth	6	94.25	●
3rd sub-pillar: SDG Contribution	28	78.75	
4.3.1 SDG 3: Good Health and Well-Being	19	91.69	
4.3.2 SDG 4: Quality Education	38	53.53	
4.3.3 SDG 5: Women's economic opportunity	80	72.57	
4.3.4 SDG 7: Affordable and Clean Energy	22	80.78	
4.3.5 SDG 11: Sustainable Cities and Communities	10	95.18	

NOTE: ● Indicates a strength and ○ a weakness.

Italy

	Rank (Out of 134)	Score
Network Readiness Index	**31**	**62.20**

Pillar/sub-pillar	Rank	Score
A. Technology pillar	**29**	**53.08**
1st sub-pillar: Access	42	71.79
2nd sub-pillar: Content	35	36.96
3rd sub-pillar: Future Technologies	23	50.48
B. People pillar	**28**	**56.17**
1st sub-pillar: Individuals	32	54.44
2nd sub-pillar: Businesses	28	61.78
3rd sub-pillar: Governments	29	52.30
C. Governance pillar	**32**	**74.28**
1st sub-pillar: Trust	40	66.56
2nd sub-pillar: Regulation	30	79.03
3rd sub-pillar: Inclusion	28	77.26
D. Impact pillar	**30**	**65.27**
1st sub-pillar: Economy	28	40.80
2nd sub-pillar: Quality of Life	53	72.78
3rd sub-pillar: SDG Contribution	21	82.22



The Network Readiness Index in detail

Indicator	Rank	Score	
A. Technology pillar	**29**	**53.08**	
1st sub-pillar: Access	42	71.79	
1.1.1 Mobile tariffs	19	84.58	●
1.1.2 Handset prices	44	61.96	
1.1.3 FTTH/building Internet subscriptions	33	39.94	
1.1.4 Population covered by at least a 3G mobile network	1	100.00	●
1.1.5 International Internet bandwidth	50	74.25	
1.1.6 Internet access in schools	47	70.00	
2nd sub-pillar: Content	35	36.96	
1.2.1 GitHub commits	45	19.16	
1.2.2 Internet domain registrations	28	26.51	
1.2.3 Mobile apps development	59	68.17	
1.2.4 AI scientific publications	13	34.01	●
3rd sub-pillar: Future Technologies	23	50.48	
1.3.1 Adoption of emerging technologies	32	65.18	
1.3.2 Investment in emerging technologies	62	41.00	
1.3.3 Robot density	13	29.88	
1.3.4 Computer software spending	3	65.85	●
B. People pillar	**28**	**56.17**	
1st sub-pillar: Individuals	32	54.44	
2.1.1 Mobile broadband internet traffic within the country	13	44.55	●
2.1.2 ICT skills in the education system	49	55.71	
2.1.3 Use of virtual social networks	44	70.19	
2.1.4 Tertiary enrollment	38	45.05	
2.1.5 Adult literacy rate	18	99.11	
2.1.6 AI talent concentration	32	12.02	○
2nd sub-pillar: Businesses	28	61.78	
2.2.1 Firms with website	27	75.40	
2.2.2 GERD financed by business enterprise	23	65.37	
2.2.3 Knowledge intensive employment	39	53.65	
2.2.4 Annual investment in telecommunication services	8	91.16	●
2.2.5 GERD performed by business enterprise	25	23.33	
3rd sub-pillar: Governments	29	52.30	
2.3.1 Government online services	23	85.18	
2.3.2 Publication and use of open data	20	61.76	
2.3.3 Government promotion of investment in emerging tech	69	35.69	
2.3.4 R&D expenditure by governments and higher education	27	26.56	

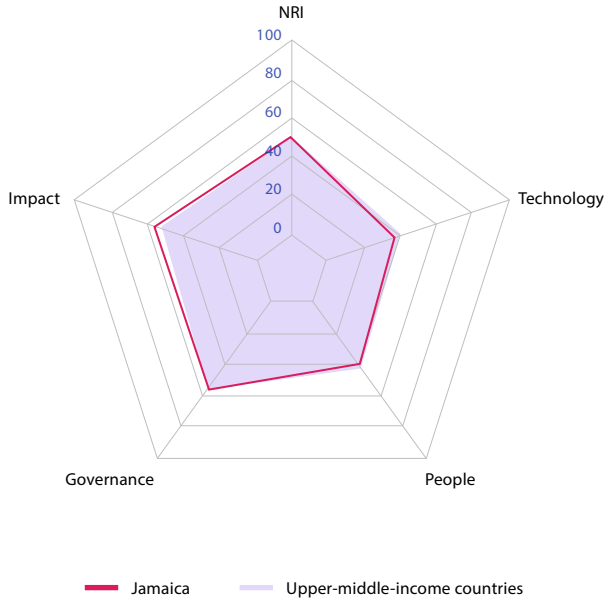
Indicator	Rank	Score	
C. Governance pillar	**32**	**74.28**	
1st sub-pillar: Trust	40	66.56	
3.1.1 Secure Internet servers	34	79.29	
3.1.2 Cybersecurity	27	96.06	
3.1.3 Online access to financial account	69	26.71	○
3.1.4 Internet shopping	29	64.19	
2nd sub-pillar: Regulation	30	79.03	
3.2.1 Regulatory quality	44	61.92	
3.2.2 ICT regulatory environment	1	100.00	●
3.2.3 Regulation of emerging technologies	38	62.34	
3.2.4 E-commerce legislation	1	100.00	●
3.2.5 Privacy protection by law content	54	70.88	
3rd sub-pillar: Inclusion	28	77.26	
3.3.1 E-Participation	32	72.10	
3.3.2 Socioeconomic gap in use of digital payments	29	92.67	
3.3.3 Availability of local online content	41	75.00	
3.3.4 Gender gap in Internet use	66	66.76	○
3.3.5 Rural gap in use of digital payments	6	79.77	●
D. Impact pillar	**30**	**65.27**	
1st sub-pillar: Economy	28	40.80	
4.1.1 High-tech and medium-high-tech manufacturing	27	47.52	
4.1.2 High-tech exports	59	14.63	
4.1.3 PCT patent applications	26	32.13	
4.1.4 Domestic market size	12	77.71	●
4.1.5 Prevalence of gig economy	32	61.34	
4.1.6 ICT services exports	72	11.51	
2nd sub-pillar: Quality of Life	53	72.78	
4.2.1 Happiness	41	72.65	
4.2.2 Freedom to make life choices	106	55.92	○
4.2.3 Income inequality	53	69.85	
4.2.4 Healthy life expectancy at birth	10	92.72	●
3rd sub-pillar: SDG Contribution	21	82.22	
4.3.1 SDG 3: Good Health and Well-Being	21	90.22	
4.3.2 SDG 4: Quality Education	34	58.33	
4.3.3 SDG 5: Women's economic opportunity	15	96.46	
4.3.4 SDG 7: Affordable and Clean Energy	16	82.15	●
4.3.5 SDG 11: Sustainable Cities and Communities	30	83.93	

NOTE: ● Indicates a strength and ○ a weakness.

Jamaica

	Rank (Out of 134)	Score
Network Readiness Index	**72**	**46.11**

Pillar/sub-pillar	Rank	Score
A. Technology pillar	**85**	**35.38**
1st sub-pillar: Access	90	54.89
2nd sub-pillar: Content	106	13.63
3rd sub-pillar: Future Technologies	51	37.61
B. People pillar	**85**	**38.28**
1st sub-pillar: Individuals	117	24.94
2nd sub-pillar: Businesses	46	52.36
3rd sub-pillar: Governments	69	37.53
C. Governance pillar	**71**	**54.49**
1st sub-pillar: Trust	99	30.05
2nd sub-pillar: Regulation	27	79.98
3rd sub-pillar: Inclusion	87	53.45
D. Impact pillar	**50**	**56.28**
1st sub-pillar: Economy	77	24.39
2nd sub-pillar: Quality of Life	46	74.44
3rd sub-pillar: SDG Contribution	51	70.02



The Network Readiness Index in detail

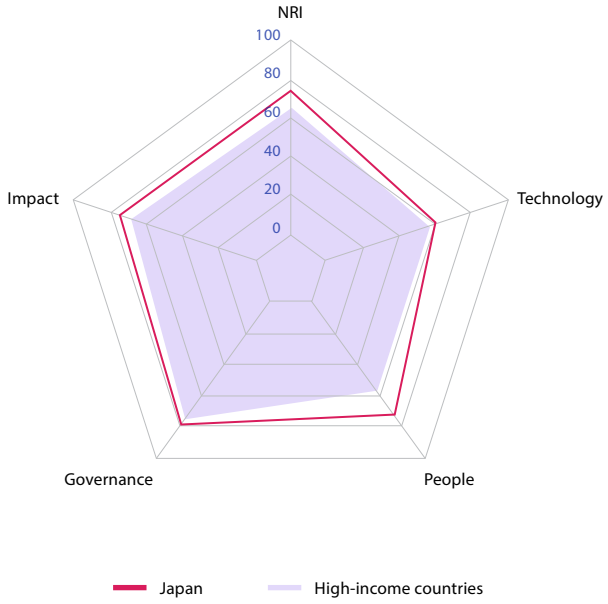
Indicator	Rank	Score	
A. Technology pillar	**85**	**35.38**	
1st sub-pillar: Access	90	54.89	
1.1.1 Mobile tariffs	119	24.33	○
1.1.2 Handset prices	95	35.15	
1.1.3 FTTH/building Internet subscriptions	77	24.91	
1.1.4 Population covered by at least a 3G mobile network	57	99.67	
1.1.5 International Internet bandwidth	95	66.45	
1.1.6 Internet access in schools	43	78.83	
2nd sub-pillar: Content	106	13.63	
1.2.1 GitHub commits	86	3.33	
1.2.2 Internet domain registrations	90	1.45	
1.2.3 Mobile apps development	103	49.11	○
1.2.4 AI scientific publications	110	0.64	○
3rd sub-pillar: Future Technologies	51	37.61	
1.3.1 Adoption of emerging technologies	76	43.00	
1.3.2 Investment in emerging technologies	72	38.00	
1.3.3 Robot density	NA	NA	
1.3.4 Computer software spending	29	31.83	●
B. People pillar	**85**	**38.28**	
1st sub-pillar: Individuals	117	24.94	
2.1.1 Mobile broadband internet traffic within the country	110	1.22	○
2.1.2 ICT skills in the education system	83	36.31	
2.1.3 Use of virtual social networks	89	45.75	
2.1.4 Tertiary enrollment	89	16.47	
2.1.5 Adult literacy rate	NA	NA	
2.1.6 AI talent concentration	NA	NA	
2nd sub-pillar: Businesses	46	52.36	
2.2.1 Firms with website	NA	NA	
2.2.2 GERD financed by business enterprise	NA	NA	
2.2.3 Knowledge intensive employment	68	30.78	
2.2.4 Annual investment in telecommunication services	94	73.94	
2.2.5 GERD performed by business enterprise	NA	NA	
3rd sub-pillar: Governments	69	37.53	
2.3.1 Government online services	99	43.79	
2.3.2 Publication and use of open data	47	35.29	●
2.3.3 Government promotion of investment in emerging tech	78	33.50	
2.3.4 R&D expenditure by governments and higher education	NA	NA	

Indicator	Rank	Score	
C. Governance pillar	**71**	**54.49**	
1st sub-pillar: Trust	99	30.05	
3.1.1 Secure Internet servers	95	40.89	
3.1.2 Cybersecurity	106	31.34	
3.1.3 Online access to financial account	NA	NA	
3.1.4 Internet shopping	74	17.93	
2nd sub-pillar: Regulation	27	79.98	
3.2.1 Regulatory quality	58	54.02	●
3.2.2 ICT regulatory environment	87	73.53	
3.2.3 Regulation of emerging technologies	NA	NA	
3.2.4 E-commerce legislation	1	100.00	●
3.2.5 Privacy protection by law content	6	92.35	●
3rd sub-pillar: Inclusion	87	53.45	
3.3.1 E-Participation	106	26.75	
3.3.2 Socioeconomic gap in use of digital payments	92	56.09	
3.3.3 Availability of local online content	65	60.34	
3.3.4 Gender gap in Internet use	4	83.18	●
3.3.5 Rural gap in use of digital payments	101	40.88	
D. Impact pillar	**50**	**56.28**	
1st sub-pillar: Economy	77	24.39	
4.1.1 High-tech and medium-high-tech manufacturing	NA	NA	
4.1.2 High-tech exports	91	4.02	
4.1.3 PCT patent applications	70	2.47	
4.1.4 Domestic market size	122	32.66	○
4.1.5 Prevalence of gig economy	56	44.77	●
4.1.6 ICT services exports	20	38.01	●
2nd sub-pillar: Quality of Life	46	74.44	
4.2.1 Happiness	66	65.43	
4.2.2 Freedom to make life choices	38	83.17	●
4.2.3 Income inequality	NA	NA	
4.2.4 Healthy life expectancy at birth	58	74.73	●
3rd sub-pillar: SDG Contribution	51	70.02	
4.3.1 SDG 3: Good Health and Well-Being	67	68.54	
4.3.2 SDG 4: Quality Education	NA	NA	
4.3.3 SDG 5: Women's economic opportunity	103	63.72	
4.3.4 SDG 7: Affordable and Clean Energy	72	70.16	
4.3.5 SDG 11: Sustainable Cities and Communities	41	77.67	●

NOTE: ● Indicates a strength and ○ a weakness.

Japan

	Rank (Out of 134)	Score
Network Readiness Index	**13**	**71.06**
Pillar/sub-pillar	**Rank**	**Score**
A. Technology pillar	**15**	**60.62**
1st sub-pillar: Access	5	81.46
2nd sub-pillar: Content	33	38.34
3rd sub-pillar: Future Technologies	12	62.07
B. People pillar	**3**	**72.59**
1st sub-pillar: Individuals	5	69.15
2nd sub-pillar: Businesses	14	71.36
3rd sub-pillar: Governments	4	77.28
C. Governance pillar	**24**	**78.73**
1st sub-pillar: Trust	35	69.26
2nd sub-pillar: Regulation	23	82.02
3rd sub-pillar: Inclusion	8	84.92
D. Impact pillar	**14**	**72.30**
1st sub-pillar: Economy	12	57.55
2nd sub-pillar: Quality of Life	31	78.93
3rd sub-pillar: SDG Contribution	25	80.41



The Network Readiness Index in detail

Indicator	Rank	Score	
A. Technology pillar	**15**	**60.62**	
1st sub-pillar: Access	5	81.46	
1.1.1 Mobile tariffs	23	82.44	
1.1.2 Handset prices	13	80.46	
1.1.3 FTTH/building Internet subscriptions	8	65.96	
1.1.4 Population covered by at least a 3G mobile network	28	99.97	
1.1.5 International Internet bandwidth	29	78.49	
1.1.6 Internet access in schools	NA	NA	
2nd sub-pillar: Content	33	38.34	
1.2.1 GitHub commits	40	24.59	
1.2.2 Internet domain registrations	41	12.18	
1.2.3 Mobile apps development	40	72.48	
1.2.4 AI scientific publications	6	44.11	●
3rd sub-pillar: Future Technologies	12	62.07	
1.3.1 Adoption of emerging technologies	10	85.26	
1.3.2 Investment in emerging technologies	9	80.00	
1.3.3 Robot density	4	54.29	
1.3.4 Computer software spending	42	28.74	
B. People pillar	**3**	**72.59**	
1st sub-pillar: Individuals	5	69.15	
2.1.1 Mobile broadband internet traffic within the country	7	58.24	
2.1.2 ICT skills in the education system	19	75.17	
2.1.3 Use of virtual social networks	45	70.09	
2.1.4 Tertiary enrollment	47	42.23	
2.1.5 Adult literacy rate	NA	NA	
2.1.6 AI talent concentration	1	100.00	●
2nd sub-pillar: Businesses	14	71.36	
2.2.1 Firms with website	NA	NA	
2.2.2 GERD financed by business enterprise	2	96.58	●
2.2.3 Knowledge intensive employment	70	29.47	
2.2.4 Annual investment in telecommunication services	4	93.02	●
2.2.5 GERD performed by business enterprise	4	66.37	●
3rd sub-pillar: Governments	4	77.28	
2.3.1 Government online services	10	89.99	
2.3.2 Publication and use of open data	7	88.24	
2.3.3 Government promotion of investment in emerging tech	16	71.65	
2.3.4 R&D expenditure by governments and higher education	5	59.24	●

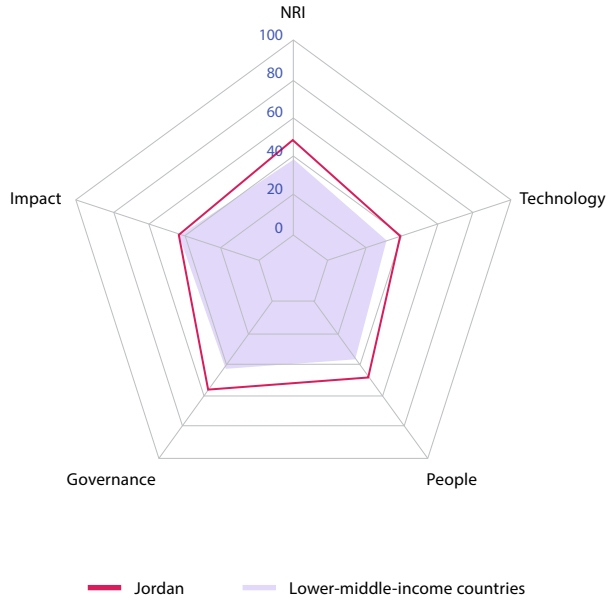
Indicator	Rank	Score	
C. Governance pillar	**24**	**78.73**	
1st sub-pillar: Trust	35	69.26	
3.1.1 Secure Internet servers	29	80.09	
3.1.2 Cybersecurity	12	97.78	
3.1.3 Online access to financial account	48	38.84	
3.1.4 Internet shopping	32	60.33	
2nd sub-pillar: Regulation	23	82.02	
3.2.1 Regulatory quality	19	80.68	
3.2.2 ICT regulatory environment	92	70.00	○
3.2.3 Regulation of emerging technologies	26	72.99	
3.2.4 E-commerce legislation	1	100.00	●
3.2.5 Privacy protection by law content	17	86.44	
3rd sub-pillar: Inclusion	8	84.92	
3.3.1 E-Participation	1	100.00	●
3.3.2 Socioeconomic gap in use of digital payments	21	96.17	
3.3.3 Availability of local online content	2	97.60	●
3.3.4 Gender gap in Internet use	86	59.11	○
3.3.5 Rural gap in use of digital payments	41	71.73	
D. Impact pillar	**14**	**72.30**	
1st sub-pillar: Economy	12	57.55	
4.1.1 High-tech and medium-high-tech manufacturing	8	68.78	
4.1.2 High-tech exports	27	32.36	
4.1.3 PCT patent applications	1	100.00	●
4.1.4 Domestic market size	4	84.54	●
4.1.5 Prevalence of gig economy	50	50.29	
4.1.6 ICT services exports	82	9.30	○
2nd sub-pillar: Quality of Life	31	78.93	
4.2.1 Happiness	44	71.15	
4.2.2 Freedom to make life choices	78	68.95	
4.2.3 Income inequality	38	75.63	
4.2.4 Healthy life expectancy at birth	1	100.00	●
3rd sub-pillar: SDG Contribution	25	80.41	
4.3.1 SDG 3: Good Health and Well-Being	16	92.78	
4.3.2 SDG 4: Quality Education	5	75.89	
4.3.3 SDG 5: Women's economic opportunity	88	69.91	○
4.3.4 SDG 7: Affordable and Clean Energy	51	75.22	
4.3.5 SDG 11: Sustainable Cities and Communities	22	88.26	

NOTE: ● Indicates a strength and ○ a weakness.

Jordan

	Rank (Out of 134)	Score
Network Readiness Index	**68**	**47.29**

Pillar/sub-pillar	Rank	Score
A. Technology pillar	**68**	**40.05**
1st sub-pillar: Access	91	54.39
2nd sub-pillar: Content	65	23.19
3rd sub-pillar: Future Technologies	39	42.56
B. People pillar	**44**	**49.19**
1st sub-pillar: Individuals	44	52.10
2nd sub-pillar: Businesses	27	62.28
3rd sub-pillar: Governments	85	33.19
C. Governance pillar	**67**	**55.16**
1st sub-pillar: Trust	92	33.54
2nd sub-pillar: Regulation	71	63.44
3rd sub-pillar: Inclusion	50	68.49
D. Impact pillar	**99**	**44.75**
1st sub-pillar: Economy	84	22.66
2nd sub-pillar: Quality of Life	93	59.85
3rd sub-pillar: SDG Contribution	105	51.73



The Network Readiness Index in detail

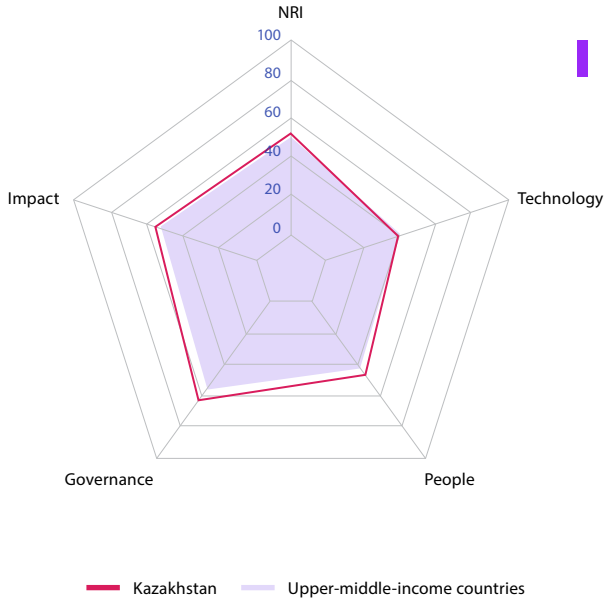
Indicator	Rank	Score	
A. Technology pillar	**68**	**40.05**	
1st sub-pillar: Access	91	54.39	
1.1.1 Mobile tariffs	101	41.04	
1.1.2 Handset prices	63	47.38	
1.1.3 FTTH/building Internet subscriptions	58	30.36	
1.1.4 Population covered by at least a 3G mobile network	40	99.93	●
1.1.5 International Internet bandwidth	51	74.07	
1.1.6 Internet access in schools	60	33.56	
2nd sub-pillar: Content	65	23.19	
1.2.1 GitHub commits	75	4.33	
1.2.2 Internet domain registrations	78	2.31	
1.2.3 Mobile apps development	26	75.38	●
1.2.4 AI scientific publications	44	10.75	
3rd sub-pillar: Future Technologies	39	42.56	
1.3.1 Adoption of emerging technologies	59	49.03	
1.3.2 Investment in emerging technologies	44	49.25	
1.3.3 Robot density	NA	NA	
1.3.4 Computer software spending	41	29.40	●
B. People pillar	**44**	**49.19**	
1st sub-pillar: Individuals	44	52.10	
2.1.1 Mobile broadband internet traffic within the country	75	7.25	
2.1.2 ICT skills in the education system	14	79.79	●
2.1.3 Use of virtual social networks	80	54.45	
2.1.4 Tertiary enrollment	84	21.18	
2.1.5 Adult literacy rate	27	97.84	●
2.1.6 AI talent concentration	NA	NA	
2nd sub-pillar: Businesses	27	62.28	
2.2.1 Firms with website	24	78.10	●
2.2.2 GERD financed by business enterprise	NA	NA	
2.2.3 Knowledge intensive employment	61	32.93	
2.2.4 Annual investment in telecommunication services	80	75.83	
2.2.5 GERD performed by business enterprise	NA	NA	
3rd sub-pillar: Governments	85	33.19	
2.3.1 Government online services	73	62.36	
2.3.2 Publication and use of open data	86	11.76	○
2.3.3 Government promotion of investment in emerging tech	48	46.28	
2.3.4 R&D expenditure by governments and higher education	50	12.36	

Indicator	Rank	Score	
C. Governance pillar	**67**	**55.16**	
1st sub-pillar: Trust	92	33.54	
3.1.1 Secure Internet servers	98	38.62	
3.1.2 Cybersecurity	78	70.45	
3.1.3 Online access to financial account	112	9.24	○
3.1.4 Internet shopping	78	15.85	
2nd sub-pillar: Regulation	71	63.44	
3.2.1 Regulatory quality	62	53.00	
3.2.2 ICT regulatory environment	64	84.12	
3.2.3 Regulation of emerging technologies	45	56.36	
3.2.4 E-commerce legislation	87	66.67	○
3.2.5 Privacy protection by law content	84	57.07	
3rd sub-pillar: Inclusion	50	68.49	
3.3.1 E-Participation	67	53.49	
3.3.2 Socioeconomic gap in use of digital payments	97	54.42	
3.3.3 Availability of local online content	42	74.52	●
3.3.4 Gender gap in Internet use	84	60.03	
3.3.5 Rural gap in use of digital payments	1	100.00	●
D. Impact pillar	**99**	**44.75**	
1st sub-pillar: Economy	84	22.66	
4.1.1 High-tech and medium-high-tech manufacturing	66	20.69	
4.1.2 High-tech exports	104	2.55	
4.1.3 PCT patent applications	45	8.06	
4.1.4 Domestic market size	84	46.39	
4.1.5 Prevalence of gig economy	39	57.27	●
4.1.6 ICT services exports	127	1.02	○
2nd sub-pillar: Quality of Life	93	59.85	
4.2.1 Happiness	106	37.26	
4.2.2 Freedom to make life choices	88	64.05	
4.2.3 Income inequality	NA	NA	
4.2.4 Healthy life expectancy at birth	45	78.25	
3rd sub-pillar: SDG Contribution	105	51.73	
4.3.1 SDG 3: Good Health and Well-Being	98	51.25	
4.3.2 SDG 4: Quality Education	55	33.44	
4.3.3 SDG 5: Women's economic opportunity	129	24.78	○
4.3.4 SDG 7: Affordable and Clean Energy	68	71.89	
4.3.5 SDG 11: Sustainable Cities and Communities	43	77.30	●

NOTE: ● Indicates a strength and ○ a weakness.

Kazakhstan

	Rank (Out of 134)	Score
Network Readiness Index	**58**	**50.97**
Pillar/sub-pillar	**Rank**	**Score**
A. Technology pillar	**79**	**37.92**
1st sub-pillar: Access	52	69.11
2nd sub-pillar: Content	82	19.10
3rd sub-pillar: Future Technologies	98	25.55
B. People pillar	**49**	**47.86**
1st sub-pillar: Individuals	54	50.16
2nd sub-pillar: Businesses	56	48.15
3rd sub-pillar: Governments	48	45.27
C. Governance pillar	**54**	**62.72**
1st sub-pillar: Trust	48	59.13
2nd sub-pillar: Regulation	104	54.01
3rd sub-pillar: Inclusion	35	75.02
D. Impact pillar	**55**	**55.38**
1st sub-pillar: Economy	63	29.77
2nd sub-pillar: Quality of Life	35	77.63
3rd sub-pillar: SDG Contribution	88	58.75



The Network Readiness Index in detail

Indicator	Rank	Score	
A. Technology pillar	**79**	**37.92**	
1st sub-pillar: Access	52	69.11	
1.1.1 Mobile tariffs	10	91.02	●
1.1.2 Handset prices	81	40.38	
1.1.3 FTTH/building Internet subscriptions	40	38.43	
1.1.4 Population covered by at least a 3G mobile network	76	99.34	
1.1.5 International Internet bandwidth	37	76.36	
1.1.6 Internet access in schools	NA	NA	
2nd sub-pillar: Content	82	19.10	
1.2.1 GitHub commits	70	5.70	
1.2.2 Internet domain registrations	76	2.46	
1.2.3 Mobile apps development	64	65.62	
1.2.4 AI scientific publications	80	2.60	
3rd sub-pillar: Future Technologies	98	25.55	
1.3.1 Adoption of emerging technologies	85	38.60	
1.3.2 Investment in emerging technologies	75	37.00	
1.3.3 Robot density	NA	NA	
1.3.4 Computer software spending	122	1.06	○
B. People pillar	**49**	**47.86**	
1st sub-pillar: Individuals	54	50.16	
2.1.1 Mobile broadband internet traffic within the country	23	34.87	●
2.1.2 ICT skills in the education system	103	13.53	○
2.1.3 Use of virtual social networks	78	56.79	
2.1.4 Tertiary enrollment	34	45.87	
2.1.5 Adult literacy rate	6	99.73	●
2.1.6 AI talent concentration	NA	NA	
2nd sub-pillar: Businesses	56	48.15	
2.2.1 Firms with website	64	47.25	
2.2.2 GERD financed by business enterprise	34	58.66	
2.2.3 Knowledge intensive employment	36	55.66	
2.2.4 Annual investment in telecommunication services	66	77.92	
2.2.5 GERD performed by business enterprise	71	1.26	
3rd sub-pillar: Governments	48	45.27	
2.3.1 Government online services	8	92.75	●
2.3.2 Publication and use of open data	61	26.47	
2.3.3 Government promotion of investment in emerging tech	26	59.71	●
2.3.4 R&D expenditure by governments and higher education	101	2.16	○

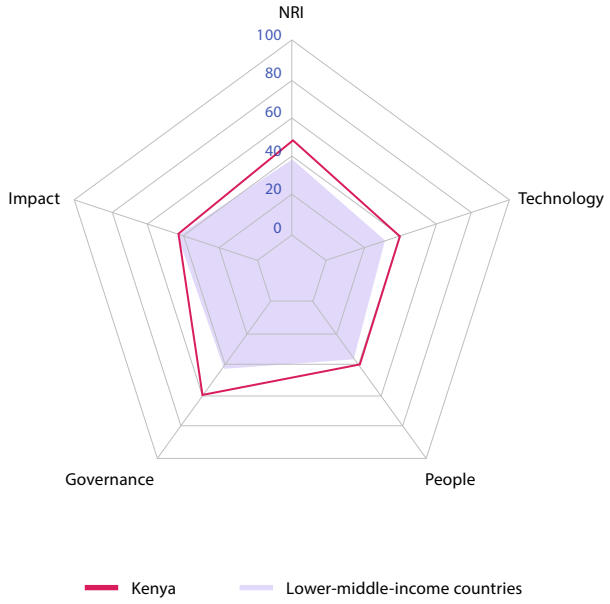
Indicator	Rank	Score	
C. Governance pillar	**54**	**62.72**	
1st sub-pillar: Trust	48	59.13	
3.1.1 Secure Internet servers	51	64.66	
3.1.2 Cybersecurity	38	93.03	
3.1.3 Online access to financial account	52	35.30	
3.1.4 Internet shopping	48	43.53	
2nd sub-pillar: Regulation	104	54.01	
3.2.1 Regulatory quality	65	51.63	
3.2.2 ICT regulatory environment	129	45.88	○
3.2.3 Regulation of emerging technologies	72	42.08	
3.2.4 E-commerce legislation	1	100.00	●
3.2.5 Privacy protection by law content	121	30.44	○
3rd sub-pillar: Inclusion	35	75.02	
3.3.1 E-Participation	15	80.23	●
3.3.2 Socioeconomic gap in use of digital payments	9	98.66	●
3.3.3 Availability of local online content	70	59.86	
3.3.4 Gender gap in Internet use	39	70.12	
3.3.5 Rural gap in use of digital payments	59	66.23	
D. Impact pillar	**55**	**55.38**	
1st sub-pillar: Economy	63	29.77	
4.1.1 High-tech and medium-high-tech manufacturing	74	17.56	
4.1.2 High-tech exports	9	59.19	●
4.1.3 PCT patent applications	76	1.71	
4.1.4 Domestic market size	42	61.92	
4.1.5 Prevalence of gig economy	78	35.76	
4.1.6 ICT services exports	111	2.47	
2nd sub-pillar: Quality of Life	35	77.63	
4.2.1 Happiness	54	67.96	
4.2.2 Freedom to make life choices	32	84.61	●
4.2.3 Income inequality	13	88.44	●
4.2.4 Healthy life expectancy at birth	75	69.50	
3rd sub-pillar: SDG Contribution	88	58.75	
4.3.1 SDG 3: Good Health and Well-Being	45	78.00	
4.3.2 SDG 4: Quality Education	61	27.87	
4.3.3 SDG 5: Women's economic opportunity	99	65.49	
4.3.4 SDG 7: Affordable and Clean Energy	114	50.94	
4.3.5 SDG 11: Sustainable Cities and Communities	54	71.43	

NOTE: ● Indicates a strength and ○ a weakness.

Kenya

	Rank (Out of 134)	Score
Network Readiness Index	**70**	**46.86**

Pillar/sub-pillar	Rank	Score
A. Technology pillar	**65**	**40.56**
1st sub-pillar: Access	76	61.50
2nd sub-pillar: Content	83	19.05
3rd sub-pillar: Future Technologies	43	41.12
B. People pillar	**69**	**42.93**
1st sub-pillar: Individuals	105	33.79
2nd sub-pillar: Businesses	60	47.04
3rd sub-pillar: Governments	40	47.95
C. Governance pillar	**61**	**58.59**
1st sub-pillar: Trust	56	52.48
2nd sub-pillar: Regulation	64	66.19
3rd sub-pillar: Inclusion	77	57.10
D. Impact pillar	**96**	**45.35**
1st sub-pillar: Economy	66	28.09
2nd sub-pillar: Quality of Life	113	48.73
3rd sub-pillar: SDG Contribution	85	59.24



The Network Readiness Index in detail

Indicator	Rank	Score	
A. Technology pillar	**65**	**40.56**	
1st sub-pillar: Access	76	61.50	
1.1.1 Mobile tariffs	92	46.35	
1.1.2 Handset prices	109	28.28	
1.1.3 FTTH/building Internet subscriptions	28	43.90	●
1.1.4 Population covered by at least a 3G mobile network	76	99.34	
1.1.5 International Internet bandwidth	8	89.61	●
1.1.6 Internet access in schools	NA	NA	
2nd sub-pillar: Content	83	19.05	
1.2.1 GitHub commits	62	7.94	
1.2.2 Internet domain registrations	98	1.00	
1.2.3 Mobile apps development	87	59.37	
1.2.4 AI scientific publications	58	7.89	
3rd sub-pillar: Future Technologies	43	41.12	
1.3.1 Adoption of emerging technologies	55	50.77	
1.3.2 Investment in emerging technologies	32	60.00	●
1.3.3 Robot density	NA	NA	
1.3.4 Computer software spending	84	12.61	
B. People pillar	**69**	**42.93**	
1st sub-pillar: Individuals	105	33.79	
2.1.1 Mobile broadband internet traffic within the country	49	14.10	●
2.1.2 ICT skills in the education system	42	57.43	●
2.1.3 Use of virtual social networks	109	16.23	○
2.1.4 Tertiary enrollment	113	4.94	○
2.1.5 Adult literacy rate	76	76.27	
2.1.6 AI talent concentration	NA	NA	
2nd sub-pillar: Businesses	60	47.04	
2.2.1 Firms with website	71	43.67	
2.2.2 GERD financed by business enterprise	NA	NA	
2.2.3 Knowledge intensive employment	90	18.00	
2.2.4 Annual investment in telecommunication services	53	79.45	
2.2.5 GERD performed by business enterprise	NA	NA	
3rd sub-pillar: Governments	40	47.95	
2.3.1 Government online services	68	64.87	
2.3.2 Publication and use of open data	41	38.24	●
2.3.3 Government promotion of investment in emerging tech	57	40.75	
2.3.4 R&D expenditure by governments and higher education	NA	NA	

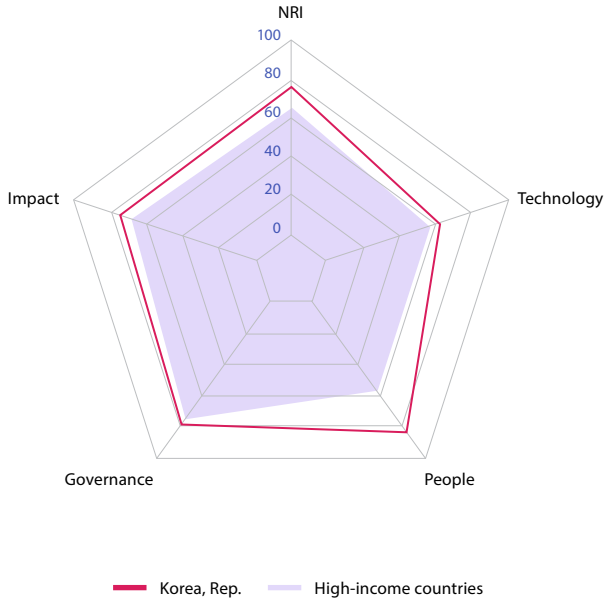
Indicator	Rank	Score	
C. Governance pillar	**61**	**58.59**	
1st sub-pillar: Trust	56	52.48	
3.1.1 Secure Internet servers	86	43.98	
3.1.2 Cybersecurity	59	81.38	
3.1.3 Online access to financial account	18	66.35	●
3.1.4 Internet shopping	73	18.23	
2nd sub-pillar: Regulation	64	66.19	
3.2.1 Regulatory quality	94	39.54	
3.2.2 ICT regulatory environment	34	89.41	●
3.2.3 Regulation of emerging technologies	75	40.52	
3.2.4 E-commerce legislation	1	100.00	●
3.2.5 Privacy protection by law content	75	61.49	
3rd sub-pillar: Inclusion	77	57.10	
3.3.1 E-Participation	64	56.97	
3.3.2 Socioeconomic gap in use of digital payments	70	72.59	
3.3.3 Availability of local online content	83	51.44	
3.3.4 Gender gap in Internet use	97	38.79	○
3.3.5 Rural gap in use of digital payments	61	65.69	
D. Impact pillar	**96**	**45.35**	
1st sub-pillar: Economy	66	28.09	
4.1.1 High-tech and medium-high-tech manufacturing	80	15.15	
4.1.2 High-tech exports	86	5.42	
4.1.3 PCT patent applications	90	0.66	
4.1.4 Domestic market size	59	55.57	
4.1.5 Prevalence of gig economy	41	56.10	●
4.1.6 ICT services exports	23	35.60	●
2nd sub-pillar: Quality of Life	113	48.73	
4.2.1 Happiness	103	38.98	
4.2.2 Freedom to make life choices	108	55.16	○
4.2.3 Income inequality	82	55.78	
4.2.4 Healthy life expectancy at birth	110	45.01	○
3rd sub-pillar: SDG Contribution	85	59.24	
4.3.1 SDG 3: Good Health and Well-Being	102	45.39	
4.3.2 SDG 4: Quality Education	NA	NA	
4.3.3 SDG 5: Women's economic opportunity	80	72.57	
4.3.4 SDG 7: Affordable and Clean Energy	100	61.27	
4.3.5 SDG 11: Sustainable Cities and Communities	79	57.73	

NOTE: ● Indicates a strength and ○ a weakness.

Korea, Rep.

	Rank (Out of 134)	Score
Network Readiness Index	**7**	**74.48**

Pillar/sub-pillar	Rank	Score
A. Technology pillar	**17**	**60.10**
1st sub-pillar: Access	23	75.76
2nd sub-pillar: Content	30	40.42
3rd sub-pillar: Future Technologies	8	64.12
B. People pillar	**1**	**84.11**
1st sub-pillar: Individuals	1	79.88
2nd sub-pillar: Businesses	1	82.85
3rd sub-pillar: Governments	1	89.59
C. Governance pillar	**18**	**80.44**
1st sub-pillar: Trust	10	85.10
2nd sub-pillar: Regulation	41	75.26
3rd sub-pillar: Inclusion	17	80.96
D. Impact pillar	**11**	**73.27**
1st sub-pillar: Economy	3	65.35
2nd sub-pillar: Quality of Life	40	75.23
3rd sub-pillar: SDG Contribution	26	79.22



The Network Readiness Index in detail

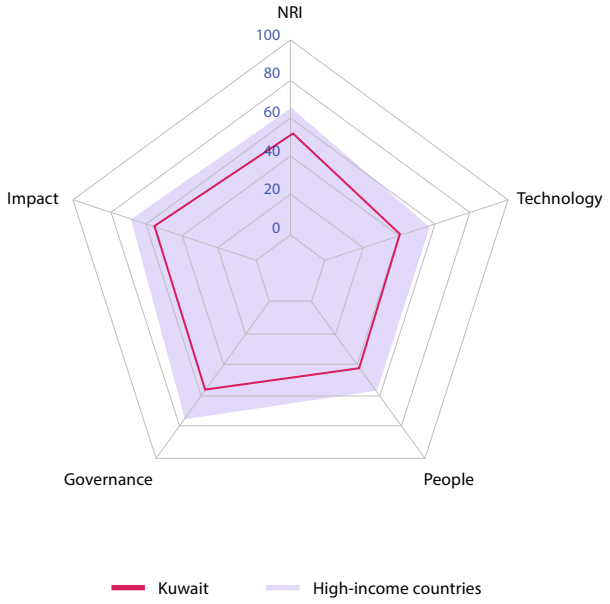
Indicator	Rank	Score	
A. Technology pillar	**17**	**60.10**	
1st sub-pillar: Access	23	75.76	
1.1.1 Mobile tariffs	71	59.86	○
1.1.2 Handset prices	54	55.03	
1.1.3 FTTH/building Internet subscriptions	12	59.11	
1.1.4 Population covered by at least a 3G mobile network	28	99.97	
1.1.5 International Internet bandwidth	22	80.61	
1.1.6 Internet access in schools	1	100.00	●
2nd sub-pillar: Content	30	40.42	
1.2.1 GitHub commits	25	46.41	
1.2.2 Internet domain registrations	47	8.85	
1.2.3 Mobile apps development	21	75.94	
1.2.4 AI scientific publications	16	30.49	
3rd sub-pillar: Future Technologies	8	64.12	
1.3.1 Adoption of emerging technologies	20	75.40	
1.3.2 Investment in emerging technologies	34	59.50	
1.3.3 Robot density	1	100.00	●
1.3.4 Computer software spending	65	21.58	
B. People pillar	**1**	**84.11**	
1st sub-pillar: Individuals	1	79.88	
2.1.1 Mobile broadband internet traffic within the country	15	44.36	
2.1.2 ICT skills in the education system	12	81.92	
2.1.3 Use of virtual social networks	4	87.29	●
2.1.4 Tertiary enrollment	4	67.32	●
2.1.5 Adult literacy rate	23	98.36	
2.1.6 AI talent concentration	1	100.00	●
2nd sub-pillar: Businesses	1	82.85	
2.2.1 Firms with website	33	69.79	
2.2.2 GERD financed by business enterprise	4	94.16	●
2.2.3 Knowledge intensive employment	30	60.01	
2.2.4 Annual investment in telecommunication services	10	90.28	
2.2.5 GERD performed by business enterprise	1	100.00	●
3rd sub-pillar: Governments	1	89.59	
2.3.1 Government online services	3	98.08	●
2.3.2 Publication and use of open data	4	94.12	
2.3.3 Government promotion of investment in emerging tech	10	77.46	
2.3.4 R&D expenditure by governments and higher education	2	88.70	●

Indicator	Rank	Score	
C. Governance pillar	**18**	**80.44**	
1st sub-pillar: Trust	10	85.10	
3.1.1 Secure Internet servers	47	69.34	
3.1.2 Cybersecurity	5	98.49	
3.1.3 Online access to financial account	9	82.64	
3.1.4 Internet shopping	5	89.91	●
2nd sub-pillar: Regulation	41	75.26	
3.2.1 Regulatory quality	28	74.44	
3.2.2 ICT regulatory environment	105	66.12	○
3.2.3 Regulation of emerging technologies	32	64.68	
3.2.4 E-commerce legislation	1	100.00	●
3.2.5 Privacy protection by law content	52	71.07	
3rd sub-pillar: Inclusion	17	80.96	
3.3.1 E-Participation	9	94.19	
3.3.2 Socioeconomic gap in use of digital payments	26	93.43	
3.3.3 Availability of local online content	32	81.01	
3.3.4 Gender gap in Internet use	43	69.52	
3.3.5 Rural gap in use of digital payments	57	66.67	
D. Impact pillar	**11**	**73.27**	
1st sub-pillar: Economy	3	65.35	
4.1.1 High-tech and medium-high-tech manufacturing	7	70.83	
4.1.2 High-tech exports	6	64.53	
4.1.3 PCT patent applications	2	98.56	●
4.1.4 Domestic market size	14	76.85	
4.1.5 Prevalence of gig economy	20	68.31	
4.1.6 ICT services exports	67	13.03	
2nd sub-pillar: Quality of Life	40	75.23	
4.2.1 Happiness	58	66.91	
4.2.2 Freedom to make life choices	100	58.07	○
4.2.3 Income inequality	27	79.40	
4.2.4 Healthy life expectancy at birth	3	96.53	●
3rd sub-pillar: SDG Contribution	26	79.22	
4.3.1 SDG 3: Good Health and Well-Being	6	96.29	
4.3.2 SDG 4: Quality Education	6	75.76	
4.3.3 SDG 5: Women's economic opportunity	60	78.76	
4.3.4 SDG 7: Affordable and Clean Energy	101	60.48	○
4.3.5 SDG 11: Sustainable Cities and Communities	29	84.81	

NOTE: ● Indicates a strength and ○ a weakness.

Kuwait

	Rank (Out of 134)	Score
Network Readiness Index	**64**	**48.36**
Pillar/sub-pillar	**Rank**	**Score**
A. Technology pillar	**56**	**43.14**
1st sub-pillar: Access	54	68.59
2nd sub-pillar: Content	90	18.08
3rd sub-pillar: Future Technologies	38	42.76
B. People pillar	**71**	**42.27**
1st sub-pillar: Individuals	33	54.27
2nd sub-pillar: Businesses	89	36.46
3rd sub-pillar: Governments	74	36.08
C. Governance pillar	**72**	**54.17**
1st sub-pillar: Trust	67	44.83
2nd sub-pillar: Regulation	80	62.07
3rd sub-pillar: Inclusion	81	55.61
D. Impact pillar	**65**	**53.86**
1st sub-pillar: Economy	56	31.68
2nd sub-pillar: Quality of Life	30	79.47
3rd sub-pillar: SDG Contribution	110	50.43



The Network Readiness Index in detail

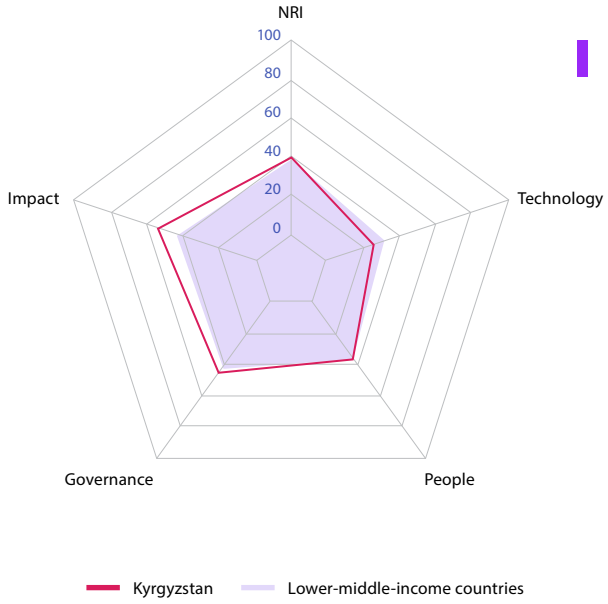
Indicator	Rank	Score	
A. Technology pillar	**56**	**43.14**	
1st sub-pillar: Access	54	68.59	
1.1.1 Mobile tariffs	54	67.95	
1.1.2 Handset prices	39	65.55	●
1.1.3 FTTH/building Internet subscriptions	117	5.16	○
1.1.4 Population covered by at least a 3G mobile network	1	100.00	●
1.1.5 International Internet bandwidth	59	72.86	
1.1.6 Internet access in schools	1	100.00	●
2nd sub-pillar: Content	90	18.08	
1.2.1 GitHub commits	101	1.95	
1.2.2 Internet domain registrations	65	4.07	
1.2.3 Mobile apps development	67	65.32	
1.2.4 AI scientific publications	104	0.99	
3rd sub-pillar: Future Technologies	38	42.76	
1.3.1 Adoption of emerging technologies	77	42.95	
1.3.2 Investment in emerging technologies	57	42.50	
1.3.3 Robot density	NA	NA	
1.3.4 Computer software spending	24	42.84	●
B. People pillar	**71**	**42.27**	
1st sub-pillar: Individuals	33	54.27	
2.1.1 Mobile broadband internet traffic within the country	27	30.26	●
2.1.2 ICT skills in the education system	89	28.91	
2.1.3 Use of virtual social networks	19	79.18	●
2.1.4 Tertiary enrollment	53	37.85	
2.1.5 Adult literacy rate	41	95.16	
2.1.6 AI talent concentration	NA	NA	
2nd sub-pillar: Businesses	89	36.46	
2.2.1 Firms with website	NA	NA	
2.2.2 GERD financed by business enterprise	92	1.18	○
2.2.3 Knowledge intensive employment	63	32.42	
2.2.4 Annual investment in telecommunication services	81	75.79	
2.2.5 GERD performed by business enterprise	NA	NA	
3rd sub-pillar: Governments	74	36.08	
2.3.1 Government online services	66	66.55	
2.3.2 Publication and use of open data	NA	NA	
2.3.3 Government promotion of investment in emerging tech	62	38.52	
2.3.4 R&D expenditure by governments and higher education	91	3.18	

Indicator	Rank	Score	
C. Governance pillar	**72**	**54.17**	
1st sub-pillar: Trust	67	44.83	
3.1.1 Secure Internet servers	77	47.92	
3.1.2 Cybersecurity	73	74.63	
3.1.3 Online access to financial account	55	34.02	
3.1.4 Internet shopping	64	22.76	
2nd sub-pillar: Regulation	80	62.07	
3.2.1 Regulatory quality	61	53.55	
3.2.2 ICT regulatory environment	95	69.41	
3.2.3 Regulation of emerging technologies	76	39.22	
3.2.4 E-commerce legislation	1	100.00	●
3.2.5 Privacy protection by law content	101	48.18	
3rd sub-pillar: Inclusion	81	55.61	
3.3.1 E-Participation	67	53.49	
3.3.2 Socioeconomic gap in use of digital payments	64	76.49	
3.3.3 Availability of local online content	48	68.51	
3.3.4 Gender gap in Internet use	25	72.04	●
3.3.5 Rural gap in use of digital payments	124	7.53	○
D. Impact pillar	**65**	**53.86**	
1st sub-pillar: Economy	56	31.68	
4.1.1 High-tech and medium-high-tech manufacturing	61	24.80	
4.1.2 High-tech exports	107	2.20	
4.1.3 PCT patent applications	89	0.67	
4.1.4 Domestic market size	63	53.32	
4.1.5 Prevalence of gig economy	46	53.20	
4.1.6 ICT services exports	10	55.91	●
2nd sub-pillar: Quality of Life	30	79.47	
4.2.1 Happiness	48	69.82	
4.2.2 Freedom to make life choices	41	82.00	●
4.2.3 Income inequality	NA	NA	
4.2.4 Healthy life expectancy at birth	29	86.58	●
3rd sub-pillar: SDG Contribution	110	50.43	
4.3.1 SDG 3: Good Health and Well-Being	73	67.63	
4.3.2 SDG 4: Quality Education	NA	NA	
4.3.3 SDG 5: Women's economic opportunity	132	7.96	○
4.3.4 SDG 7: Affordable and Clean Energy	115	50.72	○
4.3.5 SDG 11: Sustainable Cities and Communities	49	75.41	

NOTE: ● Indicates a strength and ○ a weakness.

Kyrgyzstan

	Rank (Out of 134)	Score
Network Readiness Index	**94**	**39.80**
Pillar/sub-pillar	**Rank**	**Score**
A. Technology pillar	**111**	**27.07**
1st sub-pillar: Access	100	49.37
2nd sub-pillar: Content	89	18.16
3rd sub-pillar: Future Technologies	129	13.69
B. People pillar	**101**	**31.90**
1st sub-pillar: Individuals	88	41.23
2nd sub-pillar: Businesses	102	32.10
3rd sub-pillar: Governments	107	22.36
C. Governance pillar	**95**	**47.22**
1st sub-pillar: Trust	101	29.61
2nd sub-pillar: Regulation	115	48.47
3rd sub-pillar: Inclusion	58	63.59
D. Impact pillar	**69**	**53.00**
1st sub-pillar: Economy	112	15.64
2nd sub-pillar: Quality of Life	33	78.68
3rd sub-pillar: SDG Contribution	64	64.67



The Network Readiness Index in detail

Indicator	Rank	Score	
A. Technology pillar	**111**	**27.07**	
1st sub-pillar: Access	100	49.37	
1.1.1 Mobile tariffs	100	42.77	
1.1.2 Handset prices	113	26.94	
1.1.3 FTTH/building Internet subscriptions	81	23.89	
1.1.4 Population covered by at least a 3G mobile network	105	96.86	
1.1.5 International Internet bandwidth	101	64.40	
1.1.6 Internet access in schools	56	41.37	
2nd sub-pillar: Content	89	18.16	
1.2.1 GitHub commits	67	6.86	●
1.2.2 Internet domain registrations	106	0.59	
1.2.3 Mobile apps development	74	63.85	
1.2.4 AI scientific publications	98	1.33	
3rd sub-pillar: Future Technologies	129	13.69	
1.3.1 Adoption of emerging technologies	122	15.66	○
1.3.2 Investment in emerging technologies	120	19.25	○
1.3.3 Robot density	NA	NA	
1.3.4 Computer software spending	95	6.16	
B. People pillar	**101**	**31.90**	
1st sub-pillar: Individuals	88	41.23	
2.1.1 Mobile broadband internet traffic within the country	71	8.06	
2.1.2 ICT skills in the education system	93	26.85	
2.1.3 Use of virtual social networks	98	37.54	
2.1.4 Tertiary enrollment	64	34.25	●
2.1.5 Adult literacy rate	12	99.45	●
2.1.6 AI talent concentration	NA	NA	
2nd sub-pillar: Businesses	102	32.10	
2.2.1 Firms with website	56	55.11	●
2.2.2 GERD financed by business enterprise	79	8.58	
2.2.3 Knowledge intensive employment	78	24.94	
2.2.4 Annual investment in telecommunication services	111	71.20	
2.2.5 GERD performed by business enterprise	77	0.69	
3rd sub-pillar: Governments	107	22.36	
2.3.1 Government online services	80	57.74	
2.3.2 Publication and use of open data	82	13.24	
2.3.3 Government promotion of investment in emerging tech	111	17.05	
2.3.4 R&D expenditure by governments and higher education	107	1.42	○

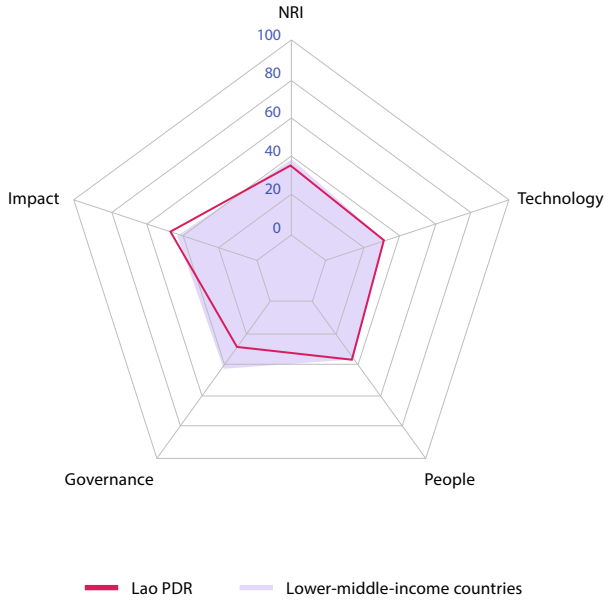
Indicator	Rank	Score	
C. Governance pillar	**95**	**47.22**	
1st sub-pillar: Trust	101	29.61	
3.1.1 Secure Internet servers	76	48.21	
3.1.2 Cybersecurity	96	48.75	
3.1.3 Online access to financial account	105	10.62	
3.1.4 Internet shopping	87	10.86	
2nd sub-pillar: Regulation	115	48.47	
3.2.1 Regulatory quality	101	36.55	
3.2.2 ICT regulatory environment	106	65.88	
3.2.3 Regulation of emerging technologies	92	27.53	
3.2.4 E-commerce legislation	87	66.67	
3.2.5 Privacy protection by law content	106	45.70	
3rd sub-pillar: Inclusion	58	63.59	
3.3.1 E-Participation	78	48.84	
3.3.2 Socioeconomic gap in use of digital payments	30	92.28	●
3.3.3 Availability of local online content	98	41.35	
3.3.4 Gender gap in Internet use	NA	NA	
3.3.5 Rural gap in use of digital payments	40	71.88	●
D. Impact pillar	**69**	**53.00**	
1st sub-pillar: Economy	112	15.64	
4.1.1 High-tech and medium-high-tech manufacturing	108	0.00	○
4.1.2 High-tech exports	32	28.29	●
4.1.3 PCT patent applications	99	0.00	○
4.1.4 Domestic market size	119	34.59	
4.1.5 Prevalence of gig economy	95	28.49	
4.1.6 ICT services exports	112	2.47	
2nd sub-pillar: Quality of Life	33	78.68	
4.2.1 Happiness	75	61.66	
4.2.2 Freedom to make life choices	4	95.50	●
4.2.3 Income inequality	17	85.43	●
4.2.4 Healthy life expectancy at birth	69	72.13	
3rd sub-pillar: SDG Contribution	64	64.67	
4.3.1 SDG 3: Good Health and Well-Being	66	68.88	●
4.3.2 SDG 4: Quality Education	NA	NA	
4.3.3 SDG 5: Women's economic opportunity	96	67.26	
4.3.4 SDG 7: Affordable and Clean Energy	106	57.51	
4.3.5 SDG 11: Sustainable Cities and Communities	69	65.02	

NOTE: ● Indicates a strength and ○ a weakness.

Lao PDR

	Rank (Out of 134)	Score
Network Readiness Index	**109**	**34.72**

Pillar/sub-pillar	Rank	Score
A. Technology pillar	**99**	**30.12**
1st sub-pillar: Access	98	50.12
2nd sub-pillar: Content	126	0.99
3rd sub-pillar: Future Technologies	46	39.25
B. People pillar	**98**	**33.17**
1st sub-pillar: Individuals	98	37.34
2nd sub-pillar: Businesses	116	26.93
3rd sub-pillar: Governments	77	35.23
C. Governance pillar	**130**	**27.68**
1st sub-pillar: Trust	123	16.53
2nd sub-pillar: Regulation	125	36.47
3rd sub-pillar: Inclusion	126	30.05
D. Impact pillar	**87**	**47.91**
1st sub-pillar: Economy	78	24.30
2nd sub-pillar: Quality of Life	82	63.78
3rd sub-pillar: SDG Contribution	91	55.64



The Network Readiness Index in detail

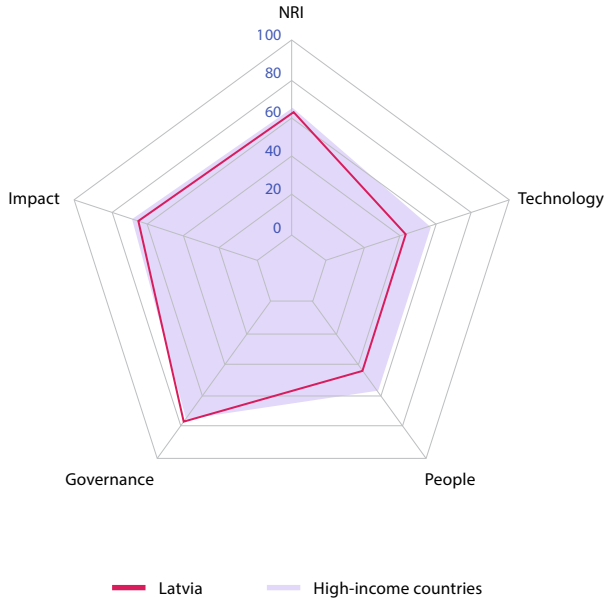
Indicator	Rank	Score	
A. Technology pillar	**99**	**30.12**	
1st sub-pillar: Access	98	50.12	
1.1.1 Mobile tariffs	97	43.59	
1.1.2 Handset prices	94	36.52	
1.1.3 FTTH/building Internet subscriptions	98	14.38	
1.1.4 Population covered by at least a 3G mobile network	114	94.47	
1.1.5 International Internet bandwidth	114	61.64	
1.1.6 Internet access in schools	NA	NA	
2nd sub-pillar: Content	126	0.99	
1.2.1 GitHub commits	120	0.61	
1.2.2 Internet domain registrations	79	2.28	
1.2.3 Mobile apps development	NA	NA	
1.2.4 AI scientific publications	129	0.09	○
3rd sub-pillar: Future Technologies	46	39.25	
1.3.1 Adoption of emerging technologies	70	44.69	●
1.3.2 Investment in emerging technologies	51	46.25	●
1.3.3 Robot density	NA	NA	
1.3.4 Computer software spending	46	26.80	●
B. People pillar	**98**	**33.17**	
1st sub-pillar: Individuals	98	37.34	
2.1.1 Mobile broadband internet traffic within the country	93	2.93	
2.1.2 ICT skills in the education system	57	53.96	●
2.1.3 Use of virtual social networks	94	40.57	
2.1.4 Tertiary enrollment	106	6.92	
2.1.5 Adult literacy rate	71	82.35	
2.1.6 AI talent concentration	NA	NA	
2nd sub-pillar: Businesses	116	26.93	
2.2.1 Firms with website	93	24.72	
2.2.2 GERD financed by business enterprise	NA	NA	
2.2.3 Knowledge intensive employment	93	17.65	
2.2.4 Annual investment in telecommunication services	123	38.41	○
2.2.5 GERD performed by business enterprise	NA	NA	
3rd sub-pillar: Governments	77	35.23	
2.3.1 Government online services	127	22.69	
2.3.2 Publication and use of open data	NA	NA	
2.3.3 Government promotion of investment in emerging tech	43	47.77	●
2.3.4 R&D expenditure by governments and higher education	NA	NA	

Indicator	Rank	Score	
C. Governance pillar	**130**	**27.68**	
1st sub-pillar: Trust	123	16.53	
3.1.1 Secure Internet servers	113	31.56	
3.1.2 Cybersecurity	117	18.94	
3.1.3 Online access to financial account	122	5.12	○
3.1.4 Internet shopping	89	10.49	
2nd sub-pillar: Regulation	125	36.47	
3.2.1 Regulatory quality	120	29.55	
3.2.2 ICT regulatory environment	130	26.71	○
3.2.3 Regulation of emerging technologies	69	43.12	
3.2.4 E-commerce legislation	87	66.67	
3.2.5 Privacy protection by law content	129	16.30	○
3rd sub-pillar: Inclusion	126	30.05	
3.3.1 E-Participation	114	24.42	
3.3.2 Socioeconomic gap in use of digital payments	129	14.18	○
3.3.3 Availability of local online content	73	56.49	●
3.3.4 Gender gap in Internet use	NA	NA	
3.3.5 Rural gap in use of digital payments	114	25.09	
D. Impact pillar	**87**	**47.91**	
1st sub-pillar: Economy	78	24.30	
4.1.1 High-tech and medium-high-tech manufacturing	101	3.69	
4.1.2 High-tech exports	16	41.76	●
4.1.3 PCT patent applications	92	0.60	
4.1.4 Domestic market size	100	40.45	
4.1.5 Prevalence of gig economy	43	54.36	●
4.1.6 ICT services exports	96	4.93	
2nd sub-pillar: Quality of Life	82	63.78	
4.2.1 Happiness	92	47.88	
4.2.2 Freedom to make life choices	13	91.95	●
4.2.3 Income inequality	73	60.80	
4.2.4 Healthy life expectancy at birth	100	54.50	
3rd sub-pillar: SDG Contribution	91	55.64	
4.3.1 SDG 3: Good Health and Well-Being	111	36.00	
4.3.2 SDG 4: Quality Education	NA	NA	
4.3.3 SDG 5: Women's economic opportunity	48	83.19	●
4.3.4 SDG 7: Affordable and Clean Energy	105	58.38	
4.3.5 SDG 11: Sustainable Cities and Communities	103	45.00	

NOTE: ● Indicates a strength and ○ a weakness.

Latvia

	Rank (Out of 134)	Score
Network Readiness Index	**37**	**57.77**
Pillar/sub-pillar	**Rank**	**Score**
A. Technology pillar	**51**	**44.53**
1st sub-pillar: Access	53	68.81
2nd sub-pillar: Content	38	35.67
3rd sub-pillar: Future Technologies	80	29.11
B. People pillar	**54**	**46.34**
1st sub-pillar: Individuals	53	50.19
2nd sub-pillar: Businesses	51	49.60
3rd sub-pillar: Governments	67	39.23
C. Governance pillar	**20**	**80.22**
1st sub-pillar: Trust	20	78.02
2nd sub-pillar: Regulation	18	84.33
3rd sub-pillar: Inclusion	25	78.30
D. Impact pillar	**39**	**59.99**
1st sub-pillar: Economy	46	34.44
2nd sub-pillar: Quality of Life	56	71.21
3rd sub-pillar: SDG Contribution	37	74.32



The Network Readiness Index in detail

Indicator	Rank	Score	
A. Technology pillar	**51**	**44.53**	
1st sub-pillar: Access	53	68.81	
1.1.1 Mobile tariffs	59	64.04	
1.1.2 Handset prices	45	60.83	
1.1.3 FTTH/building Internet subscriptions	82	23.75	
1.1.4 Population covered by at least a 3G mobile network	57	99.67	
1.1.5 International Internet bandwidth	100	64.58	○
1.1.6 Internet access in schools	1	100.00	●
2nd sub-pillar: Content	38	35.67	
1.2.1 GitHub commits	28	40.42	
1.2.2 Internet domain registrations	31	24.31	
1.2.3 Mobile apps development	20	75.97	●
1.2.4 AI scientific publications	88	1.99	
3rd sub-pillar: Future Technologies	80	29.11	
1.3.1 Adoption of emerging technologies	38	61.35	
1.3.2 Investment in emerging technologies	54	44.75	
1.3.3 Robot density	47	1.54	○
1.3.4 Computer software spending	91	8.79	
B. People pillar	**54**	**46.34**	
1st sub-pillar: Individuals	53	50.19	
2.1.1 Mobile broadband internet traffic within the country	48	14.21	
2.1.2 ICT skills in the education system	71	45.11	
2.1.3 Use of virtual social networks	32	75.95	
2.1.4 Tertiary enrollment	8	61.95	
2.1.5 Adult literacy rate	3	99.85	●
2.1.6 AI talent concentration	43	4.08	○
2nd sub-pillar: Businesses	51	49.60	
2.2.1 Firms with website	39	67.40	
2.2.2 GERD financed by business enterprise	61	33.39	
2.2.3 Knowledge intensive employment	23	68.40	●
2.2.4 Annual investment in telecommunication services	97	73.00	○
2.2.5 GERD performed by business enterprise	50	5.79	
3rd sub-pillar: Governments	67	39.23	
2.3.1 Government online services	35	79.39	
2.3.2 Publication and use of open data	58	27.94	
2.3.3 Government promotion of investment in emerging tech	67	37.31	
2.3.4 R&D expenditure by governments and higher education	51	12.28	

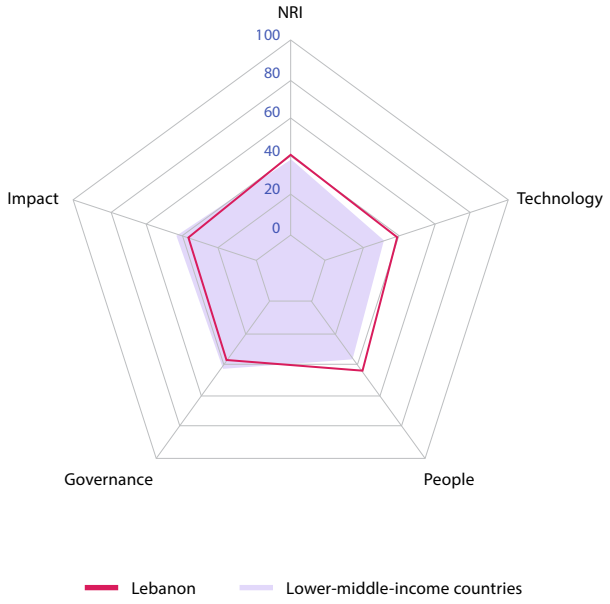
Indicator	Rank	Score	
C. Governance pillar	**20**	**80.22**	
1st sub-pillar: Trust	20	78.02	
3.1.1 Secure Internet servers	36	79.16	
3.1.2 Cybersecurity	21	97.23	●
3.1.3 Online access to financial account	16	69.36	●
3.1.4 Internet shopping	27	66.34	
2nd sub-pillar: Regulation	18	84.33	
3.2.1 Regulatory quality	25	77.24	
3.2.2 ICT regulatory environment	45	87.06	
3.2.3 Regulation of emerging technologies	39	61.04	
3.2.4 E-commerce legislation	1	100.00	●
3.2.5 Privacy protection by law content	2	96.32	●
3rd sub-pillar: Inclusion	25	78.30	
3.3.1 E-Participation	29	73.25	
3.3.2 Socioeconomic gap in use of digital payments	31	91.94	
3.3.3 Availability of local online content	31	81.25	
3.3.4 Gender gap in Internet use	17	73.74	●
3.3.5 Rural gap in use of digital payments	45	71.31	
D. Impact pillar	**39**	**59.99**	
1st sub-pillar: Economy	46	34.44	
4.1.1 High-tech and medium-high-tech manufacturing	65	21.09	
4.1.2 High-tech exports	28	30.51	
4.1.3 PCT patent applications	29	20.75	
4.1.4 Domestic market size	97	40.95	○
4.1.5 Prevalence of gig economy	40	56.40	
4.1.6 ICT services exports	21	36.92	●
2nd sub-pillar: Quality of Life	56	71.21	
4.2.1 Happiness	49	68.86	
4.2.2 Freedom to make life choices	68	73.65	
4.2.3 Income inequality	54	68.59	
4.2.4 Healthy life expectancy at birth	62	73.72	
3rd sub-pillar: SDG Contribution	37	74.32	
4.3.1 SDG 3: Good Health and Well-Being	61	71.24	
4.3.2 SDG 4: Quality Education	28	62.57	
4.3.3 SDG 5: Women's economic opportunity	1	100.00	●
4.3.4 SDG 7: Affordable and Clean Energy	47	75.72	
4.3.5 SDG 11: Sustainable Cities and Communities	73	62.07	

NOTE: ● Indicates a strength and ○ a weakness.

Lebanon

	Rank (Out of 134)	Score
Network Readiness Index	**96**	**39.70**

Pillar/sub-pillar	Rank	Score
A. Technology pillar	**82**	**37.43**
1st sub-pillar: Access	78	60.78
2nd sub-pillar: Content	64	23.48
3rd sub-pillar: Future Technologies	87	28.03
B. People pillar	**46**	**48.08**
1st sub-pillar: Individuals	14	60.10
2nd sub-pillar: Businesses	32	60.47
3rd sub-pillar: Governments	105	23.68
C. Governance pillar	**116**	**37.11**
1st sub-pillar: Trust	110	24.00
2nd sub-pillar: Regulation	129	33.73
3rd sub-pillar: Inclusion	86	53.60
D. Impact pillar	**120**	**36.16**
1st sub-pillar: Economy	76	25.10
2nd sub-pillar: Quality of Life	132	28.42
3rd sub-pillar: SDG Contribution	94	54.96



The Network Readiness Index in detail

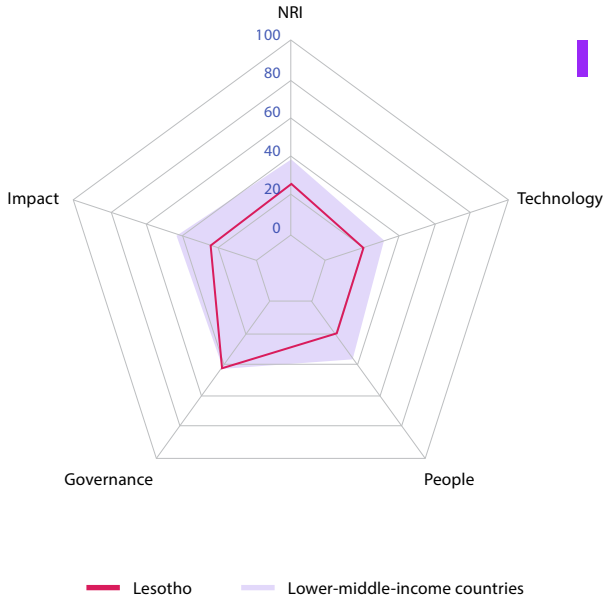
Indicator	Rank	Score	
A. Technology pillar	**82**	**37.43**	
1st sub-pillar: Access	78	60.78	
1.1.1 Mobile tariffs	124	13.31	
1.1.2 Handset prices	103	31.05	
1.1.3 FTTH/building Internet subscriptions	NA	NA	
1.1.4 Population covered by at least a 3G mobile network	49	99.87	●
1.1.5 International Internet bandwidth	90	66.82	
1.1.6 Internet access in schools	37	92.86	●
2nd sub-pillar: Content	64	23.48	
1.2.1 GitHub commits	55	9.03	●
1.2.2 Internet domain registrations	64	4.08	
1.2.3 Mobile apps development	25	75.41	●
1.2.4 AI scientific publications	69	5.37	
3rd sub-pillar: Future Technologies	87	28.03	
1.3.1 Adoption of emerging technologies	80	40.87	
1.3.2 Investment in emerging technologies	63	40.75	
1.3.3 Robot density	NA	NA	
1.3.4 Computer software spending	112	2.47	
B. People pillar	**46**	**48.08**	
1st sub-pillar: Individuals	14	60.10	
2.1.1 Mobile broadband internet traffic within the country	112	0.90	○
2.1.2 ICT skills in the education system	NA	NA	
2.1.3 Use of virtual social networks	5	85.83	●
2.1.4 Tertiary enrollment	NA	NA	
2.1.5 Adult literacy rate	48	93.58	
2.1.6 AI talent concentration	NA	NA	
2nd sub-pillar: Businesses	32	60.47	
2.2.1 Firms with website	44	62.38	●
2.2.2 GERD financed by business enterprise	NA	NA	
2.2.3 Knowledge intensive employment	49	40.33	●
2.2.4 Annual investment in telecommunication services	59	78.70	
2.2.5 GERD performed by business enterprise	NA	NA	
3rd sub-pillar: Governments	105	23.68	
2.3.1 Government online services	110	36.53	
2.3.2 Publication and use of open data	97	5.88	○
2.3.3 Government promotion of investment in emerging tech	94	28.62	
2.3.4 R&D expenditure by governments and higher education	NA	NA	

Indicator	Rank	Score	
C. Governance pillar	**116**	**37.11**	
1st sub-pillar: Trust	110	24.00	
3.1.1 Secure Internet servers	82	46.14	
3.1.2 Cybersecurity	108	29.22	
3.1.3 Online access to financial account	101	12.96	
3.1.4 Internet shopping	101	7.69	
2nd sub-pillar: Regulation	129	33.73	
3.2.1 Regulatory quality	119	29.66	
3.2.2 ICT regulatory environment	132	12.94	○
3.2.3 Regulation of emerging technologies	96	24.94	
3.2.4 E-commerce legislation	87	66.67	
3.2.5 Privacy protection by law content	119	34.46	
3rd sub-pillar: Inclusion	86	53.60	
3.3.1 E-Participation	88	38.37	
3.3.2 Socioeconomic gap in use of digital payments	102	52.99	
3.3.3 Availability of local online content	81	51.68	
3.3.4 Gender gap in Internet use	NA	NA	
3.3.5 Rural gap in use of digital payments	44	71.37	●
D. Impact pillar	**120**	**36.16**	
1st sub-pillar: Economy	76	25.10	
4.1.1 High-tech and medium-high-tech manufacturing	NA	NA	
4.1.2 High-tech exports	95	3.66	
4.1.3 PCT patent applications	NA	NA	
4.1.4 Domestic market size	93	41.72	
4.1.5 Prevalence of gig economy	68	38.37	
4.1.6 ICT services exports	58	16.63	●
2nd sub-pillar: Quality of Life	132	28.42	
4.2.1 Happiness	130	0.00	○
4.2.2 Freedom to make life choices	128	12.49	○
4.2.3 Income inequality	NA	NA	
4.2.4 Healthy life expectancy at birth	66	72.76	
3rd sub-pillar: SDG Contribution	94	54.96	
4.3.1 SDG 3: Good Health and Well-Being	60	71.60	
4.3.2 SDG 4: Quality Education	70	17.44	
4.3.3 SDG 5: Women's economic opportunity	122	41.59	
4.3.4 SDG 7: Affordable and Clean Energy	47	75.72	●
4.3.5 SDG 11: Sustainable Cities and Communities	59	68.47	

NOTE: ● Indicates a strength and ○ a weakness.

Lesotho

	Rank (Out of 134)	Score
Network Readiness Index	**128**	**26.74**
Pillar/sub-pillar	**Rank**	**Score**
A. Technology pillar	**126**	**19.38**
1st sub-pillar: Access	121	39.86
2nd sub-pillar: Content	131	0.41
3rd sub-pillar: Future Technologies	119	17.88
B. People pillar	**129**	**17.63**
1st sub-pillar: Individuals	118	21.24
2nd sub-pillar: Businesses	124	22.17
3rd sub-pillar: Governments	132	9.49
C. Governance pillar	**103**	**42.57**
1st sub-pillar: Trust	111	23.11
2nd sub-pillar: Regulation	119	42.90
3rd sub-pillar: Inclusion	67	61.72
D. Impact pillar	**132**	**27.38**
1st sub-pillar: Economy	133	8.86
2nd sub-pillar: Quality of Life	131	30.98
3rd sub-pillar: SDG Contribution	124	42.31



The Network Readiness Index in detail

Indicator	Rank	Score	
A. Technology pillar	**126**	**19.38**	
1st sub-pillar: Access	121	39.86	
1.1.1 Mobile tariffs	121	19.86	
1.1.2 Handset prices	114	26.85	
1.1.3 FTTH/building Internet subscriptions	110	7.62	
1.1.4 Population covered by at least a 3G mobile network	93	98.31	●
1.1.5 International Internet bandwidth	132	46.67	○
1.1.6 Internet access in schools	NA	NA	
2nd sub-pillar: Content	131	0.41	
1.2.1 GitHub commits	121	0.53	
1.2.2 Internet domain registrations	113	0.34	
1.2.3 Mobile apps development	NA	NA	
1.2.4 AI scientific publications	119	0.37	
3rd sub-pillar: Future Technologies	119	17.88	
1.3.1 Adoption of emerging technologies	127	0.00	○
1.3.2 Investment in emerging technologies	79	35.75	●
1.3.3 Robot density	NA	NA	
1.3.4 Computer software spending	NA	NA	
B. People pillar	**129**	**17.63**	
1st sub-pillar: Individuals	118	21.24	
2.1.1 Mobile broadband internet traffic within the country	120	0.15	
2.1.2 ICT skills in the education system	105	8.92	
2.1.3 Use of virtual social networks	107	17.99	
2.1.4 Tertiary enrollment	112	5.04	
2.1.5 Adult literacy rate	80	74.09	
2.1.6 AI talent concentration	NA	NA	
2nd sub-pillar: Businesses	124	22.17	
2.2.1 Firms with website	111	6.24	
2.2.2 GERD financed by business enterprise	94	0.97	
2.2.3 Knowledge intensive employment	99	15.32	
2.2.4 Annual investment in telecommunication services	118	66.15	
2.2.5 GERD performed by business enterprise	NA	NA	
3rd sub-pillar: Governments	132	9.49	
2.3.1 Government online services	123	27.67	
2.3.2 Publication and use of open data	NA	NA	
2.3.3 Government promotion of investment in emerging tech	125	0.05	
2.3.4 R&D expenditure by governments and higher education	112	0.74	

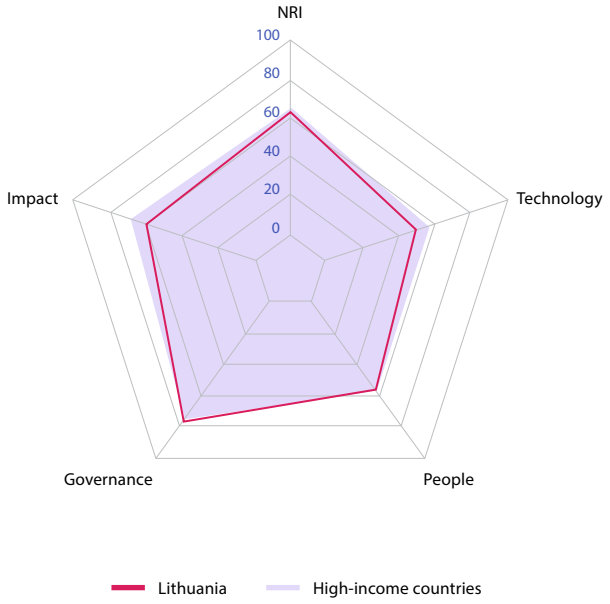
Indicator	Rank	Score	
C. Governance pillar	**103**	**42.57**	
1st sub-pillar: Trust	111	23.11	
3.1.1 Secure Internet servers	110	33.47	
3.1.2 Cybersecurity	129	7.48	○
3.1.3 Online access to financial account	60	30.94	●
3.1.4 Internet shopping	68	20.57	●
2nd sub-pillar: Regulation	119	42.90	
3.2.1 Regulatory quality	112	32.95	
3.2.2 ICT regulatory environment	102	66.82	
3.2.3 Regulation of emerging technologies	109	10.39	
3.2.4 E-commerce legislation	121	33.33	
3.2.5 Privacy protection by law content	53	70.98	●
3rd sub-pillar: Inclusion	67	61.72	
3.3.1 E-Participation	104	29.07	
3.3.2 Socioeconomic gap in use of digital payments	58	80.15	●
3.3.3 Availability of local online content	118	26.44	
3.3.4 Gender gap in Internet use	1	100.00	●
3.3.5 Rural gap in use of digital payments	38	72.92	●
D. Impact pillar	**132**	**27.38**	
1st sub-pillar: Economy	133	8.86	
4.1.1 High-tech and medium-high-tech manufacturing	NA	NA	
4.1.2 High-tech exports	131	0.00	○
4.1.3 PCT patent applications	99	0.00	○
4.1.4 Domestic market size	133	9.16	○
4.1.5 Prevalence of gig economy	88	33.43	●
4.1.6 ICT services exports	119	1.71	
2nd sub-pillar: Quality of Life	131	30.98	
4.2.1 Happiness	122	21.56	
4.2.2 Freedom to make life choices	102	56.88	
4.2.3 Income inequality	96	45.48	
4.2.4 Healthy life expectancy at birth	133	0.00	○
3rd sub-pillar: SDG Contribution	124	42.31	
4.3.1 SDG 3: Good Health and Well-Being	114	32.54	
4.3.2 SDG 4: Quality Education	NA	NA	
4.3.3 SDG 5: Women's economic opportunity	93	69.03	●
4.3.4 SDG 7: Affordable and Clean Energy	124	41.91	
4.3.5 SDG 11: Sustainable Cities and Communities	127	25.76	

NOTE: ● Indicates a strength and ○ a weakness.

Lithuania

	Rank (Out of 134)	Score
Network Readiness Index	**33**	**60.41**

Pillar/sub-pillar	Rank	Score
A. Technology pillar	**35**	**49.55**
1st sub-pillar: Access	16	76.77
2nd sub-pillar: Content	34	37.35
3rd sub-pillar: Future Technologies	61	34.53
B. People pillar	**36**	**53.42**
1st sub-pillar: Individuals	41	52.59
2nd sub-pillar: Businesses	37	56.97
3rd sub-pillar: Governments	32	50.71
C. Governance pillar	**19**	**80.35**
1st sub-pillar: Trust	24	76.18
2nd sub-pillar: Regulation	11	87.70
3rd sub-pillar: Inclusion	29	77.15
D. Impact pillar	**44**	**58.34**
1st sub-pillar: Economy	60	30.96
2nd sub-pillar: Quality of Life	55	71.49
3rd sub-pillar: SDG Contribution	42	72.57



The Network Readiness Index in detail

Indicator	Rank	Score	
A. Technology pillar	**35**	**49.55**	
1st sub-pillar: Access	16	76.77	
1.1.1 Mobile tariffs	21	83.16	
1.1.2 Handset prices	21	76.76	
1.1.3 FTTH/building Internet subscriptions	69	26.97	
1.1.4 Population covered by at least a 3G mobile network	22	100.00	
1.1.5 International Internet bandwidth	39	76.10	
1.1.6 Internet access in schools	34	97.60	
2nd sub-pillar: Content	34	37.35	
1.2.1 GitHub commits	29	36.74	
1.2.2 Internet domain registrations	27	27.08	
1.2.3 Mobile apps development	8	82.70	●
1.2.4 AI scientific publications	78	2.86	
3rd sub-pillar: Future Technologies	61	34.53	
1.3.1 Adoption of emerging technologies	31	65.18	
1.3.2 Investment in emerging technologies	29	61.75	
1.3.3 Robot density	36	5.46	
1.3.4 Computer software spending	98	5.74	○
B. People pillar	**36**	**53.42**	
1st sub-pillar: Individuals	41	52.59	
2.1.1 Mobile broadband internet traffic within the country	50	13.36	
2.1.2 ICT skills in the education system	25	71.21	
2.1.3 Use of virtual social networks	39	73.22	
2.1.4 Tertiary enrollment	32	45.94	
2.1.5 Adult literacy rate	5	99.77	●
2.1.6 AI talent concentration	32	12.02	○
2nd sub-pillar: Businesses	37	56.97	
2.2.1 Firms with website	23	78.99	
2.2.2 GERD financed by business enterprise	50	46.16	
2.2.3 Knowledge intensive employment	19	71.42	
2.2.4 Annual investment in telecommunication services	91	74.39	○
2.2.5 GERD performed by business enterprise	37	13.91	
3rd sub-pillar: Governments	32	50.71	
2.3.1 Government online services	28	81.73	
2.3.2 Publication and use of open data	NA	NA	
2.3.3 Government promotion of investment in emerging tech	38	50.60	
2.3.4 R&D expenditure by governments and higher education	36	19.79	

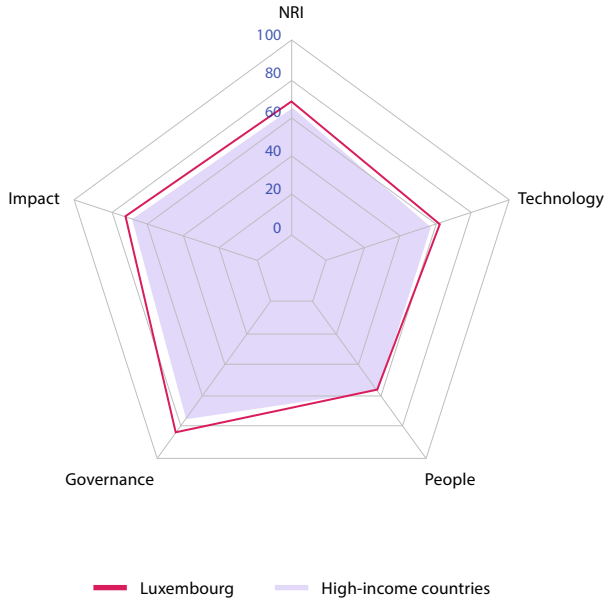
Indicator	Rank	Score	
C. Governance pillar	**19**	**80.35**	
1st sub-pillar: Trust	24	76.18	
3.1.1 Secure Internet servers	15	85.86	●
3.1.2 Cybersecurity	11	97.89	●
3.1.3 Online access to financial account	20	60.65	
3.1.4 Internet shopping	33	60.32	
2nd sub-pillar: Regulation	11	87.70	
3.2.1 Regulatory quality	23	78.45	
3.2.2 ICT regulatory environment	2	99.41	●
3.2.3 Regulation of emerging technologies	27	71.95	
3.2.4 E-commerce legislation	1	100.00	●
3.2.5 Privacy protection by law content	13	88.72	●
3rd sub-pillar: Inclusion	29	77.15	
3.3.1 E-Participation	67	53.49	
3.3.2 Socioeconomic gap in use of digital payments	33	91.15	
3.3.3 Availability of local online content	16	87.74	●
3.3.4 Gender gap in Internet use	14	74.20	●
3.3.5 Rural gap in use of digital payments	8	79.18	●
D. Impact pillar	**44**	**58.34**	
1st sub-pillar: Economy	60	30.96	
4.1.1 High-tech and medium-high-tech manufacturing	51	29.59	
4.1.2 High-tech exports	42	20.63	
4.1.3 PCT patent applications	37	11.04	
4.1.4 Domestic market size	81	46.97	
4.1.5 Prevalence of gig economy	44	53.78	
4.1.6 ICT services exports	45	23.75	
2nd sub-pillar: Quality of Life	55	71.49	
4.2.1 Happiness	11	87.14	●
4.2.2 Freedom to make life choices	107	55.77	○
4.2.3 Income inequality	56	67.84	
4.2.4 Healthy life expectancy at birth	57	75.19	
3rd sub-pillar: SDG Contribution	42	72.57	
4.3.1 SDG 3: Good Health and Well-Being	75	67.57	
4.3.2 SDG 4: Quality Education	32	59.45	
4.3.3 SDG 5: Women's economic opportunity	29	91.15	
4.3.4 SDG 7: Affordable and Clean Energy	42	76.81	
4.3.5 SDG 11: Sustainable Cities and Communities	63	67.89	

NOTE: ● Indicates a strength and ○ a weakness.

Luxembourg

	Rank (Out of 134)	Score
Network Readiness Index	**18**	**67.84**

Pillar/sub-pillar	Rank	Score
A. Technology pillar	**13**	**62.47**
1st sub-pillar: Access	38	72.33
2nd sub-pillar: Content	14	52.27
3rd sub-pillar: Future Technologies	9	62.80
B. People pillar	**33**	**53.87**
1st sub-pillar: Individuals	109	30.30
2nd sub-pillar: Businesses	22	66.44
3rd sub-pillar: Governments	18	64.87
C. Governance pillar	**12**	**84.23**
1st sub-pillar: Trust	23	77.03
2nd sub-pillar: Regulation	1	95.03
3rd sub-pillar: Inclusion	18	80.65
D. Impact pillar	**17**	**70.79**
1st sub-pillar: Economy	31	39.40
2nd sub-pillar: Quality of Life	11	86.63
3rd sub-pillar: SDG Contribution	7	86.34



The Network Readiness Index in detail

Indicator	Rank	Score	
A. Technology pillar	**13**	**62.47**	
1st sub-pillar: Access	38	72.33	
1.1.1 Mobile tariffs	3	98.99	●
1.1.2 Handset prices	23	74.83	
1.1.3 FTTH/building Internet subscriptions	113	6.67	○
1.1.4 Population covered by at least a 3G mobile network	1	100.00	●
1.1.5 International Internet bandwidth	19	81.15	
1.1.6 Internet access in schools	NA	NA	
2nd sub-pillar: Content	14	52.27	
1.2.1 GitHub commits	24	50.42	
1.2.2 Internet domain registrations	5	83.98	●
1.2.3 Mobile apps development	30	74.11	
1.2.4 AI scientific publications	111	0.57	○
3rd sub-pillar: Future Technologies	9	62.80	
1.3.1 Adoption of emerging technologies	7	92.18	●
1.3.2 Investment in emerging technologies	10	79.50	
1.3.3 Robot density	NA	NA	
1.3.4 Computer software spending	78	16.73	
B. People pillar	**33**	**53.87**	
1st sub-pillar: Individuals	109	30.30	
2.1.1 Mobile broadband internet traffic within the country	108	1.31	○
2.1.2 ICT skills in the education system	40	59.34	
2.1.3 Use of virtual social networks	76	58.06	
2.1.4 Tertiary enrollment	100	11.12	
2.1.5 Adult literacy rate	NA	NA	
2.1.6 AI talent concentration	23	21.67	
2nd sub-pillar: Businesses	22	66.44	
2.2.1 Firms with website	17	82.33	
2.2.2 GERD financed by business enterprise	25	63.43	
2.2.3 Knowledge intensive employment	1	100.00	●
2.2.4 Annual investment in telecommunication services	92	74.30	○
2.2.5 GERD performed by business enterprise	40	12.14	
3rd sub-pillar: Governments	18	64.87	
2.3.1 Government online services	29	81.42	
2.3.2 Publication and use of open data	NA	NA	
2.3.3 Government promotion of investment in emerging tech	3	94.93	●
2.3.4 R&D expenditure by governments and higher education	39	18.26	

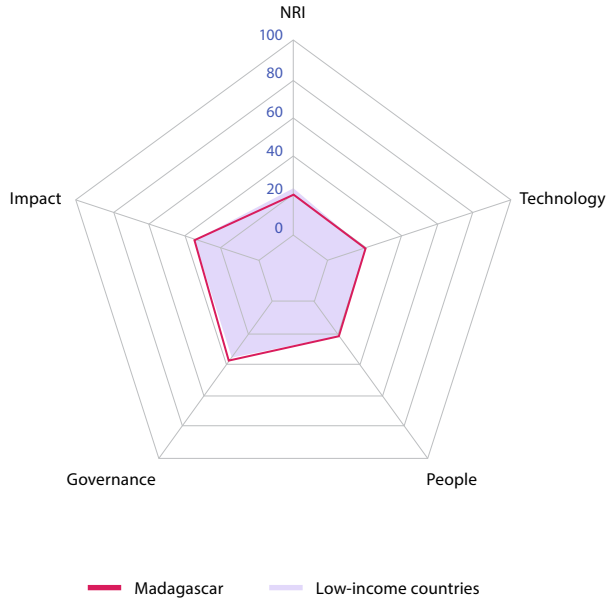
Indicator	Rank	Score	
C. Governance pillar	**12**	**84.23**	
1st sub-pillar: Trust	23	77.03	
3.1.1 Secure Internet servers	16	85.48	
3.1.2 Cybersecurity	18	97.36	
3.1.3 Online access to financial account	17	66.56	
3.1.4 Internet shopping	35	58.71	
2nd sub-pillar: Regulation	1	95.03	
3.2.1 Regulatory quality	2	92.87	●
3.2.2 ICT regulatory environment	38	88.82	
3.2.3 Regulation of emerging technologies	1	100.00	●
3.2.4 E-commerce legislation	1	100.00	●
3.2.5 Privacy protection by law content	4	93.44	●
3rd sub-pillar: Inclusion	18	80.65	
3.3.1 E-Participation	25	74.42	
3.3.2 Socioeconomic gap in use of digital payments	15	96.82	
3.3.3 Availability of local online content	17	86.54	
3.3.4 Gender gap in Internet use	47	69.21	
3.3.5 Rural gap in use of digital payments	17	76.25	
D. Impact pillar	**17**	**70.79**	
1st sub-pillar: Economy	31	39.40	
4.1.1 High-tech and medium-high-tech manufacturing	NA	NA	
4.1.2 High-tech exports	70	10.77	
4.1.3 PCT patent applications	8	65.38	
4.1.4 Domestic market size	90	43.34	
4.1.5 Prevalence of gig economy	50	50.29	
4.1.6 ICT services exports	36	27.24	
2nd sub-pillar: Quality of Life	11	86.63	
4.2.1 Happiness	8	90.68	●
4.2.2 Freedom to make life choices	17	89.97	
4.2.3 Income inequality	40	74.37	
4.2.4 Healthy life expectancy at birth	12	91.48	
3rd sub-pillar: SDG Contribution	7	86.34	
4.3.1 SDG 3: Good Health and Well-Being	8	95.29	●
4.3.2 SDG 4: Quality Education	35	58.23	
4.3.3 SDG 5: Women's economic opportunity	1	100.00	●
4.3.4 SDG 7: Affordable and Clean Energy	13	83.02	
4.3.5 SDG 11: Sustainable Cities and Communities	11	95.15	

NOTE: ● Indicates a strength and ○ a weakness.

Madagascar

	Rank (Out of 134)	Score
Network Readiness Index	**124**	**27.64**

Pillar/sub-pillar	Rank	Score
A. Technology pillar	**128**	**17.62**
1st sub-pillar: Access	128	32.81
2nd sub-pillar: Content	130	0.59
3rd sub-pillar: Future Technologies	113	19.46
B. People pillar	**124**	**22.00**
1st sub-pillar: Individuals	122	19.98
2nd sub-pillar: Businesses	106	30.90
3rd sub-pillar: Governments	122	15.11
C. Governance pillar	**113**	**38.19**
1st sub-pillar: Trust	125	16.01
2nd sub-pillar: Regulation	61	66.97
3rd sub-pillar: Inclusion	124	31.59
D. Impact pillar	**126**	**32.75**
1st sub-pillar: Economy	86	22.44
2nd sub-pillar: Quality of Life	125	37.71
3rd sub-pillar: SDG Contribution	132	38.10



The Network Readiness Index in detail

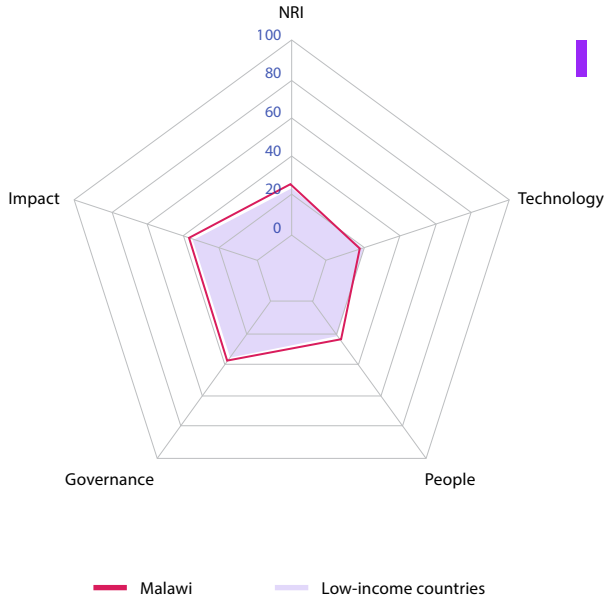
Indicator	Rank	Score	
A. Technology pillar	**128**	**17.62**	
1st sub-pillar: Access	128	32.81	
1.1.1 Mobile tariffs	129	8.03	○
1.1.2 Handset prices	124	18.18	
1.1.3 FTTH/building Internet subscriptions	75	25.50	●
1.1.4 Population covered by at least a 3G mobile network	127	85.34	
1.1.5 International Internet bandwidth	117	59.70	
1.1.6 Internet access in schools	83	0.12	
2nd sub-pillar: Content	130	0.59	
1.2.1 GitHub commits	118	0.69	
1.2.2 Internet domain registrations	127	0.11	
1.2.3 Mobile apps development	122	0.00	○
1.2.4 AI scientific publications	95	1.56	●
3rd sub-pillar: Future Technologies	113	19.46	
1.3.1 Adoption of emerging technologies	116	22.75	
1.3.2 Investment in emerging technologies	88	33.75	●
1.3.3 Robot density	NA	NA	
1.3.4 Computer software spending	115	1.87	
B. People pillar	**124**	**22.00**	
1st sub-pillar: Individuals	122	19.98	
2.1.1 Mobile broadband internet traffic within the country	100	2.13	
2.1.2 ICT skills in the education system	NA	NA	
2.1.3 Use of virtual social networks	121	6.94	
2.1.4 Tertiary enrollment	125	1.89	
2.1.5 Adult literacy rate	85	68.94	
2.1.6 AI talent concentration	NA	NA	
2nd sub-pillar: Businesses	106	30.90	
2.2.1 Firms with website	100	18.25	
2.2.2 GERD financed by business enterprise	NA	NA	
2.2.3 Knowledge intensive employment	124	1.49	
2.2.4 Annual investment in telecommunication services	98	72.96	
2.2.5 GERD performed by business enterprise	NA	NA	
3rd sub-pillar: Governments	122	15.11	
2.3.1 Government online services	122	28.33	
2.3.2 Publication and use of open data	NA	NA	
2.3.3 Government promotion of investment in emerging tech	112	16.96	
2.3.4 R&D expenditure by governments and higher education	114	0.05	○

Indicator	Rank	Score	
C. Governance pillar	**113**	**38.19**	
1st sub-pillar: Trust	125	16.01	
3.1.1 Secure Internet servers	128	18.27	○
3.1.2 Cybersecurity	115	21.98	
3.1.3 Online access to financial account	82	18.78	●
3.1.4 Internet shopping	108	5.02	
2nd sub-pillar: Regulation	61	66.97	
3.2.1 Regulatory quality	115	31.08	
3.2.2 ICT regulatory environment	115	61.76	
3.2.3 Regulation of emerging technologies	NA	NA	
3.2.4 E-commerce legislation	1	100.00	●
3.2.5 Privacy protection by law content	40	75.05	●
3rd sub-pillar: Inclusion	124	31.59	
3.3.1 E-Participation	106	26.75	
3.3.2 Socioeconomic gap in use of digital payments	128	26.77	○
3.3.3 Availability of local online content	109	34.13	
3.3.4 Gender gap in Internet use	NA	NA	
3.3.5 Rural gap in use of digital payments	104	38.73	
D. Impact pillar	**126**	**32.75**	
1st sub-pillar: Economy	86	22.44	
4.1.1 High-tech and medium-high-tech manufacturing	NA	NA	
4.1.2 High-tech exports	117	1.17	
4.1.3 PCT patent applications	87	0.80	●
4.1.4 Domestic market size	106	37.55	
4.1.5 Prevalence of gig economy	59	44.19	●
4.1.6 ICT services exports	35	28.52	●
2nd sub-pillar: Quality of Life	125	37.71	
4.2.1 Happiness	116	31.00	
4.2.2 Freedom to make life choices	126	24.79	○
4.2.3 Income inequality	91	51.26	●
4.2.4 Healthy life expectancy at birth	111	43.78	
3rd sub-pillar: SDG Contribution	132	38.10	
4.3.1 SDG 3: Good Health and Well-Being	132	10.58	○
4.3.2 SDG 4: Quality Education	NA	NA	
4.3.3 SDG 5: Women's economic opportunity	112	56.64	
4.3.4 SDG 7: Affordable and Clean Energy	122	43.50	
4.3.5 SDG 11: Sustainable Cities and Communities	109	41.67	

NOTE: ● Indicates a strength and ○ a weakness.

Malawi

	Rank (Out of 134)	Score
Network Readiness Index	**121**	**29.39**
Pillar/sub-pillar	**Rank**	**Score**
A. Technology pillar	**131**	**16.42**
1st sub-pillar: Access	126	36.20
2nd sub-pillar: Content	125	1.15
3rd sub-pillar: Future Technologies	130	11.93
B. People pillar	**121**	**24.86**
1st sub-pillar: Individuals	119	21.11
2nd sub-pillar: Businesses	87	37.26
3rd sub-pillar: Governments	120	16.21
C. Governance pillar	**112**	**38.35**
1st sub-pillar: Trust	112	22.59
2nd sub-pillar: Regulation	112	49.91
3rd sub-pillar: Inclusion	111	42.53
D. Impact pillar	**114**	**37.92**
1st sub-pillar: Economy	122	13.42
2nd sub-pillar: Quality of Life	116	46.14
3rd sub-pillar: SDG Contribution	97	54.18



The Network Readiness Index in detail

Indicator	Rank	Score	
A. Technology pillar	**131**	**16.42**	
1st sub-pillar: Access	126	36.20	
1.1.1 Mobile tariffs	128	9.48	○
1.1.2 Handset prices	129	13.05	○
1.1.3 FTTH/building Internet subscriptions	120	4.47	
1.1.4 Population covered by at least a 3G mobile network	113	94.86	
1.1.5 International Internet bandwidth	120	59.11	
1.1.6 Internet access in schools	NA	NA	
2nd sub-pillar: Content	125	1.15	
1.2.1 GitHub commits	124	0.38	
1.2.2 Internet domain registrations	126	0.11	
1.2.3 Mobile apps development	NA	NA	
1.2.4 AI scientific publications	77	2.95	●
3rd sub-pillar: Future Technologies	130	11.93	
1.3.1 Adoption of emerging technologies	124	13.46	○
1.3.2 Investment in emerging technologies	118	19.75	
1.3.3 Robot density	NA	NA	
1.3.4 Computer software spending	111	2.58	
B. People pillar	**121**	**24.86**	
1st sub-pillar: Individuals	119	21.11	
2.1.1 Mobile broadband internet traffic within the country	97	2.21	
2.1.2 ICT skills in the education system	69	46.84	●
2.1.3 Use of virtual social networks	133	1.08	○
2.1.4 Tertiary enrollment	130	0.05	
2.1.5 Adult literacy rate	94	55.37	
2.1.6 AI talent concentration	NA	NA	
2nd sub-pillar: Businesses	87	37.26	
2.2.1 Firms with website	74	40.90	●
2.2.2 GERD financed by business enterprise	NA	NA	
2.2.3 Knowledge intensive employment	123	1.57	
2.2.4 Annual investment in telecommunication services	116	69.31	
2.2.5 GERD performed by business enterprise	NA	NA	
3rd sub-pillar: Governments	120	16.21	
2.3.1 Government online services	120	29.34	
2.3.2 Publication and use of open data	91	8.82	
2.3.3 Government promotion of investment in emerging tech	116	10.46	
2.3.4 R&D expenditure by governments and higher education	NA	NA	

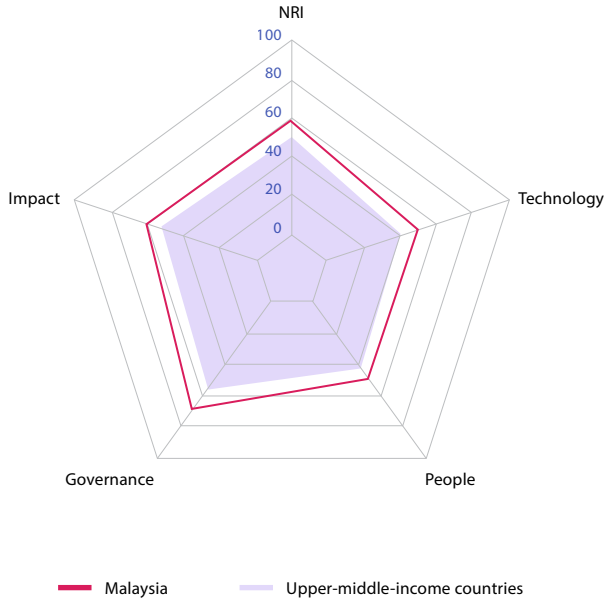
Indicator	Rank	Score	
C. Governance pillar	**112**	**38.35**	
1st sub-pillar: Trust	112	22.59	
3.1.1 Secure Internet servers	125	22.35	
3.1.2 Cybersecurity	101	35.72	
3.1.3 Online access to financial account	59	31.01	●
3.1.4 Internet shopping	124	1.29	
2nd sub-pillar: Regulation	112	49.91	
3.2.1 Regulatory quality	114	31.85	
3.2.2 ICT regulatory environment	58	84.71	●
3.2.3 Regulation of emerging technologies	114	5.19	
3.2.4 E-commerce legislation	87	66.67	
3.2.5 Privacy protection by law content	77	61.16	●
3rd sub-pillar: Inclusion	111	42.53	
3.3.1 E-Participation	90	36.05	
3.3.2 Socioeconomic gap in use of digital payments	91	56.69	
3.3.3 Availability of local online content	129	16.59	○
3.3.4 Gender gap in Internet use	NA	NA	
3.3.5 Rural gap in use of digital payments	72	60.81	●
D. Impact pillar	**114**	**37.92**	
1st sub-pillar: Economy	122	13.42	
4.1.1 High-tech and medium-high-tech manufacturing	NA	NA	
4.1.2 High-tech exports	87	4.93	
4.1.3 PCT patent applications	99	0.00	○
4.1.4 Domestic market size	121	33.38	
4.1.5 Prevalence of gig economy	125	3.49	○
4.1.6 ICT services exports	40	25.32	●
2nd sub-pillar: Quality of Life	116	46.14	
4.2.1 Happiness	125	18.66	
4.2.2 Freedom to make life choices	92	61.42	
4.2.3 Income inequality	69	61.56	●
4.2.4 Healthy life expectancy at birth	112	42.93	
3rd sub-pillar: SDG Contribution	97	54.18	
4.3.1 SDG 3: Good Health and Well-Being	113	32.83	
4.3.2 SDG 4: Quality Education	NA	NA	
4.3.3 SDG 5: Women's economic opportunity	83	71.68	●
4.3.4 SDG 7: Affordable and Clean Energy	90	66.26	
4.3.5 SDG 11: Sustainable Cities and Communities	100	45.96	

NOTE: ● Indicates a strength and ○ a weakness.

Malaysia

	Rank (Out of 134)	Score
Network Readiness Index	**40**	**56.72**

Pillar/sub-pillar	Rank	Score
A. Technology pillar	**38**	**49.31**
1st sub-pillar: Access	25	75.61
2nd sub-pillar: Content	59	24.88
3rd sub-pillar: Future Technologies	30	47.45
B. People pillar	**48**	**47.97**
1st sub-pillar: Individuals	56	49.37
2nd sub-pillar: Businesses	62	45.76
3rd sub-pillar: Governments	37	48.78
C. Governance pillar	**39**	**69.80**
1st sub-pillar: Trust	38	67.57
2nd sub-pillar: Regulation	52	70.55
3rd sub-pillar: Inclusion	46	71.28
D. Impact pillar	**41**	**59.81**
1st sub-pillar: Economy	15	53.67
2nd sub-pillar: Quality of Life	60	69.60
3rd sub-pillar: SDG Contribution	89	56.18



The Network Readiness Index in detail

Indicator	Rank	Score	
A. Technology pillar	**38**	**49.31**	
1st sub-pillar: Access	25	75.61	
1.1.1 Mobile tariffs	72	59.83	
1.1.2 Handset prices	42	63.03	
1.1.3 FTTH/building Internet subscriptions	22	46.74	●
1.1.4 Population covered by at least a 3G mobile network	84	98.97	
1.1.5 International Internet bandwidth	12	85.50	●
1.1.6 Internet access in schools	29	99.60	
2nd sub-pillar: Content	59	24.88	
1.2.1 GitHub commits	61	8.12	
1.2.2 Internet domain registrations	56	5.58	
1.2.3 Mobile apps development	78	62.86	○
1.2.4 AI scientific publications	23	22.97	●
3rd sub-pillar: Future Technologies	30	47.45	
1.3.1 Adoption of emerging technologies	25	71.90	
1.3.2 Investment in emerging technologies	12	78.75	●
1.3.3 Robot density	30	9.20	
1.3.4 Computer software spending	38	29.94	
B. People pillar	**48**	**47.97**	
1st sub-pillar: Individuals	56	49.37	
2.1.1 Mobile broadband internet traffic within the country	9	46.08	●
2.1.2 ICT skills in the education system	61	51.21	
2.1.3 Use of virtual social networks	37	74.10	
2.1.4 Tertiary enrollment	76	26.10	
2.1.5 Adult literacy rate	NA	NA	
2.1.6 AI talent concentration	NA	NA	
2nd sub-pillar: Businesses	62	45.76	
2.2.1 Firms with website	69	44.71	
2.2.2 GERD financed by business enterprise	45	47.27	●
2.2.3 Knowledge intensive employment	48	41.52	
2.2.4 Annual investment in telecommunication services	35	83.57	
2.2.5 GERD performed by business enterprise	41	11.70	
3rd sub-pillar: Governments	37	48.78	
2.3.1 Government online services	53	73.81	
2.3.2 Publication and use of open data	58	27.94	
2.3.3 Government promotion of investment in emerging tech	11	76.39	●
2.3.4 R&D expenditure by governments and higher education	43	16.96	

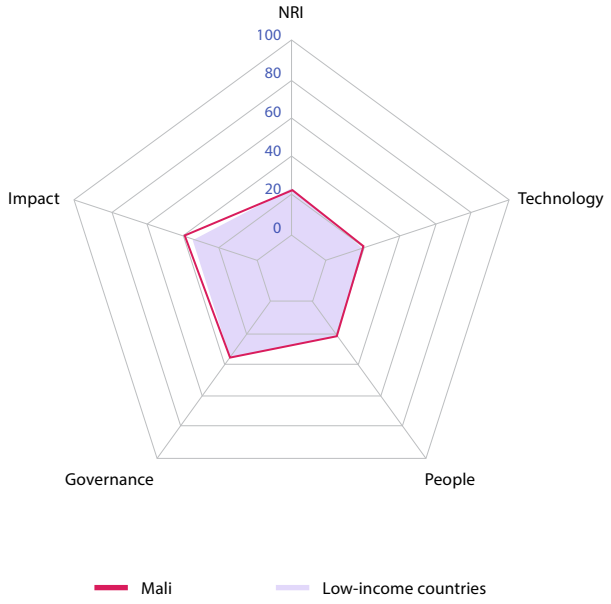
Indicator	Rank	Score	
C. Governance pillar	**39**	**69.80**	
1st sub-pillar: Trust	38	67.57	
3.1.1 Secure Internet servers	45	70.99	
3.1.2 Cybersecurity	8	98.03	●
3.1.3 Online access to financial account	41	43.40	
3.1.4 Internet shopping	39	57.86	
2nd sub-pillar: Regulation	52	70.55	
3.2.1 Regulatory quality	42	65.92	
3.2.2 ICT regulatory environment	70	83.53	
3.2.3 Regulation of emerging technologies	40	60.00	
3.2.4 E-commerce legislation	1	100.00	●
3.2.5 Privacy protection by law content	112	43.30	○
3rd sub-pillar: Inclusion	46	71.28	
3.3.1 E-Participation	47	67.44	
3.3.2 Socioeconomic gap in use of digital payments	59	79.29	
3.3.3 Availability of local online content	39	76.68	
3.3.4 Gender gap in Internet use	68	66.70	
3.3.5 Rural gap in use of digital payments	58	66.29	
D. Impact pillar	**41**	**59.81**	
1st sub-pillar: Economy	15	53.67	
4.1.1 High-tech and medium-high-tech manufacturing	17	57.79	●
4.1.2 High-tech exports	4	93.51	●
4.1.3 PCT patent applications	50	5.69	
4.1.4 Domestic market size	30	67.85	
4.1.5 Prevalence of gig economy	6	85.76	●
4.1.6 ICT services exports	73	11.40	
2nd sub-pillar: Quality of Life	60	69.60	
4.2.1 Happiness	52	68.11	
4.2.2 Freedom to make life choices	36	83.77	
4.2.3 Income inequality	86	54.77	○
4.2.4 Healthy life expectancy at birth	71	71.74	
3rd sub-pillar: SDG Contribution	89	56.18	
4.3.1 SDG 3: Good Health and Well-Being	46	77.85	
4.3.2 SDG 4: Quality Education	47	39.53	
4.3.3 SDG 5: Women's economic opportunity	126	29.20	○
4.3.4 SDG 7: Affordable and Clean Energy	83	67.41	
4.3.5 SDG 11: Sustainable Cities and Communities	65	66.91	

NOTE: ● Indicates a strength and ○ a weakness.

Mali

	Rank (Out of 134)	Score
Network Readiness Index	**123**	**28.27**

Pillar/sub-pillar	Rank	Score
A. Technology pillar	**125**	**19.83**
1st sub-pillar: Access	118	40.72
2nd sub-pillar: Content	124	1.55
3rd sub-pillar: Future Technologies	123	17.20
B. People pillar	**126**	**17.93**
1st sub-pillar: Individuals	131	12.21
2nd sub-pillar: Businesses	112	28.88
3rd sub-pillar: Governments	125	12.70
C. Governance pillar	**118**	**36.15**
1st sub-pillar: Trust	130	13.58
2nd sub-pillar: Regulation	105	53.71
3rd sub-pillar: Inclusion	113	41.15
D. Impact pillar	**112**	**39.19**
1st sub-pillar: Economy	94	20.86
2nd sub-pillar: Quality of Life	103	52.67
3rd sub-pillar: SDG Contribution	123	44.05



The Network Readiness Index in detail

Indicator	Rank	Score	
A. Technology pillar	**125**	**19.83**	
1st sub-pillar: Access	118	40.72	
1.1.1 Mobile tariffs	123	14.96	
1.1.2 Handset prices	123	18.29	
1.1.3 FTTH/building Internet subscriptions	88	20.26	
1.1.4 Population covered by at least a 3G mobile network	125	87.04	
1.1.5 International Internet bandwidth	107	63.04	
1.1.6 Internet access in schools	NA	NA	
2nd sub-pillar: Content	124	1.55	
1.2.1 GitHub commits	130	0.13	○
1.2.2 Internet domain registrations	70	3.49	●
1.2.3 Mobile apps development	NA	NA	
1.2.4 AI scientific publications	102	1.04	
3rd sub-pillar: Future Technologies	123	17.20	
1.3.1 Adoption of emerging technologies	120	16.80	
1.3.2 Investment in emerging technologies	90	33.25	
1.3.3 Robot density	NA	NA	
1.3.4 Computer software spending	118	1.55	
B. People pillar	**126**	**17.93**	
1st sub-pillar: Individuals	131	12.21	
2.1.1 Mobile broadband internet traffic within the country	119	0.28	○
2.1.2 ICT skills in the education system	65	49.24	●
2.1.3 Use of virtual social networks	126	4.59	
2.1.4 Tertiary enrollment	127	1.47	
2.1.5 Adult literacy rate	105	5.46	○
2.1.6 AI talent concentration	NA	NA	
2nd sub-pillar: Businesses	112	28.88	
2.2.1 Firms with website	79	37.78	
2.2.2 GERD financed by business enterprise	93	1.02	
2.2.3 Knowledge intensive employment	125	1.32	○
2.2.4 Annual investment in telecommunication services	84	75.39	
2.2.5 GERD performed by business enterprise	NA	NA	
3rd sub-pillar: Governments	125	12.70	
2.3.1 Government online services	119	29.84	
2.3.2 Publication and use of open data	103	1.47	○
2.3.3 Government promotion of investment in emerging tech	113	16.50	
2.3.4 R&D expenditure by governments and higher education	92	2.98	

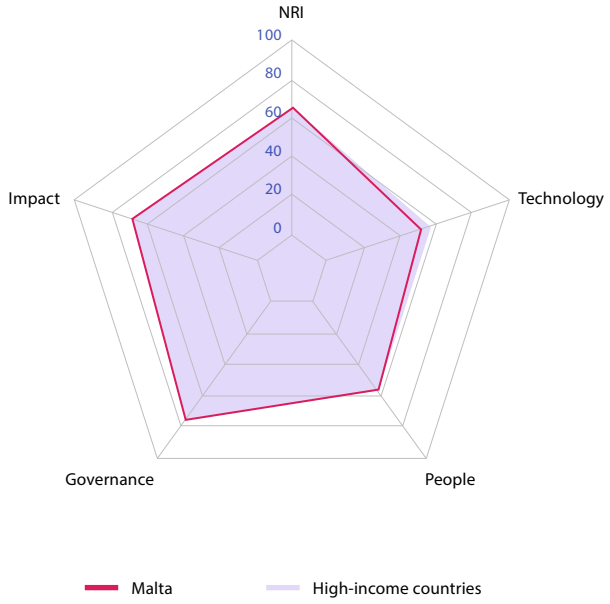
Indicator	Rank	Score	
C. Governance pillar	**118**	**36.15**	
1st sub-pillar: Trust	130	13.58	
3.1.1 Secure Internet servers	127	18.34	
3.1.2 Cybersecurity	128	8.56	○
3.1.3 Online access to financial account	71	24.23	●
3.1.4 Internet shopping	118	3.21	
2nd sub-pillar: Regulation	105	53.71	
3.2.1 Regulatory quality	106	35.56	
3.2.2 ICT regulatory environment	79	76.47	●
3.2.3 Regulation of emerging technologies	95	25.45	
3.2.4 E-commerce legislation	87	66.67	
3.2.5 Privacy protection by law content	66	64.39	●
3rd sub-pillar: Inclusion	113	41.15	
3.3.1 E-Participation	111	25.58	
3.3.2 Socioeconomic gap in use of digital payments	84	63.47	●
3.3.3 Availability of local online content	113	29.57	
3.3.4 Gender gap in Internet use	NA	NA	
3.3.5 Rural gap in use of digital payments	95	45.97	
D. Impact pillar	**112**	**39.19**	
1st sub-pillar: Economy	94	20.86	
4.1.1 High-tech and medium-high-tech manufacturing	NA	NA	
4.1.2 High-tech exports	73	9.69	●
4.1.3 PCT patent applications	99	0.00	○
4.1.4 Domestic market size	104	38.36	
4.1.5 Prevalence of gig economy	90	31.10	
4.1.6 ICT services exports	42	25.13	●
2nd sub-pillar: Quality of Life	103	52.67	
4.2.1 Happiness	112	34.56	
4.2.2 Freedom to make life choices	67	73.74	●
4.2.3 Income inequality	58	67.59	●
4.2.4 Healthy life expectancy at birth	122	34.79	
3rd sub-pillar: SDG Contribution	123	44.05	
4.3.1 SDG 3: Good Health and Well-Being	125	21.85	
4.3.2 SDG 4: Quality Education	NA	NA	
4.3.3 SDG 5: Women's economic opportunity	119	48.67	
4.3.4 SDG 7: Affordable and Clean Energy	91	65.61	
4.3.5 SDG 11: Sustainable Cities and Communities	112	40.08	

NOTE: ● Indicates a strength and ○ a weakness.

Malta

	Rank (Out of 134)	Score
Network Readiness Index	**32**	**61.94**

Pillar/sub-pillar	Rank	Score
A. Technology pillar	**33**	**49.71**
1st sub-pillar: Access	79	60.65
2nd sub-pillar: Content	31	39.60
3rd sub-pillar: Future Technologies	27	48.89
B. People pillar	**26**	**57.05**
1st sub-pillar: Individuals	34	53.97
2nd sub-pillar: Businesses	33	59.92
3rd sub-pillar: Governments	22	57.26
C. Governance pillar	**33**	**73.95**
1st sub-pillar: Trust	37	67.76
2nd sub-pillar: Regulation	28	79.80
3rd sub-pillar: Inclusion	38	74.31
D. Impact pillar	**28**	**67.04**
1st sub-pillar: Economy	30	40.30
2nd sub-pillar: Quality of Life	25	80.26
3rd sub-pillar: SDG Contribution	24	80.57



The Network Readiness Index in detail

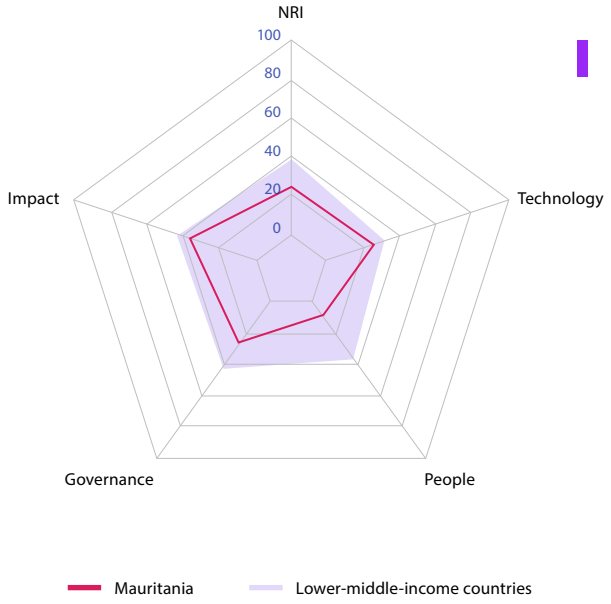
Indicator	Rank	Score	
A. Technology pillar	**33**	**49.71**	
1st sub-pillar: Access	79	60.65	
1.1.1 Mobile tariffs	43	72.85	
1.1.2 Handset prices	43	62.20	
1.1.3 FTTH/building Internet subscriptions	116	6.37	○
1.1.4 Population covered by at least a 3G mobile network	1	100.00	●
1.1.5 International Internet bandwidth	113	61.84	○
1.1.6 Internet access in schools	NA	NA	
2nd sub-pillar: Content	31	39.60	
1.2.1 GitHub commits	31	34.37	
1.2.2 Internet domain registrations	18	47.27	●
1.2.3 Mobile apps development	17	76.24	
1.2.4 AI scientific publications	113	0.51	○
3rd sub-pillar: Future Technologies	27	48.89	
1.3.1 Adoption of emerging technologies	37	61.51	
1.3.2 Investment in emerging technologies	38	53.50	
1.3.3 Robot density	NA	NA	
1.3.4 Computer software spending	30	31.65	
B. People pillar	**26**	**57.05**	
1st sub-pillar: Individuals	34	53.97	
2.1.1 Mobile broadband internet traffic within the country	107	1.40	○
2.1.2 ICT skills in the education system	55	54.45	
2.1.3 Use of virtual social networks	36	74.49	
2.1.4 Tertiary enrollment	30	46.42	
2.1.5 Adult literacy rate	52	93.09	
2.1.6 AI talent concentration	NA	NA	
2nd sub-pillar: Businesses	33	59.92	
2.2.1 Firms with website	11	85.26	●
2.2.2 GERD financed by business enterprise	14	74.47	●
2.2.3 Knowledge intensive employment	21	69.70	
2.2.4 Annual investment in telecommunication services	NA	NA	
2.2.5 GERD performed by business enterprise	44	10.23	
3rd sub-pillar: Governments	22	57.26	
2.3.1 Government online services	18	87.28	●
2.3.2 Publication and use of open data	NA	NA	
2.3.3 Government promotion of investment in emerging tech	15	73.14	●
2.3.4 R&D expenditure by governments and higher education	56	11.35	

Indicator	Rank	Score	
C. Governance pillar	**33**	**73.95**	
1st sub-pillar: Trust	37	67.76	
3.1.1 Secure Internet servers	38	76.43	
3.1.2 Cybersecurity	57	83.36	
3.1.3 Online access to financial account	31	51.17	
3.1.4 Internet shopping	34	60.06	
2nd sub-pillar: Regulation	28	79.80	
3.2.1 Regulatory quality	38	67.98	
3.2.2 ICT regulatory environment	9	95.29	●
3.2.3 Regulation of emerging technologies	14	80.26	●
3.2.4 E-commerce legislation	1	100.00	●
3.2.5 Privacy protection by law content	86	55.44	
3rd sub-pillar: Inclusion	38	74.31	
3.3.1 E-Participation	22	75.59	
3.3.2 Socioeconomic gap in use of digital payments	47	84.38	
3.3.3 Availability of local online content	54	66.35	
3.3.4 Gender gap in Internet use	37	70.29	
3.3.5 Rural gap in use of digital payments	29	74.97	
D. Impact pillar	**28**	**67.04**	
1st sub-pillar: Economy	30	40.30	
4.1.1 High-tech and medium-high-tech manufacturing	32	44.79	
4.1.2 High-tech exports	8	59.89	●
4.1.3 PCT patent applications	19	42.22	
4.1.4 Domestic market size	126	31.43	○
4.1.5 Prevalence of gig economy	33	59.59	
4.1.6 ICT services exports	102	3.85	
2nd sub-pillar: Quality of Life	25	80.26	
4.2.1 Happiness	38	73.41	
4.2.2 Freedom to make life choices	57	77.06	
4.2.3 Income inequality	27	79.40	
4.2.4 Healthy life expectancy at birth	13	91.17	●
3rd sub-pillar: SDG Contribution	24	80.57	
4.3.1 SDG 3: Good Health and Well-Being	28	86.75	
4.3.2 SDG 4: Quality Education	41	50.93	
4.3.3 SDG 5: Women's economic opportunity	36	87.61	
4.3.4 SDG 7: Affordable and Clean Energy	3	90.17	●
4.3.5 SDG 11: Sustainable Cities and Communities	25	87.38	

NOTE: ● Indicates a strength and ○ a weakness.

Mauritania

	Rank (Out of 134)	Score
Network Readiness Index	**131**	**23.73**
Pillar/sub-pillar	**Rank**	**Score**
A. Technology pillar	**117**	**24.72**
1st sub-pillar: Access	124	37.94
2nd sub-pillar: Content	133	0.15
3rd sub-pillar: Future Technologies	56	36.08
B. People pillar	**134**	**10.13**
1st sub-pillar: Individuals	124	18.42
2nd sub-pillar: Businesses	132	11.98
3rd sub-pillar: Governments	134	0.00
C. Governance pillar	**131**	**25.39**
1st sub-pillar: Trust	131	12.69
2nd sub-pillar: Regulation	128	33.92
3rd sub-pillar: Inclusion	128	29.55
D. Impact pillar	**123**	**34.70**
1st sub-pillar: Economy	131	9.50
2nd sub-pillar: Quality of Life	101	53.50
3rd sub-pillar: SDG Contribution	127	41.10



The Network Readiness Index in detail

Indicator	Rank	Score	
A. Technology pillar	**117**	**24.72**	
1st sub-pillar: Access	124	37.94	
1.1.1 Mobile tariffs	116	25.44	
1.1.2 Handset prices	122	18.54	
1.1.3 FTTH/building Internet subscriptions	NA	NA	
1.1.4 Population covered by at least a 3G mobile network	132	60.18	○
1.1.5 International Internet bandwidth	130	47.60	○
1.1.6 Internet access in schools	NA	NA	
2nd sub-pillar: Content	133	0.15	
1.2.1 GitHub commits	128	0.25	○
1.2.2 Internet domain registrations	124	0.14	
1.2.3 Mobile apps development	NA	NA	
1.2.4 AI scientific publications	130	0.04	○
3rd sub-pillar: Future Technologies	56	36.08	
1.3.1 Adoption of emerging technologies	NA	NA	
1.3.2 Investment in emerging technologies	60	41.25	
1.3.3 Robot density	NA	NA	
1.3.4 Computer software spending	33	30.91	
B. People pillar	**134**	**10.13**	
1st sub-pillar: Individuals	124	18.42	
2.1.1 Mobile broadband internet traffic within the country	95	2.58	
2.1.2 ICT skills in the education system	NA	NA	
2.1.3 Use of virtual social networks	112	14.08	
2.1.4 Tertiary enrollment	124	2.13	
2.1.5 Adult literacy rate	95	54.89	
2.1.6 AI talent concentration	NA	NA	
2nd sub-pillar: Businesses	132	11.98	
2.2.1 Firms with website	83	35.93	
2.2.2 GERD financed by business enterprise	100	0.00	
2.2.3 Knowledge intensive employment	NA	NA	
2.2.4 Annual investment in telecommunication services	124	0.00	○
2.2.5 GERD performed by business enterprise	NA	NA	
3rd sub-pillar: Governments	134	0.00	
2.3.1 Government online services	133	0.00	○
2.3.2 Publication and use of open data	NA	NA	
2.3.3 Government promotion of investment in emerging tech	NA	NA	
2.3.4 R&D expenditure by governments and higher education	115	0.00	○

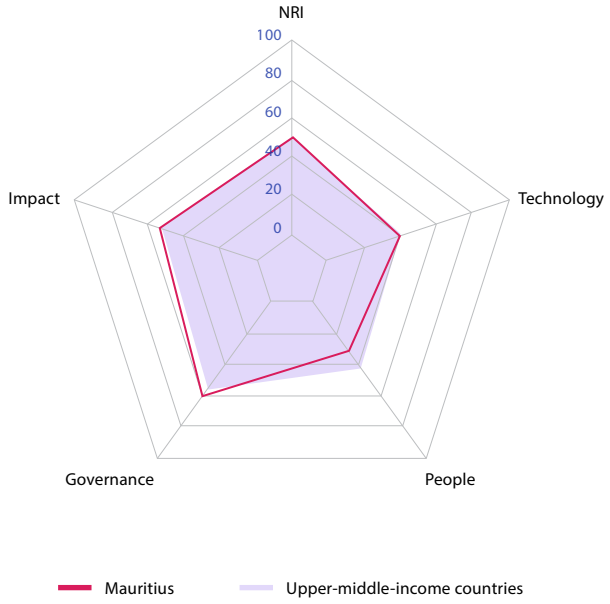
Indicator	Rank	Score	
C. Governance pillar	**131**	**25.39**	
1st sub-pillar: Trust	131	12.69	
3.1.1 Secure Internet servers	126	21.16	
3.1.2 Cybersecurity	119	17.51	
3.1.3 Online access to financial account	115	8.20	
3.1.4 Internet shopping	115	3.88	
2nd sub-pillar: Regulation	128	33.92	
3.2.1 Regulatory quality	126	25.76	
3.2.2 ICT regulatory environment	116	61.18	
3.2.3 Regulation of emerging technologies	119	1.04	
3.2.4 E-commerce legislation	87	66.67	
3.2.5 Privacy protection by law content	130	14.95	○
3rd sub-pillar: Inclusion	128	29.55	
3.3.1 E-Participation	133	0.00	○
3.3.2 Socioeconomic gap in use of digital payments	52	82.96	
3.3.3 Availability of local online content	121	25.00	
3.3.4 Gender gap in Internet use	NA	NA	
3.3.5 Rural gap in use of digital payments	123	10.24	
D. Impact pillar	**123**	**34.70**	
1st sub-pillar: Economy	131	9.50	
4.1.1 High-tech and medium-high-tech manufacturing	NA	NA	
4.1.2 High-tech exports	98	3.47	
4.1.3 PCT patent applications	99	0.00	○
4.1.4 Domestic market size	124	31.67	
4.1.5 Prevalence of gig economy	NA	NA	
4.1.6 ICT services exports	107	2.85	
2nd sub-pillar: Quality of Life	101	53.50	
4.2.1 Happiness	96	44.11	
4.2.2 Freedom to make life choices	120	41.52	
4.2.3 Income inequality	34	76.38	
4.2.4 Healthy life expectancy at birth	105	51.99	
3rd sub-pillar: SDG Contribution	127	41.10	
4.3.1 SDG 3: Good Health and Well-Being	126	18.63	
4.3.2 SDG 4: Quality Education	NA	NA	
4.3.3 SDG 5: Women's economic opportunity	128	26.55	○
4.3.4 SDG 7: Affordable and Clean Energy	46	75.79	
4.3.5 SDG 11: Sustainable Cities and Communities	107	43.43	

NOTE: ● Indicates a strength and ○ a weakness.

Mauritius

	Rank (Out of 134)	Score
Network Readiness Index	**76**	**45.56**

Pillar/sub-pillar	Rank	Score
A. Technology pillar	**80**	**37.88**
1st sub-pillar: Access	67	64.84
2nd sub-pillar: Content	78	20.05
3rd sub-pillar: Future Technologies	83	28.75
B. People pillar	**106**	**30.00**
1st sub-pillar: Individuals	78	44.34
2nd sub-pillar: Businesses	131	12.97
3rd sub-pillar: Governments	88	32.70
C. Governance pillar	**56**	**60.51**
1st sub-pillar: Trust	63	47.75
2nd sub-pillar: Regulation	53	70.43
3rd sub-pillar: Inclusion	59	63.34
D. Impact pillar	**66**	**53.85**
1st sub-pillar: Economy	96	19.16
2nd sub-pillar: Quality of Life	76	66.33
3rd sub-pillar: SDG Contribution	33	76.05



The Network Readiness Index in detail

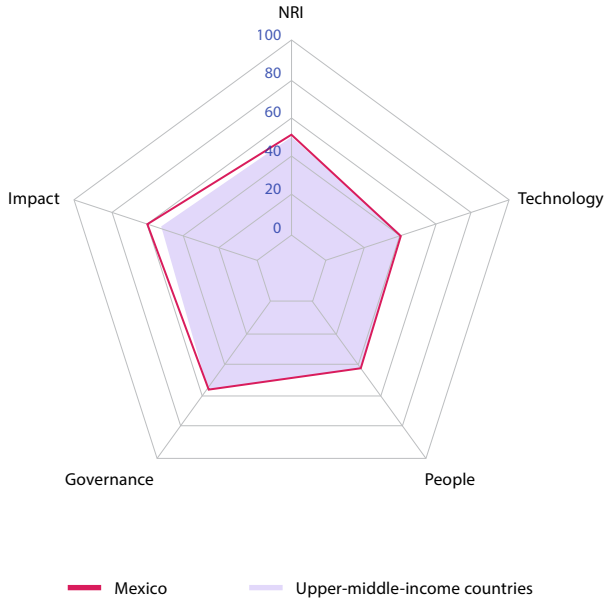
Indicator	Rank	Score	
A. Technology pillar	**80**	**37.88**	
1st sub-pillar: Access	67	64.84	
1.1.1 Mobile tariffs	73	59.15	
1.1.2 Handset prices	84	39.77	
1.1.3 FTTH/building Internet subscriptions	76	25.28	
1.1.4 Population covered by at least a 3G mobile network	57	99.67	
1.1.5 International Internet bandwidth	98	65.19	
1.1.6 Internet access in schools	1	100.00	●
2nd sub-pillar: Content	78	20.05	
1.2.1 GitHub commits	69	6.02	
1.2.2 Internet domain registrations	48	8.28	●
1.2.3 Mobile apps development	66	65.47	
1.2.4 AI scientific publications	116	0.44	○
3rd sub-pillar: Future Technologies	83	28.75	
1.3.1 Adoption of emerging technologies	87	38.18	
1.3.2 Investment in emerging technologies	82	35.00	
1.3.3 Robot density	NA	NA	
1.3.4 Computer software spending	83	13.05	
B. People pillar	**106**	**30.00**	
1st sub-pillar: Individuals	78	44.34	
2.1.1 Mobile broadband internet traffic within the country	103	1.75	○
2.1.2 ICT skills in the education system	80	38.81	
2.1.3 Use of virtual social networks	66	63.15	
2.1.4 Tertiary enrollment	69	28.72	
2.1.5 Adult literacy rate	62	89.28	
2.1.6 AI talent concentration	NA	NA	
2nd sub-pillar: Businesses	131	12.97	
2.2.1 Firms with website	NA	NA	
2.2.2 GERD financed by business enterprise	82	5.07	
2.2.3 Knowledge intensive employment	60	33.31	
2.2.4 Annual investment in telecommunication services	NA	NA	
2.2.5 GERD performed by business enterprise	78	0.54	
3rd sub-pillar: Governments	88	32.70	
2.3.1 Government online services	77	58.91	
2.3.2 Publication and use of open data	61	26.47	
2.3.3 Government promotion of investment in emerging tech	60	38.99	
2.3.4 R&D expenditure by governments and higher education	70	6.42	

Indicator	Rank	Score	
C. Governance pillar	**56**	**60.51**	
1st sub-pillar: Trust	63	47.75	
3.1.1 Secure Internet servers	65	54.41	
3.1.2 Cybersecurity	23	96.84	●
3.1.3 Online access to financial account	84	18.11	
3.1.4 Internet shopping	66	21.64	
2nd sub-pillar: Regulation	53	70.43	
3.2.1 Regulatory quality	27	75.97	●
3.2.2 ICT regulatory environment	77	77.06	
3.2.3 Regulation of emerging technologies	65	43.90	
3.2.4 E-commerce legislation	1	100.00	●
3.2.5 Privacy protection by law content	88	55.25	
3rd sub-pillar: Inclusion	59	63.34	
3.3.1 E-Participation	86	40.70	
3.3.2 Socioeconomic gap in use of digital payments	49	83.94	●
3.3.3 Availability of local online content	77	54.09	
3.3.4 Gender gap in Internet use	71	66.54	
3.3.5 Rural gap in use of digital payments	43	71.42	●
D. Impact pillar	**66**	**53.85**	
1st sub-pillar: Economy	96	19.16	
4.1.1 High-tech and medium-high-tech manufacturing	105	2.10	○
4.1.2 High-tech exports	123	0.45	○
4.1.3 PCT patent applications	NA	NA	
4.1.4 Domestic market size	123	32.38	○
4.1.5 Prevalence of gig economy	84	34.01	
4.1.6 ICT services exports	37	26.85	●
2nd sub-pillar: Quality of Life	76	66.33	
4.2.1 Happiness	72	63.02	
4.2.2 Freedom to make life choices	74	70.50	
4.2.3 Income inequality	59	65.83	
4.2.4 Healthy life expectancy at birth	88	65.98	
3rd sub-pillar: SDG Contribution	33	76.05	
4.3.1 SDG 3: Good Health and Well-Being	90	59.47	
4.3.2 SDG 4: Quality Education	NA	NA	
4.3.3 SDG 5: Women's economic opportunity	42	84.96	●
4.3.4 SDG 7: Affordable and Clean Energy	10	84.32	●
4.3.5 SDG 11: Sustainable Cities and Communities	48	75.46	●

NOTE: ● Indicates a strength and ○ a weakness.

Mexico

	Rank (Out of 134)	Score
Network Readiness Index	**62**	**49.59**
Pillar/sub-pillar	**Rank**	**Score**
A. Technology pillar	**70**	**39.64**
1st sub-pillar: Access	63	65.26
2nd sub-pillar: Content	62	23.83
3rd sub-pillar: Future Technologies	75	29.83
B. People pillar	**63**	**44.44**
1st sub-pillar: Individuals	76	44.87
2nd sub-pillar: Businesses	95	35.39
3rd sub-pillar: Governments	28	53.07
C. Governance pillar	**68**	**55.15**
1st sub-pillar: Trust	71	42.14
2nd sub-pillar: Regulation	46	72.21
3rd sub-pillar: Inclusion	91	51.10
D. Impact pillar	**43**	**59.11**
1st sub-pillar: Economy	42	36.09
2nd sub-pillar: Quality of Life	57	71.10
3rd sub-pillar: SDG Contribution	50	70.15



The Network Readiness Index in detail

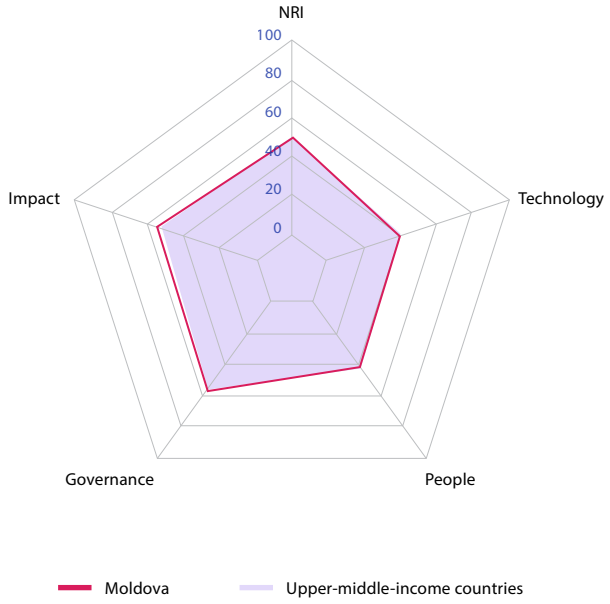
Indicator	Rank	Score	
A. Technology pillar	**70**	**39.64**	
1st sub-pillar: Access	63	65.26	
1.1.1 Mobile tariffs	93	45.92	
1.1.2 Handset prices	30	70.63	
1.1.3 FTTH/building Internet subscriptions	13	58.82	●
1.1.4 Population covered by at least a 3G mobile network	86	98.68	
1.1.5 International Internet bandwidth	28	78.66	
1.1.6 Internet access in schools	57	38.88	
2nd sub-pillar: Content	62	23.83	
1.2.1 GitHub commits	82	3.93	
1.2.2 Internet domain registrations	66	3.89	
1.2.3 Mobile apps development	72	64.45	
1.2.4 AI scientific publications	22	23.04	●
3rd sub-pillar: Future Technologies	75	29.83	
1.3.1 Adoption of emerging technologies	47	55.16	
1.3.2 Investment in emerging technologies	66	39.75	
1.3.3 Robot density	34	7.45	
1.3.4 Computer software spending	76	16.96	
B. People pillar	**63**	**44.44**	
1st sub-pillar: Individuals	76	44.87	
2.1.1 Mobile broadband internet traffic within the country	24	34.20	●
2.1.2 ICT skills in the education system	81	37.11	
2.1.3 Use of virtual social networks	50	69.11	
2.1.4 Tertiary enrollment	70	28.41	
2.1.5 Adult literacy rate	49	93.51	
2.1.6 AI talent concentration	40	6.87	○
2nd sub-pillar: Businesses	95	35.39	
2.2.1 Firms with website	81	36.91	
2.2.2 GERD financed by business enterprise	69	22.01	
2.2.3 Knowledge intensive employment	72	28.14	
2.2.4 Annual investment in telecommunication services	16	88.29	●
2.2.5 GERD performed by business enterprise	65	1.61	
3rd sub-pillar: Governments	28	53.07	
2.3.1 Government online services	31	80.60	
2.3.2 Publication and use of open data	6	89.71	●
2.3.3 Government promotion of investment in emerging tech	68	36.80	
2.3.4 R&D expenditure by governments and higher education	77	5.16	

Indicator	Rank	Score	
C. Governance pillar	**68**	**55.15**	
1st sub-pillar: Trust	71	42.14	
3.1.1 Secure Internet servers	81	46.27	
3.1.2 Cybersecurity	60	81.36	
3.1.3 Online access to financial account	91	16.28	
3.1.4 Internet shopping	63	24.64	
2nd sub-pillar: Regulation	46	72.21	
3.2.1 Regulatory quality	83	44.39	
3.2.2 ICT regulatory environment	14	94.12	●
3.2.3 Regulation of emerging technologies	73	41.30	
3.2.4 E-commerce legislation	1	100.00	●
3.2.5 Privacy protection by law content	29	81.25	
3rd sub-pillar: Inclusion	91	51.10	
3.3.1 E-Participation	32	72.10	
3.3.2 Socioeconomic gap in use of digital payments	126	31.18	○
3.3.3 Availability of local online content	65	60.34	
3.3.4 Gender gap in Internet use	58	67.88	
3.3.5 Rural gap in use of digital payments	115	24.03	○
D. Impact pillar	**43**	**59.11**	
1st sub-pillar: Economy	42	36.09	
4.1.1 High-tech and medium-high-tech manufacturing	16	57.97	●
4.1.2 High-tech exports	25	35.68	●
4.1.3 PCT patent applications	65	2.76	
4.1.4 Domestic market size	13	77.37	●
4.1.5 Prevalence of gig economy	61	42.73	
4.1.6 ICT services exports	133	0.01	○
2nd sub-pillar: Quality of Life	57	71.10	
4.2.1 Happiness	10	87.15	●
4.2.2 Freedom to make life choices	44	80.94	
4.2.3 Income inequality	98	44.22	○
4.2.4 Healthy life expectancy at birth	70	72.07	
3rd sub-pillar: SDG Contribution	50	70.15	
4.3.1 SDG 3: Good Health and Well-Being	53	74.70	
4.3.2 SDG 4: Quality Education	54	33.50	
4.3.3 SDG 5: Women's economic opportunity	44	84.07	
4.3.4 SDG 7: Affordable and Clean Energy	35	78.32	
4.3.5 SDG 11: Sustainable Cities and Communities	36	80.15	

NOTE: ● Indicates a strength and ○ a weakness.

Moldova

	Rank (Out of 134)	Score
Network Readiness Index	**67**	**47.69**
Pillar/sub-pillar	**Rank**	**Score**
A. Technology pillar	**75**	**38.65**
1st sub-pillar: Access	46	70.87
2nd sub-pillar: Content	63	23.71
3rd sub-pillar: Future Technologies	108	21.37
B. People pillar	**80**	**39.82**
1st sub-pillar: Individuals	71	46.54
2nd sub-pillar: Businesses	101	32.15
3rd sub-pillar: Governments	60	40.77
C. Governance pillar	**63**	**57.92**
1st sub-pillar: Trust	59	49.57
2nd sub-pillar: Regulation	76	62.78
3rd sub-pillar: Inclusion	68	61.41
D. Impact pillar	**61**	**54.37**
1st sub-pillar: Economy	69	27.02
2nd sub-pillar: Quality of Life	42	74.82
3rd sub-pillar: SDG Contribution	73	61.26



The Network Readiness Index in detail

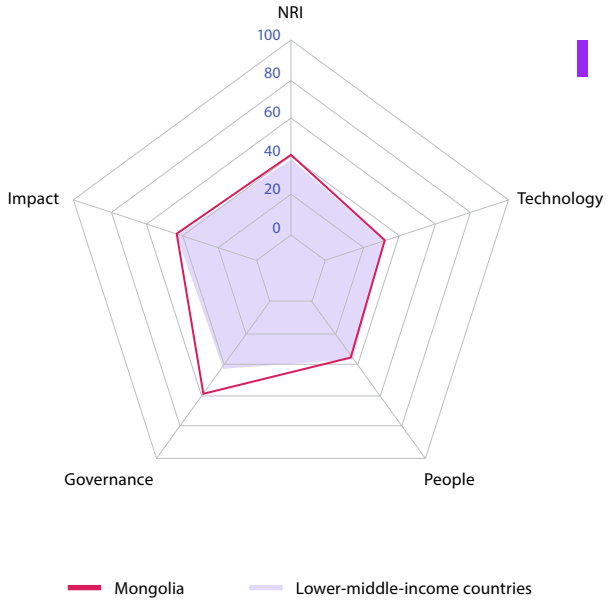
Indicator	Rank	Score	
A. Technology pillar	**75**	**38.65**	
1st sub-pillar: Access	46	70.87	
1.1.1 Mobile tariffs	68	60.66	
1.1.2 Handset prices	47	60.28	●
1.1.3 FTTH/building Internet subscriptions	44	36.58	●
1.1.4 Population covered by at least a 3G mobile network	28	99.97	●
1.1.5 International Internet bandwidth	55	73.24	
1.1.6 Internet access in schools	36	94.47	
2nd sub-pillar: Content	63	23.71	
1.2.1 GitHub commits	52	11.55	
1.2.2 Internet domain registrations	68	3.57	
1.2.3 Mobile apps development	11	78.87	●
1.2.4 AI scientific publications	107	0.85	
3rd sub-pillar: Future Technologies	108	21.37	
1.3.1 Adoption of emerging technologies	90	37.40	
1.3.2 Investment in emerging technologies	119	19.50	○
1.3.3 Robot density	NA	NA	
1.3.4 Computer software spending	93	7.23	
B. People pillar	**80**	**39.82**	
1st sub-pillar: Individuals	71	46.54	
2.1.1 Mobile broadband internet traffic within the country	90	4.18	
2.1.2 ICT skills in the education system	NA	NA	
2.1.3 Use of virtual social networks	93	42.03	
2.1.4 Tertiary enrollment	50	40.48	
2.1.5 Adult literacy rate	12	99.45	●
2.1.6 AI talent concentration	NA	NA	
2nd sub-pillar: Businesses	101	32.15	
2.2.1 Firms with website	70	44.59	
2.2.2 GERD financed by business enterprise	72	19.17	
2.2.3 Knowledge intensive employment	81	24.37	
2.2.4 Annual investment in telecommunication services	108	71.49	○
2.2.5 GERD performed by business enterprise	73	1.10	
3rd sub-pillar: Governments	60	40.77	
2.3.1 Government online services	60	71.04	
2.3.2 Publication and use of open data	34	45.59	●
2.3.3 Government promotion of investment in emerging tech	54	42.47	
2.3.4 R&D expenditure by governments and higher education	86	3.99	

Indicator	Rank	Score	
C. Governance pillar	**63**	**57.92**	
1st sub-pillar: Trust	59	49.57	
3.1.1 Secure Internet servers	48	68.84	●
3.1.2 Cybersecurity	71	75.35	
3.1.3 Online access to financial account	70	25.65	
3.1.4 Internet shopping	60	28.44	
2nd sub-pillar: Regulation	76	62.78	
3.2.1 Regulatory quality	71	49.92	
3.2.2 ICT regulatory environment	34	89.41	●
3.2.3 Regulation of emerging technologies	NA	NA	
3.2.4 E-commerce legislation	87	66.67	○
3.2.5 Privacy protection by law content	109	45.12	○
3rd sub-pillar: Inclusion	68	61.41	
3.3.1 E-Participation	47	67.44	
3.3.2 Socioeconomic gap in use of digital payments	79	66.08	
3.3.3 Availability of local online content	61	62.74	
3.3.4 Gender gap in Internet use	NA	NA	
3.3.5 Rural gap in use of digital payments	93	49.37	
D. Impact pillar	**61**	**54.37**	
1st sub-pillar: Economy	69	27.02	
4.1.1 High-tech and medium-high-tech manufacturing	63	22.34	
4.1.2 High-tech exports	94	3.81	
4.1.3 PCT patent applications	62	3.82	
4.1.4 Domestic market size	116	35.29	○
4.1.5 Prevalence of gig economy	62	42.15	
4.1.6 ICT services exports	12	54.71	●
2nd sub-pillar: Quality of Life	42	74.82	
4.2.1 Happiness	74	62.01	
4.2.2 Freedom to make life choices	64	75.55	
4.2.3 Income inequality	4	93.72	●
4.2.4 Healthy life expectancy at birth	81	67.99	
3rd sub-pillar: SDG Contribution	73	61.26	
4.3.1 SDG 3: Good Health and Well-Being	81	64.14	
4.3.2 SDG 4: Quality Education	50	36.85	
4.3.3 SDG 5: Women's economic opportunity	53	82.30	
4.3.4 SDG 7: Affordable and Clean Energy	96	63.22	
4.3.5 SDG 11: Sustainable Cities and Communities	77	59.81	

NOTE: ● Indicates a strength and ○ a weakness.

Mongolia

	Rank (Out of 134)	Score
Network Readiness Index	**83**	**43.52**
Pillar/sub-pillar	**Rank**	**Score**
A. Technology pillar	**86**	**34.56**
1st sub-pillar: Access	74	62.29
2nd sub-pillar: Content	96	17.31
3rd sub-pillar: Future Technologies	101	24.07
B. People pillar	**92**	**35.51**
1st sub-pillar: Individuals	60	48.66
2nd sub-pillar: Businesses	105	30.98
3rd sub-pillar: Governments	97	26.90
C. Governance pillar	**65**	**56.46**
1st sub-pillar: Trust	66	44.89
2nd sub-pillar: Regulation	101	56.11
3rd sub-pillar: Inclusion	51	68.39
D. Impact pillar	**89**	**47.53**
1st sub-pillar: Economy	98	18.93
2nd sub-pillar: Quality of Life	85	62.69
3rd sub-pillar: SDG Contribution	74	60.97



The Network Readiness Index in detail

Indicator	Rank	Score	
A. Technology pillar	**86**	**34.56**	
1st sub-pillar: Access	74	62.29	
1.1.1 Mobile tariffs	60	63.74	
1.1.2 Handset prices	87	38.40	
1.1.3 FTTH/building Internet subscriptions	51	33.12	
1.1.4 Population covered by at least a 3G mobile network	1	100.00	●
1.1.5 International Internet bandwidth	88	67.83	
1.1.6 Internet access in schools	46	70.66	
2nd sub-pillar: Content	96	17.31	
1.2.1 GitHub commits	68	6.14	
1.2.2 Internet domain registrations	82	1.98	
1.2.3 Mobile apps development	86	59.47	
1.2.4 AI scientific publications	94	1.65	
3rd sub-pillar: Future Technologies	101	24.07	
1.3.1 Adoption of emerging technologies	112	25.94	○
1.3.2 Investment in emerging technologies	92	33.00	
1.3.3 Robot density	NA	NA	
1.3.4 Computer software spending	82	13.28	
B. People pillar	**92**	**35.51**	
1st sub-pillar: Individuals	60	48.66	
2.1.1 Mobile broadband internet traffic within the country	77	7.11	
2.1.2 ICT skills in the education system	97	23.57	○
2.1.3 Use of virtual social networks	55	68.72	
2.1.4 Tertiary enrollment	39	45.01	
2.1.5 Adult literacy rate	19	98.88	●
2.1.6 AI talent concentration	NA	NA	
2nd sub-pillar: Businesses	105	30.98	
2.2.1 Firms with website	89	32.35	
2.2.2 GERD financed by business enterprise	77	10.01	
2.2.3 Knowledge intensive employment	50	39.12	
2.2.4 Annual investment in telecommunication services	96	73.20	
2.2.5 GERD performed by business enterprise	83	0.20	○
3rd sub-pillar: Governments	97	26.90	
2.3.1 Government online services	78	58.70	
2.3.2 Publication and use of open data	NA	NA	
2.3.3 Government promotion of investment in emerging tech	105	19.80	
2.3.4 R&D expenditure by governments and higher education	99	2.21	

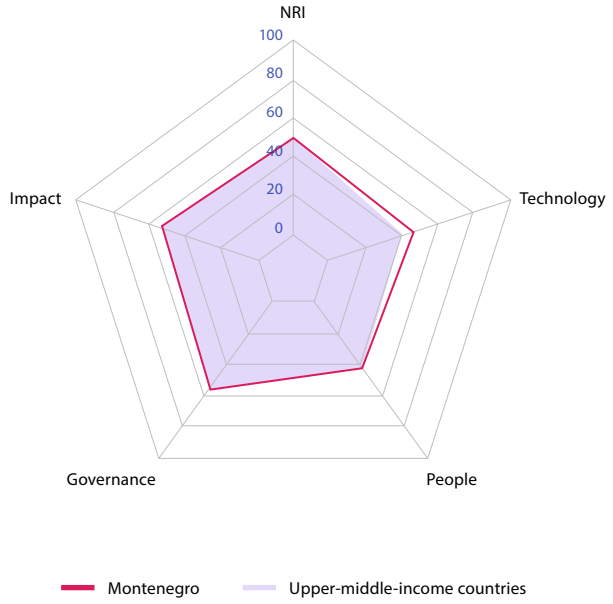
Indicator	Rank	Score	
C. Governance pillar	**65**	**56.46**	
1st sub-pillar: Trust	66	44.89	
3.1.1 Secure Internet servers	59	59.48	
3.1.2 Cybersecurity	113	24.90	
3.1.3 Online access to financial account	36	46.58	●
3.1.4 Internet shopping	44	48.61	●
2nd sub-pillar: Regulation	101	56.11	
3.2.1 Regulatory quality	82	44.89	
3.2.2 ICT regulatory environment	76	79.41	
3.2.3 Regulation of emerging technologies	88	30.65	
3.2.4 E-commerce legislation	87	66.67	○
3.2.5 Privacy protection by law content	82	58.95	
3rd sub-pillar: Inclusion	51	68.39	
3.3.1 E-Participation	57	59.31	
3.3.2 Socioeconomic gap in use of digital payments	6	99.34	●
3.3.3 Availability of local online content	97	42.55	
3.3.4 Gender gap in Internet use	69	66.57	
3.3.5 Rural gap in use of digital payments	32	74.19	●
D. Impact pillar	**89**	**47.53**	
1st sub-pillar: Economy	98	18.93	
4.1.1 High-tech and medium-high-tech manufacturing	104	2.59	○
4.1.2 High-tech exports	18	39.70	●
4.1.3 PCT patent applications	67	2.58	
4.1.4 Domestic market size	112	36.54	
4.1.5 Prevalence of gig economy	92	29.65	
4.1.6 ICT services exports	110	2.53	
2nd sub-pillar: Quality of Life	85	62.69	
4.2.1 Happiness	70	63.90	
4.2.2 Freedom to make life choices	101	57.00	
4.2.3 Income inequality	36	76.13	●
4.2.4 Healthy life expectancy at birth	102	53.74	
3rd sub-pillar: SDG Contribution	74	60.97	
4.3.1 SDG 3: Good Health and Well-Being	91	57.38	
4.3.2 SDG 4: Quality Education	NA	NA	
4.3.3 SDG 5: Women's economic opportunity	39	86.73	●
4.3.4 SDG 7: Affordable and Clean Energy	110	53.97	
4.3.5 SDG 11: Sustainable Cities and Communities	101	45.81	

NOTE: ● Indicates a strength and ○ a weakness.

Montenegro

	Rank (Out of 134)	Score
Network Readiness Index	**66**	**48.14**

Pillar/sub-pillar	Rank	Score
A. Technology pillar	**47**	**45.88**
1st sub-pillar: Access	92	54.27
2nd sub-pillar: Content	20	48.55
3rd sub-pillar: Future Technologies	59	34.83
B. People pillar	**76**	**41.00**
1st sub-pillar: Individuals	45	51.79
2nd sub-pillar: Businesses	74	42.93
3rd sub-pillar: Governments	94	28.26
C. Governance pillar	**69**	**55.08**
1st sub-pillar: Trust	88	34.21
2nd sub-pillar: Regulation	70	64.68
3rd sub-pillar: Inclusion	55	66.36
D. Impact pillar	**81**	**50.58**
1st sub-pillar: Economy	83	22.70
2nd sub-pillar: Quality of Life	64	68.94
3rd sub-pillar: SDG Contribution	82	60.11



The Network Readiness Index in detail

Indicator	Rank	Score	
A. Technology pillar	**47**	**45.88**	
1st sub-pillar: Access	92	54.27	
1.1.1 Mobile tariffs	104	36.22	
1.1.2 Handset prices	56	54.44	
1.1.3 FTTH/building Internet subscriptions	97	14.79	
1.1.4 Population covered by at least a 3G mobile network	80	99.33	
1.1.5 International Internet bandwidth	93	66.57	
1.1.6 Internet access in schools	NA	NA	
2nd sub-pillar: Content	20	48.55	
1.2.1 GitHub commits	38	25.12	●
1.2.2 Internet domain registrations	1	100.00	●
1.2.3 Mobile apps development	57	68.50	
1.2.4 AI scientific publications	112	0.57	○
3rd sub-pillar: Future Technologies	59	34.83	
1.3.1 Adoption of emerging technologies	71	44.68	
1.3.2 Investment in emerging technologies	89	33.50	
1.3.3 Robot density	NA	NA	
1.3.4 Computer software spending	48	26.30	
B. People pillar	**76**	**41.00**	
1st sub-pillar: Individuals	45	51.79	
2.1.1 Mobile broadband internet traffic within the country	102	1.78	○
2.1.2 ICT skills in the education system	NA	NA	
2.1.3 Use of virtual social networks	43	71.07	●
2.1.4 Tertiary enrollment	58	35.72	
2.1.5 Adult literacy rate	21	98.61	●
2.1.6 AI talent concentration	NA	NA	
2nd sub-pillar: Businesses	74	42.93	
2.2.1 Firms with website	82	36.39	
2.2.2 GERD financed by business enterprise	48	46.76	
2.2.3 Knowledge intensive employment	37	55.33	●
2.2.4 Annual investment in telecommunication services	109	71.32	○
2.2.5 GERD performed by business enterprise	54	4.85	
3rd sub-pillar: Governments	94	28.26	
2.3.1 Government online services	89	50.57	
2.3.2 Publication and use of open data	79	14.71	
2.3.3 Government promotion of investment in emerging tech	55	41.40	
2.3.4 R&D expenditure by governments and higher education	71	6.37	

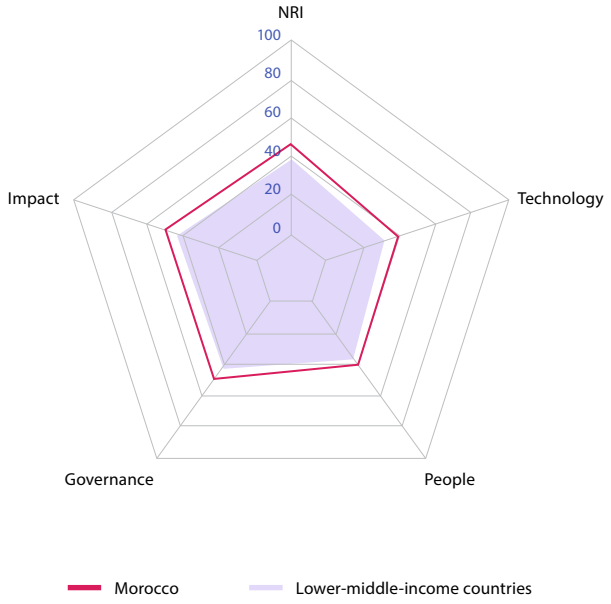
Indicator	Rank	Score	
C. Governance pillar	**69**	**55.08**	
1st sub-pillar: Trust	88	34.21	
3.1.1 Secure Internet servers	67	53.17	
3.1.2 Cybersecurity	92	52.41	
3.1.3 Online access to financial account	90	16.36	
3.1.4 Internet shopping	81	14.90	
2nd sub-pillar: Regulation	70	64.68	
3.2.1 Regulatory quality	50	59.33	●
3.2.2 ICT regulatory environment	26	92.94	●
3.2.3 Regulation of emerging technologies	79	35.32	
3.2.4 E-commerce legislation	87	66.67	○
3.2.5 Privacy protection by law content	57	69.12	
3rd sub-pillar: Inclusion	55	66.36	
3.3.1 E-Participation	80	45.35	
3.3.2 Socioeconomic gap in use of digital payments	72	71.40	
3.3.3 Availability of local online content	57	65.62	
3.3.4 Gender gap in Internet use	55	68.39	
3.3.5 Rural gap in use of digital payments	4	81.06	●
D. Impact pillar	**81**	**50.58**	
1st sub-pillar: Economy	83	22.70	
4.1.1 High-tech and medium-high-tech manufacturing	88	11.02	
4.1.2 High-tech exports	51	16.89	
4.1.3 PCT patent applications	38	9.31	●
4.1.4 Domestic market size	129	24.40	○
4.1.5 Prevalence of gig economy	63	41.57	
4.1.6 ICT services exports	26	33.00	●
2nd sub-pillar: Quality of Life	64	68.94	
4.2.1 Happiness	73	62.67	
4.2.2 Freedom to make life choices	70	71.12	
4.2.3 Income inequality	59	65.83	
4.2.4 Healthy life expectancy at birth	53	76.15	
3rd sub-pillar: SDG Contribution	82	60.11	
4.3.1 SDG 3: Good Health and Well-Being	82	63.72	
4.3.2 SDG 4: Quality Education	52	35.86	
4.3.3 SDG 5: Women's economic opportunity	60	78.76	
4.3.4 SDG 7: Affordable and Clean Energy	52	75.14	
4.3.5 SDG 11: Sustainable Cities and Communities	98	47.07	

NOTE: ● Indicates a strength and ○ a weakness.

Morocco

	Rank (Out of 134)	Score
Network Readiness Index	**77**	**45.43**

Pillar/sub-pillar	Rank	Score
A. Technology pillar	**72**	**39.20**
1st sub-pillar: Access	69	63.79
2nd sub-pillar: Content	71	22.15
3rd sub-pillar: Future Technologies	69	31.66
B. People pillar	**75**	**41.59**
1st sub-pillar: Individuals	69	46.80
2nd sub-pillar: Businesses	57	47.60
3rd sub-pillar: Governments	91	30.37
C. Governance pillar	**81**	**50.46**
1st sub-pillar: Trust	80	36.19
2nd sub-pillar: Regulation	37	76.17
3rd sub-pillar: Inclusion	117	39.00
D. Impact pillar	**83**	**50.47**
1st sub-pillar: Economy	55	32.19
2nd sub-pillar: Quality of Life	96	58.96
3rd sub-pillar: SDG Contribution	79	60.26



The Network Readiness Index in detail

Indicator	Rank	Score	
A. Technology pillar	**72**	**39.20**	
1st sub-pillar: Access	69	63.79	
1.1.1 Mobile tariffs	95	45.02	
1.1.2 Handset prices	80	41.05	
1.1.3 FTTH/building Internet subscriptions	43	36.93	●
1.1.4 Population covered by at least a 3G mobile network	50	99.84	●
1.1.5 International Internet bandwidth	21	80.87	●
1.1.6 Internet access in schools	41	79.02	
2nd sub-pillar: Content	71	22.15	
1.2.1 GitHub commits	85	3.37	
1.2.2 Internet domain registrations	88	1.51	
1.2.3 Mobile apps development	76	63.47	
1.2.4 AI scientific publications	27	20.25	●
3rd sub-pillar: Future Technologies	69	31.66	
1.3.1 Adoption of emerging technologies	91	37.16	
1.3.2 Investment in emerging technologies	82	35.00	
1.3.3 Robot density	NA	NA	
1.3.4 Computer software spending	61	22.82	
B. People pillar	**75**	**41.59**	
1st sub-pillar: Individuals	69	46.80	
2.1.1 Mobile broadband internet traffic within the country	26	30.37	●
2.1.2 ICT skills in the education system	47	56.31	
2.1.3 Use of virtual social networks	83	52.69	
2.1.4 Tertiary enrollment	73	27.49	
2.1.5 Adult literacy rate	86	67.14	
2.1.6 AI talent concentration	NA	NA	
2nd sub-pillar: Businesses	57	47.60	
2.2.1 Firms with website	59	53.03	
2.2.2 GERD financed by business enterprise	NA	NA	
2.2.3 Knowledge intensive employment	111	8.79	○
2.2.4 Annual investment in telecommunication services	48	80.97	●
2.2.5 GERD performed by business enterprise	NA	NA	
3rd sub-pillar: Governments	91	30.37	
2.3.1 Government online services	102	41.66	
2.3.2 Publication and use of open data	77	16.18	
2.3.3 Government promotion of investment in emerging tech	80	33.27	
2.3.4 R&D expenditure by governments and higher education	NA	NA	

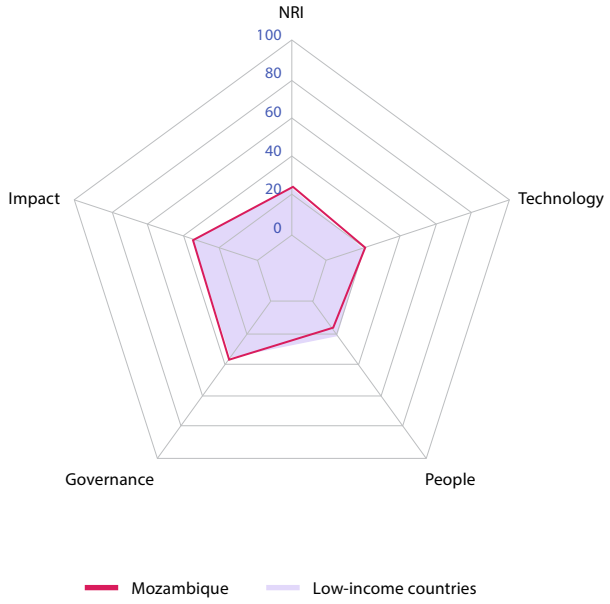
Indicator	Rank	Score	
C. Governance pillar	**81**	**50.46**	
1st sub-pillar: Trust	80	36.19	
3.1.1 Secure Internet servers	75	48.60	
3.1.2 Cybersecurity	58	82.10	
3.1.3 Online access to financial account	124	3.56	○
3.1.4 Internet shopping	88	10.50	
2nd sub-pillar: Regulation	37	76.17	
3.2.1 Regulatory quality	78	46.85	
3.2.2 ICT regulatory environment	57	85.29	
3.2.3 Regulation of emerging technologies	NA	NA	
3.2.4 E-commerce legislation	1	100.00	●
3.2.5 Privacy protection by law content	46	72.54	●
3rd sub-pillar: Inclusion	117	39.00	
3.3.1 E-Participation	111	25.58	○
3.3.2 Socioeconomic gap in use of digital payments	111	44.22	
3.3.3 Availability of local online content	68	60.10	
3.3.4 Gender gap in Internet use	73	65.12	
3.3.5 Rural gap in use of digital payments	126	0.00	○
D. Impact pillar	**83**	**50.47**	
1st sub-pillar: Economy	55	32.19	
4.1.1 High-tech and medium-high-tech manufacturing	23	53.43	●
4.1.2 High-tech exports	83	7.71	
4.1.3 PCT patent applications	58	4.53	
4.1.4 Domestic market size	54	56.97	
4.1.5 Prevalence of gig economy	66	39.83	
4.1.6 ICT services exports	29	30.66	●
2nd sub-pillar: Quality of Life	96	58.96	
4.2.1 Happiness	100	41.73	
4.2.2 Freedom to make life choices	75	69.93	
4.2.3 Income inequality	76	59.05	
4.2.4 Healthy life expectancy at birth	89	65.13	
3rd sub-pillar: SDG Contribution	79	60.26	
4.3.1 SDG 3: Good Health and Well-Being	58	72.84	
4.3.2 SDG 4: Quality Education	72	13.80	○
4.3.3 SDG 5: Women's economic opportunity	99	65.49	
4.3.4 SDG 7: Affordable and Clean Energy	40	77.10	●
4.3.5 SDG 11: Sustainable Cities and Communities	53	72.07	

NOTE: ● Indicates a strength and ○ a weakness.

Mozambique

	Rank (Out of 134)	Score
Network Readiness Index	**130**	**25.07**

Pillar/sub-pillar	Rank	Score
A. Technology pillar	**127**	**18.83**
1st sub-pillar: Access	122	39.17
2nd sub-pillar: Content	122	2.32
3rd sub-pillar: Future Technologies	127	15.01
B. People pillar	**132**	**15.44**
1st sub-pillar: Individuals	129	14.78
2nd sub-pillar: Businesses	128	19.00
3rd sub-pillar: Governments	128	12.53
C. Governance pillar	**124**	**34.54**
1st sub-pillar: Trust	113	22.27
2nd sub-pillar: Regulation	108	51.12
3rd sub-pillar: Inclusion	125	30.24
D. Impact pillar	**129**	**31.48**
1st sub-pillar: Economy	132	9.07
2nd sub-pillar: Quality of Life	120	43.08
3rd sub-pillar: SDG Contribution	125	42.30



The Network Readiness Index in detail

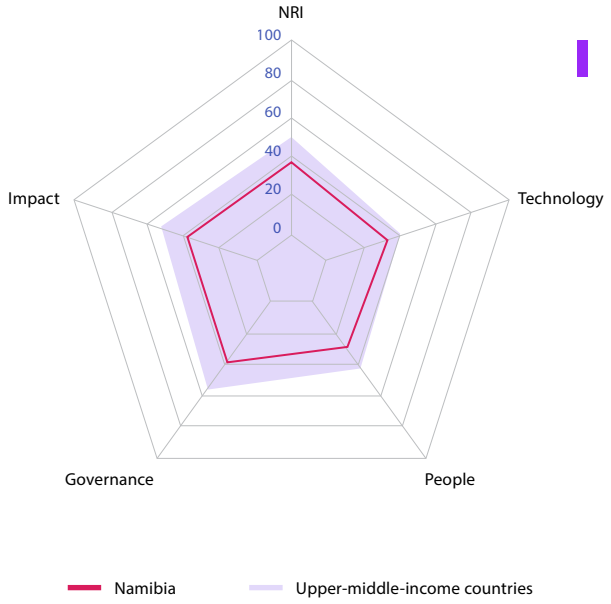
Indicator	Rank	Score	
A. Technology pillar	**127**	**18.83**	
1st sub-pillar: Access	122	39.17	
1.1.1 Mobile tariffs	126	11.26	
1.1.2 Handset prices	125	17.33	
1.1.3 FTTH/building Internet subscriptions	100	13.52	
1.1.4 Population covered by at least a 3G mobile network	114	94.47	
1.1.5 International Internet bandwidth	119	59.28	
1.1.6 Internet access in schools	NA	NA	
2nd sub-pillar: Content	122	2.32	
1.2.1 GitHub commits	127	0.29	
1.2.2 Internet domain registrations	123	0.15	
1.2.3 Mobile apps development	121	4.61	○
1.2.4 AI scientific publications	74	4.24	●
3rd sub-pillar: Future Technologies	127	15.01	
1.3.1 Adoption of emerging technologies	119	17.19	
1.3.2 Investment in emerging technologies	108	26.00	
1.3.3 Robot density	NA	NA	
1.3.4 Computer software spending	116	1.84	
B. People pillar	**132**	**15.44**	
1st sub-pillar: Individuals	129	14.78	
2.1.1 Mobile broadband internet traffic within the country	109	1.28	
2.1.2 ICT skills in the education system	NA	NA	
2.1.3 Use of virtual social networks	125	4.69	
2.1.4 Tertiary enrollment	118	3.10	
2.1.5 Adult literacy rate	96	50.05	
2.1.6 AI talent concentration	NA	NA	
2nd sub-pillar: Businesses	128	19.00	
2.2.1 Firms with website	84	35.58	●
2.2.2 GERD financed by business enterprise	96	0.58	
2.2.3 Knowledge intensive employment	122	1.80	
2.2.4 Annual investment in telecommunication services	121	57.03	
2.2.5 GERD performed by business enterprise	90	0.01	○
3rd sub-pillar: Governments	128	12.53	
2.3.1 Government online services	121	28.86	
2.3.2 Publication and use of open data	100	2.94	
2.3.3 Government promotion of investment in emerging tech	114	12.87	
2.3.4 R&D expenditure by governments and higher education	75	5.46	●

Indicator	Rank	Score	
C. Governance pillar	**124**	**34.54**	
1st sub-pillar: Trust	113	22.27	
3.1.1 Secure Internet servers	119	26.92	
3.1.2 Cybersecurity	114	22.85	
3.1.3 Online access to financial account	54	34.30	●
3.1.4 Internet shopping	109	5.00	
2nd sub-pillar: Regulation	108	51.12	
3.2.1 Regulatory quality	113	32.02	
3.2.2 ICT regulatory environment	106	65.88	
3.2.3 Regulation of emerging technologies	NA	NA	
3.2.4 E-commerce legislation	121	33.33	
3.2.5 Privacy protection by law content	44	73.25	●
3rd sub-pillar: Inclusion	125	30.24	
3.3.1 E-Participation	125	17.45	
3.3.2 Socioeconomic gap in use of digital payments	121	38.26	
3.3.3 Availability of local online content	128	18.27	○
3.3.4 Gender gap in Internet use	103	11.62	
3.3.5 Rural gap in use of digital payments	62	65.60	●
D. Impact pillar	**129**	**31.48**	
1st sub-pillar: Economy	132	9.07	
4.1.1 High-tech and medium-high-tech manufacturing	NA	NA	
4.1.2 High-tech exports	113	1.61	
4.1.3 PCT patent applications	99	0.00	○
4.1.4 Domestic market size	109	36.75	
4.1.5 Prevalence of gig economy	121	5.52	
4.1.6 ICT services exports	121	1.45	
2nd sub-pillar: Quality of Life	120	43.08	
4.2.1 Happiness	95	44.40	●
4.2.2 Freedom to make life choices	31	84.80	●
4.2.3 Income inequality	112	22.61	
4.2.4 Healthy life expectancy at birth	131	20.48	○
3rd sub-pillar: SDG Contribution	125	42.30	
4.3.1 SDG 3: Good Health and Well-Being	116	30.43	
4.3.2 SDG 4: Quality Education	NA	NA	
4.3.3 SDG 5: Women's economic opportunity	71	75.22	●
4.3.4 SDG 7: Affordable and Clean Energy	132	17.05	○
4.3.5 SDG 11: Sustainable Cities and Communities	99	46.50	●

NOTE: ● Indicates a strength and ○ a weakness.

Namibia

	Rank (Out of 134)	Score
Network Readiness Index	**112**	**33.87**
Pillar/sub-pillar	**Rank**	**Score**
A. Technology pillar	**90**	**33.04**
1st sub-pillar: Access	112	43.46
2nd sub-pillar: Content	55	26.44
3rd sub-pillar: Future Technologies	79	29.22
B. People pillar	**115**	**27.83**
1st sub-pillar: Individuals	106	32.82
2nd sub-pillar: Businesses	110	29.20
3rd sub-pillar: Governments	111	21.45
C. Governance pillar	**115**	**37.16**
1st sub-pillar: Trust	104	28.53
2nd sub-pillar: Regulation	120	40.18
3rd sub-pillar: Inclusion	110	42.78
D. Impact pillar	**115**	**37.44**
1st sub-pillar: Economy	120	13.58
2nd sub-pillar: Quality of Life	127	37.23
3rd sub-pillar: SDG Contribution	71	61.51



The Network Readiness Index in detail

Indicator	Rank	Score	
A. Technology pillar	**90**	**33.04**	
1st sub-pillar: Access	112	43.46	
1.1.1 Mobile tariffs	109	32.20	
1.1.2 Handset prices	97	33.11	
1.1.3 FTTH/building Internet subscriptions	118	4.97	
1.1.4 Population covered by at least a 3G mobile network	107	96.09	
1.1.5 International Internet bandwidth	129	50.93	○
1.1.6 Internet access in schools	NA	NA	
2nd sub-pillar: Content	55	26.44	
1.2.1 GitHub commits	93	2.68	
1.2.2 Internet domain registrations	60	4.97	●
1.2.3 Mobile apps development	46	71.66	●
1.2.4 AI scientific publications	NA	NA	
3rd sub-pillar: Future Technologies	79	29.22	
1.3.1 Adoption of emerging technologies	72	44.52	●
1.3.2 Investment in emerging technologies	84	34.75	
1.3.3 Robot density	NA	NA	
1.3.4 Computer software spending	92	8.39	
B. People pillar	**115**	**27.83**	
1st sub-pillar: Individuals	106	32.82	
2.1.1 Mobile broadband internet traffic within the country	117	0.39	○
2.1.2 ICT skills in the education system	NA	NA	
2.1.3 Use of virtual social networks	104	24.93	
2.1.4 Tertiary enrollment	88	16.56	
2.1.5 Adult literacy rate	61	89.42	●
2.1.6 AI talent concentration	NA	NA	
2nd sub-pillar: Businesses	110	29.20	
2.2.1 Firms with website	86	34.54	
2.2.2 GERD financed by business enterprise	73	13.73	
2.2.3 Knowledge intensive employment	77	24.97	
2.2.4 Annual investment in telecommunication services	105	71.75	
2.2.5 GERD performed by business enterprise	74	1.01	
3rd sub-pillar: Governments	111	21.45	
2.3.1 Government online services	109	37.18	
2.3.2 Publication and use of open data	91	8.82	
2.3.3 Government promotion of investment in emerging tech	77	33.69	
2.3.4 R&D expenditure by governments and higher education	72	6.12	

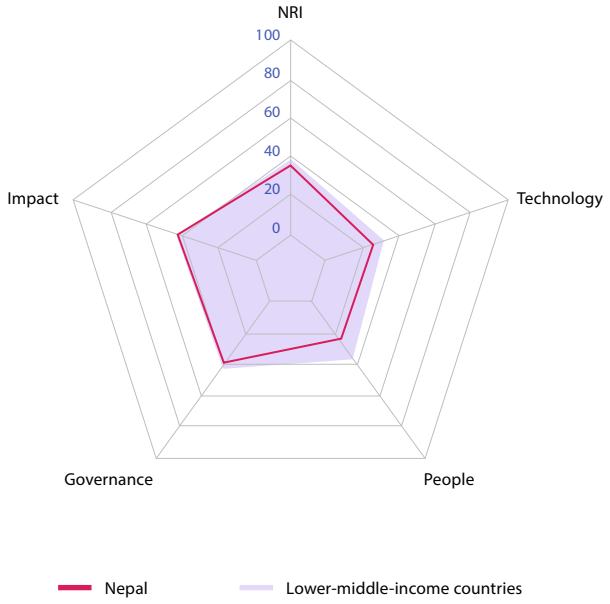
Indicator	Rank	Score	
C. Governance pillar	**115**	**37.16**	
1st sub-pillar: Trust	104	28.53	
3.1.1 Secure Internet servers	89	42.98	
3.1.2 Cybersecurity	127	9.91	○
3.1.3 Online access to financial account	35	48.77	●
3.1.4 Internet shopping	85	12.48	
2nd sub-pillar: Regulation	120	40.18	
3.2.1 Regulatory quality	72	49.50	●
3.2.2 ICT regulatory environment	88	72.59	
3.2.3 Regulation of emerging technologies	84	32.47	
3.2.4 E-commerce legislation	129	0.00	○
3.2.5 Privacy protection by law content	105	46.33	
3rd sub-pillar: Inclusion	110	42.78	
3.3.1 E-Participation	115	23.26	
3.3.2 Socioeconomic gap in use of digital payments	101	53.45	
3.3.3 Availability of local online content	102	37.74	
3.3.4 Gender gap in Internet use	NA	NA	
3.3.5 Rural gap in use of digital payments	77	56.68	
D. Impact pillar	**115**	**37.44**	
1st sub-pillar: Economy	120	13.58	
4.1.1 High-tech and medium-high-tech manufacturing	100	3.72	
4.1.2 High-tech exports	122	0.62	
4.1.3 PCT patent applications	52	5.60	●
4.1.4 Domestic market size	127	30.90	
4.1.5 Prevalence of gig economy	71	37.50	●
4.1.6 ICT services exports	105	3.11	
2nd sub-pillar: Quality of Life	127	37.23	
4.2.1 Happiness	91	48.29	
4.2.2 Freedom to make life choices	111	51.26	
4.2.3 Income inequality	115	9.80	○
4.2.4 Healthy life expectancy at birth	116	39.57	
3rd sub-pillar: SDG Contribution	71	61.51	
4.3.1 SDG 3: Good Health and Well-Being	94	54.58	
4.3.2 SDG 4: Quality Education	NA	NA	
4.3.3 SDG 5: Women's economic opportunity	56	80.53	●
4.3.4 SDG 7: Affordable and Clean Energy	55	74.49	●
4.3.5 SDG 11: Sustainable Cities and Communities	116	36.42	

NOTE: ● Indicates a strength and ○ a weakness.

Nepal

	Rank (Out of 134)	Score
Network Readiness Index	**114**	**33.73**

Pillar/sub-pillar	Rank	Score
A. Technology pillar	**112**	**27.04**
1st sub-pillar: Access	116	41.04
2nd sub-pillar: Content	74	21.67
3rd sub-pillar: Future Technologies	116	18.41
B. People pillar	**122**	**24.37**
1st sub-pillar: Individuals	111	28.72
2nd sub-pillar: Businesses	130	18.13
3rd sub-pillar: Governments	100	26.26
C. Governance pillar	**110**	**38.79**
1st sub-pillar: Trust	107	24.33
2nd sub-pillar: Regulation	113	49.14
3rd sub-pillar: Inclusion	109	42.89
D. Impact pillar	**100**	**44.71**
1st sub-pillar: Economy	101	18.33
2nd sub-pillar: Quality of Life	81	64.50
3rd sub-pillar: SDG Contribution	107	51.30



The Network Readiness Index in detail

Indicator	Rank	Score	
A. Technology pillar	**112**	**27.04**	
1st sub-pillar: Access	116	41.04	
1.1.1 Mobile tariffs	80	54.00	●
1.1.2 Handset prices	126	15.01	○
1.1.3 FTTH/building Internet subscriptions	55	31.48	●
1.1.4 Population covered by at least a 3G mobile network	129	74.75	○
1.1.5 International Internet bandwidth	94	66.48	
1.1.6 Internet access in schools	80	4.53	
2nd sub-pillar: Content	74	21.67	
1.2.1 GitHub commits	79	4.19	●
1.2.2 Internet domain registrations	96	1.05	
1.2.3 Mobile apps development	45	71.84	●
1.2.4 AI scientific publications	48	9.59	●
3rd sub-pillar: Future Technologies	116	18.41	
1.3.1 Adoption of emerging technologies	108	27.45	
1.3.2 Investment in emerging technologies	107	26.25	
1.3.3 Robot density	NA	NA	
1.3.4 Computer software spending	119	1.53	
B. People pillar	**122**	**24.37**	
1st sub-pillar: Individuals	111	28.72	
2.1.1 Mobile broadband internet traffic within the country	115	0.55	○
2.1.2 ICT skills in the education system	84	35.12	
2.1.3 Use of virtual social networks	99	37.44	
2.1.4 Tertiary enrollment	102	9.88	
2.1.5 Adult literacy rate	92	60.61	
2.1.6 AI talent concentration	NA	NA	
2nd sub-pillar: Businesses	130	18.13	
2.2.1 Firms with website	97	19.18	
2.2.2 GERD financed by business enterprise	NA	NA	
2.2.3 Knowledge intensive employment	95	17.08	
2.2.4 Annual investment in telecommunication services	NA	NA	
2.2.5 GERD performed by business enterprise	NA	NA	
3rd sub-pillar: Governments	100	26.26	
2.3.1 Government online services	106	40.23	
2.3.2 Publication and use of open data	79	14.71	
2.3.3 Government promotion of investment in emerging tech	101	23.84	
2.3.4 R&D expenditure by governments and higher education	NA	NA	

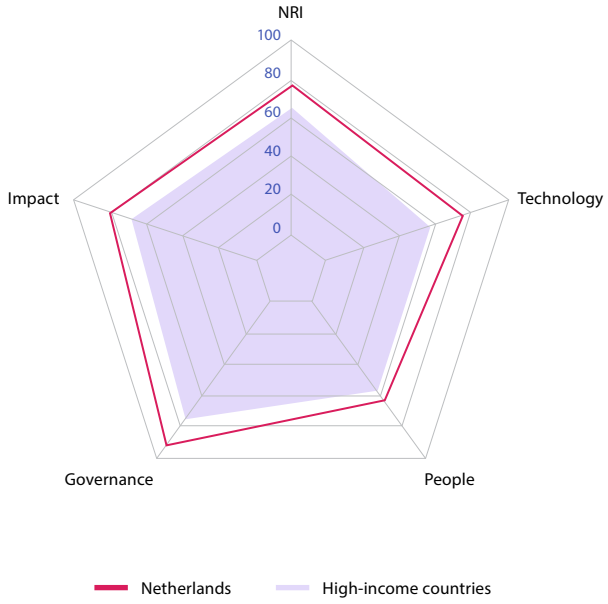
Indicator	Rank	Score	
C. Governance pillar	**110**	**38.79**	
1st sub-pillar: Trust	107	24.33	
3.1.1 Secure Internet servers	90	42.57	
3.1.2 Cybersecurity	98	44.02	
3.1.3 Online access to financial account	118	6.34	
3.1.4 Internet shopping	111	4.38	
2nd sub-pillar: Regulation	113	49.14	
3.2.1 Regulatory quality	104	35.67	
3.2.2 ICT regulatory environment	127	54.12	○
3.2.3 Regulation of emerging technologies	113	5.71	○
3.2.4 E-commerce legislation	1	100.00	●
3.2.5 Privacy protection by law content	96	50.19	
3rd sub-pillar: Inclusion	109	42.89	
3.3.1 E-Participation	120	22.09	
3.3.2 Socioeconomic gap in use of digital payments	103	52.44	
3.3.3 Availability of local online content	107	34.38	
3.3.4 Gender gap in Internet use	NA	NA	
3.3.5 Rural gap in use of digital payments	67	62.65	●
D. Impact pillar	**100**	**44.71**	
1st sub-pillar: Economy	101	18.33	
4.1.1 High-tech and medium-high-tech manufacturing	92	9.58	
4.1.2 High-tech exports	110	1.70	
4.1.3 PCT patent applications	NA	NA	
4.1.4 Domestic market size	79	47.74	●
4.1.5 Prevalence of gig economy	107	22.09	
4.1.6 ICT services exports	74	10.53	●
2nd sub-pillar: Quality of Life	81	64.50	
4.2.1 Happiness	80	58.06	
4.2.2 Freedom to make life choices	55	78.17	●
4.2.3 Income inequality	NA	NA	
4.2.4 Healthy life expectancy at birth	99	57.28	
3rd sub-pillar: SDG Contribution	107	51.30	
4.3.1 SDG 3: Good Health and Well-Being	108	40.67	
4.3.2 SDG 4: Quality Education	NA	NA	
4.3.3 SDG 5: Women's economic opportunity	80	72.57	●
4.3.4 SDG 7: Affordable and Clean Energy	111	53.54	
4.3.5 SDG 11: Sustainable Cities and Communities	113	38.42	

NOTE: ● Indicates a strength and ○ a weakness.

Netherlands

	Rank (Out of 134)	Score
Network Readiness Index	**4**	**76.04**

Pillar/sub-pillar	Rank	Score
A. Technology pillar	**4**	**71.59**
1st sub-pillar: Access	19	76.52
2nd sub-pillar: Content	4	67.29
3rd sub-pillar: Future Technologies	6	70.96
B. People pillar	**15**	**64.09**
1st sub-pillar: Individuals	57	49.28
2nd sub-pillar: Businesses	10	74.77
3rd sub-pillar: Governments	14	68.21
C. Governance pillar	**2**	**89.74**
1st sub-pillar: Trust	3	91.89
2nd sub-pillar: Regulation	5	90.62
3rd sub-pillar: Inclusion	2	86.72
D. Impact pillar	**5**	**78.74**
1st sub-pillar: Economy	8	59.63
2nd sub-pillar: Quality of Life	7	89.97
3rd sub-pillar: SDG Contribution	5	86.62



The Network Readiness Index in detail

Indicator	Rank	Score	
A. Technology pillar	**4**	**71.59**	
1st sub-pillar: Access	19	76.52	
1.1.1 Mobile tariffs	25	81.85	
1.1.2 Handset prices	35	67.46	
1.1.3 FTTH/building Internet subscriptions	50	33.92	○
1.1.4 Population covered by at least a 3G mobile network	57	99.67	○
1.1.5 International Internet bandwidth	38	76.25	
1.1.6 Internet access in schools	1	100.00	●
2nd sub-pillar: Content	4	67.29	
1.2.1 GitHub commits	9	76.40	
1.2.2 Internet domain registrations	1	100.00	●
1.2.3 Mobile apps development	33	73.74	
1.2.4 AI scientific publications	29	19.02	
3rd sub-pillar: Future Technologies	6	70.96	
1.3.1 Adoption of emerging technologies	1	100.00	●
1.3.2 Investment in emerging technologies	5	87.75	●
1.3.3 Robot density	12	33.87	
1.3.4 Computer software spending	11	62.21	
B. People pillar	**15**	**64.09**	
1st sub-pillar: Individuals	57	49.28	
2.1.1 Mobile broadband internet traffic within the country	44	17.58	
2.1.2 ICT skills in the education system	22	73.06	
2.1.3 Use of virtual social networks	9	83.48	
2.1.4 Tertiary enrollment	11	60.27	
2.1.5 Adult literacy rate	NA	NA	
2.1.6 AI talent concentration	32	12.02	○
2nd sub-pillar: Businesses	10	74.77	
2.2.1 Firms with website	3	95.67	●
2.2.2 GERD financed by business enterprise	18	70.37	
2.2.3 Knowledge intensive employment	4	82.91	●
2.2.4 Annual investment in telecommunication services	22	85.91	
2.2.5 GERD performed by business enterprise	16	39.00	
3rd sub-pillar: Governments	14	68.21	
2.3.1 Government online services	11	89.24	
2.3.2 Publication and use of open data	10	76.47	
2.3.3 Government promotion of investment in emerging tech	21	66.64	
2.3.4 R&D expenditure by governments and higher education	15	40.48	

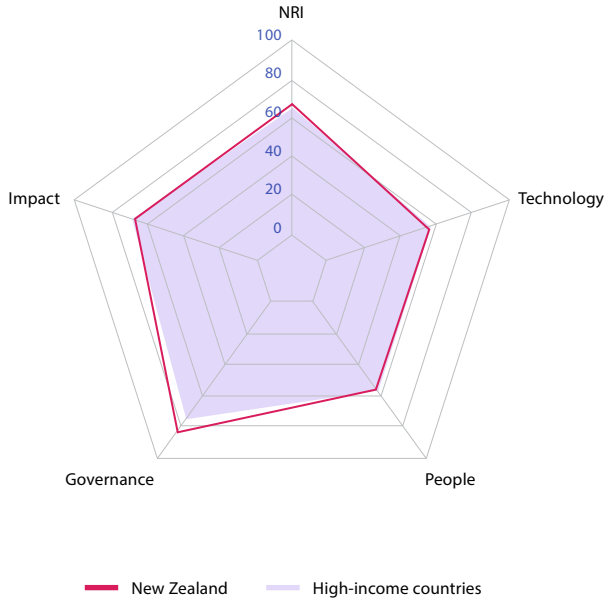
Indicator	Rank	Score	
C. Governance pillar	**2**	**89.74**	
1st sub-pillar: Trust	3	91.89	
3.1.1 Secure Internet servers	3	94.37	●
3.1.2 Cybersecurity	22	97.00	
3.1.3 Online access to financial account	5	89.01	●
3.1.4 Internet shopping	8	87.19	
2nd sub-pillar: Regulation	5	90.62	
3.2.1 Regulatory quality	7	89.19	
3.2.2 ICT regulatory environment	21	93.53	
3.2.3 Regulation of emerging technologies	11	81.56	
3.2.4 E-commerce legislation	1	100.00	●
3.2.5 Privacy protection by law content	12	88.81	
3rd sub-pillar: Inclusion	2	86.72	
3.3.1 E-Participation	5	96.51	●
3.3.2 Socioeconomic gap in use of digital payments	18	96.46	
3.3.3 Availability of local online content	3	97.12	●
3.3.4 Gender gap in Internet use	61	67.67	○
3.3.5 Rural gap in use of digital payments	21	75.85	
D. Impact pillar	**5**	**78.74**	
1st sub-pillar: Economy	8	59.63	
4.1.1 High-tech and medium-high-tech manufacturing	15	59.34	
4.1.2 High-tech exports	19	39.57	
4.1.3 PCT patent applications	9	64.91	
4.1.4 Domestic market size	27	68.94	
4.1.5 Prevalence of gig economy	3	90.12	●
4.1.6 ICT services exports	24	34.91	
2nd sub-pillar: Quality of Life	7	89.97	
4.2.1 Happiness	6	93.69	
4.2.2 Freedom to make life choices	40	82.14	
4.2.3 Income inequality	5	92.96	
4.2.4 Healthy life expectancy at birth	14	91.09	
3rd sub-pillar: SDG Contribution	5	86.62	
4.3.1 SDG 3: Good Health and Well-Being	9	94.99	
4.3.2 SDG 4: Quality Education	15	68.74	
4.3.3 SDG 5: Women's economic opportunity	1	100.00	●
4.3.4 SDG 7: Affordable and Clean Energy	38	77.31	
4.3.5 SDG 11: Sustainable Cities and Communities	17	92.05	

NOTE: ● Indicates a strength and ○ a weakness.

New Zealand

	Rank (Out of 134)	Score
Network Readiness Index	**23**	**65.96**

Pillar/sub-pillar	Rank	Score
A. Technology pillar	**27**	**53.79**
1st sub-pillar: Access	45	71.38
2nd sub-pillar: Content	22	45.65
3rd sub-pillar: Future Technologies	37	44.33
B. People pillar	**23**	**57.45**
1st sub-pillar: Individuals	77	44.35
2nd sub-pillar: Businesses	24	62.92
3rd sub-pillar: Governments	17	65.09
C. Governance pillar	**11**	**84.47**
1st sub-pillar: Trust	11	84.58
2nd sub-pillar: Regulation	19	84.02
3rd sub-pillar: Inclusion	9	84.81
D. Impact pillar	**24**	**68.14**
1st sub-pillar: Economy	36	37.34
2nd sub-pillar: Quality of Life	17	82.99
3rd sub-pillar: SDG Contribution	18	84.11



The Network Readiness Index in detail

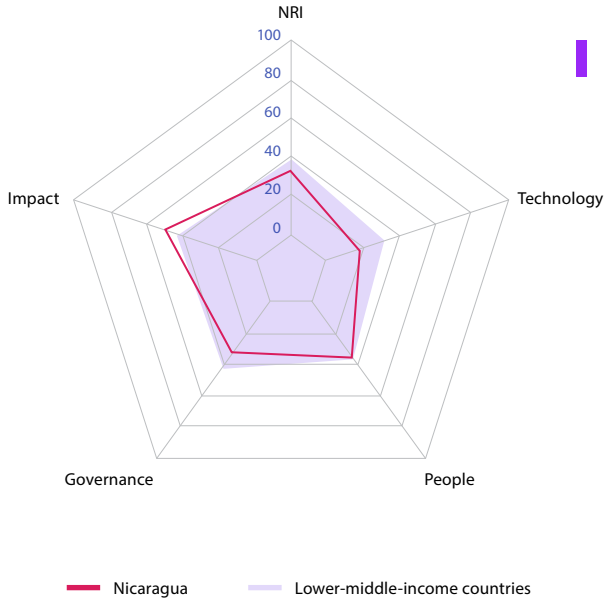
Indicator	Rank	Score	
A. Technology pillar	**27**	**53.79**	
1st sub-pillar: Access	45	71.38	
1.1.1 Mobile tariffs	37	75.86	
1.1.2 Handset prices	17	78.59	
1.1.3 FTTH/building Internet subscriptions	53	31.89	
1.1.4 Population covered by at least a 3G mobile network	71	99.52	
1.1.5 International Internet bandwidth	64	71.05	
1.1.6 Internet access in schools	NA	NA	
2nd sub-pillar: Content	22	45.65	
1.2.1 GitHub commits	22	53.04	
1.2.2 Internet domain registrations	15	50.59	●
1.2.3 Mobile apps development	50	70.86	
1.2.4 AI scientific publications	54	8.09	
3rd sub-pillar: Future Technologies	37	44.33	
1.3.1 Adoption of emerging technologies	18	77.97	
1.3.2 Investment in emerging technologies	19	68.50	
1.3.3 Robot density	33	7.46	○
1.3.4 Computer software spending	55	23.40	
B. People pillar	**23**	**57.45**	
1st sub-pillar: Individuals	77	44.35	
2.1.1 Mobile broadband internet traffic within the country	85	4.76	○
2.1.2 ICT skills in the education system	9	82.59	●
2.1.3 Use of virtual social networks	27	76.93	
2.1.4 Tertiary enrollment	24	52.10	
2.1.5 Adult literacy rate	NA	NA	
2.1.6 AI talent concentration	41	5.36	○
2nd sub-pillar: Businesses	24	62.92	
2.2.1 Firms with website	14	84.64	
2.2.2 GERD financed by business enterprise	30	61.78	
2.2.3 Knowledge intensive employment	NA	NA	
2.2.4 Annual investment in telecommunication services	36	82.99	
2.2.5 GERD performed by business enterprise	27	22.25	
3rd sub-pillar: Governments	17	65.09	
2.3.1 Government online services	6	95.35	●
2.3.2 Publication and use of open data	7	88.24	●
2.3.3 Government promotion of investment in emerging tech	36	51.63	
2.3.4 R&D expenditure by governments and higher education	31	25.13	

Indicator	Rank	Score	
C. Governance pillar	**11**	**84.47**	
1st sub-pillar: Trust	11	84.58	
3.1.1 Secure Internet servers	35	79.23	
3.1.2 Cybersecurity	56	83.76	
3.1.3 Online access to financial account	6	86.73	●
3.1.4 Internet shopping	7	88.60	●
2nd sub-pillar: Regulation	19	84.02	
3.2.1 Regulatory quality	6	90.45	●
3.2.2 ICT regulatory environment	38	88.82	
3.2.3 Regulation of emerging technologies	19	76.36	
3.2.4 E-commerce legislation	1	100.00	●
3.2.5 Privacy protection by law content	65	64.46	
3rd sub-pillar: Inclusion	9	84.81	
3.3.1 E-Participation	6	95.34	●
3.3.2 Socioeconomic gap in use of digital payments	24	94.64	
3.3.3 Availability of local online content	17	86.54	
3.3.4 Gender gap in Internet use	19	73.57	
3.3.5 Rural gap in use of digital payments	33	73.94	
D. Impact pillar	**24**	**68.14**	
1st sub-pillar: Economy	36	37.34	
4.1.1 High-tech and medium-high-tech manufacturing	73	18.56	○
4.1.2 High-tech exports	30	29.24	
4.1.3 PCT patent applications	21	36.02	
4.1.4 Domestic market size	61	53.82	
4.1.5 Prevalence of gig economy	15	70.35	
4.1.6 ICT services exports	61	16.03	
2nd sub-pillar: Quality of Life	17	82.99	
4.2.1 Happiness	14	85.98	●
4.2.2 Freedom to make life choices	61	75.91	
4.2.3 Income inequality	NA	NA	
4.2.4 Healthy life expectancy at birth	27	87.07	
3rd sub-pillar: SDG Contribution	18	84.11	
4.3.1 SDG 3: Good Health and Well-Being	14	93.74	●
4.3.2 SDG 4: Quality Education	13	68.92	
4.3.3 SDG 5: Women's economic opportunity	15	96.46	
4.3.4 SDG 7: Affordable and Clean Energy	73	69.94	
4.3.5 SDG 11: Sustainable Cities and Communities	20	91.47	

NOTE: ● Indicates a strength and ○ a weakness.

Nicaragua

	Rank (Out of 134)	Score
Network Readiness Index	**115**	**33.32**
Pillar/sub-pillar	**Rank**	**Score**
A. Technology pillar	**129**	**17.13**
1st sub-pillar: Access	125	36.30
2nd sub-pillar: Content	120	6.27
3rd sub-pillar: Future Technologies	132	8.82
B. People pillar	**103**	**31.05**
1st sub-pillar: Individuals	79	44.28
2nd sub-pillar: Businesses	117	26.68
3rd sub-pillar: Governments	109	22.19
C. Governance pillar	**125**	**32.60**
1st sub-pillar: Trust	127	14.06
2nd sub-pillar: Regulation	117	44.90
3rd sub-pillar: Inclusion	118	38.83
D. Impact pillar	**74**	**52.49**
1st sub-pillar: Economy	111	16.04
2nd sub-pillar: Quality of Life	61	69.55
3rd sub-pillar: SDG Contribution	46	71.87



The Network Readiness Index in detail

Indicator	Rank	Score	
A. Technology pillar	**129**	**17.13**	
1st sub-pillar: Access	125	36.30	
1.1.1 Mobile tariffs	118	24.51	
1.1.2 Handset prices	117	22.69	
1.1.3 FTTH/building Internet subscriptions	95	16.46	
1.1.4 Population covered by at least a 3G mobile network	124	88.27	
1.1.5 International Internet bandwidth	122	56.80	
1.1.6 Internet access in schools	73	9.04	
2nd sub-pillar: Content	120	6.27	
1.2.1 GitHub commits	105	1.78	
1.2.2 Internet domain registrations	89	1.49	
1.2.3 Mobile apps development	119	21.49	○
1.2.4 AI scientific publications	121	0.31	
3rd sub-pillar: Future Technologies	132	8.82	
1.3.1 Adoption of emerging technologies	NA	NA	
1.3.2 Investment in emerging technologies	126	13.25	
1.3.3 Robot density	NA	NA	
1.3.4 Computer software spending	102	4.39	
B. People pillar	**103**	**31.05**	
1st sub-pillar: Individuals	79	44.28	
2.1.1 Mobile broadband internet traffic within the country	NA	NA	
2.1.2 ICT skills in the education system	NA	NA	
2.1.3 Use of virtual social networks	90	45.55	
2.1.4 Tertiary enrollment	101	11.03	
2.1.5 Adult literacy rate	77	76.26	
2.1.6 AI talent concentration	NA	NA	
2nd sub-pillar: Businesses	117	26.68	
2.2.1 Firms with website	85	35.35	
2.2.2 GERD financed by business enterprise	NA	NA	
2.2.3 Knowledge intensive employment	91	18.00	
2.2.4 Annual investment in telecommunication services	NA	NA	
2.2.5 GERD performed by business enterprise	NA	NA	
3rd sub-pillar: Governments	109	22.19	
2.3.1 Government online services	101	42.63	
2.3.2 Publication and use of open data	NA	NA	
2.3.3 Government promotion of investment in emerging tech	NA	NA	
2.3.4 R&D expenditure by governments and higher education	104	1.75	

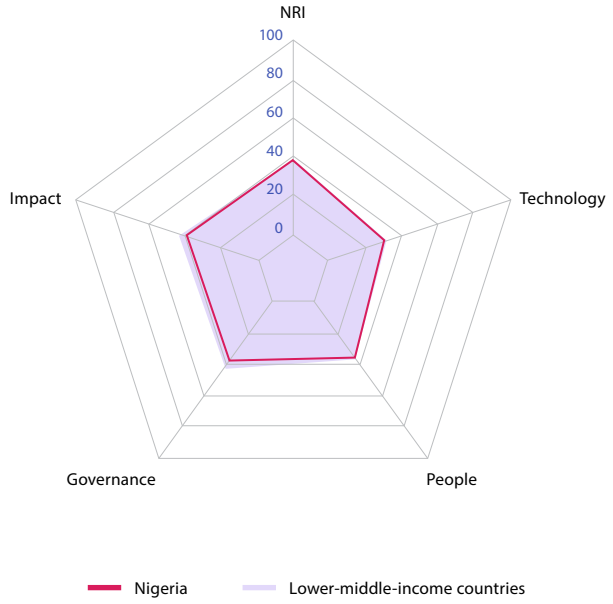
Indicator	Rank	Score	
C. Governance pillar	**125**	**32.60**	
1st sub-pillar: Trust	127	14.06	
3.1.1 Secure Internet servers	105	35.91	
3.1.2 Cybersecurity	130	7.40	○
3.1.3 Online access to financial account	120	5.71	
3.1.4 Internet shopping	102	7.23	
2nd sub-pillar: Regulation	117	44.90	
3.2.1 Regulatory quality	116	30.72	
3.2.2 ICT regulatory environment	99	68.82	
3.2.3 Regulation of emerging technologies	116	3.12	○
3.2.4 E-commerce legislation	1	100.00	●
3.2.5 Privacy protection by law content	128	21.82	○
3rd sub-pillar: Inclusion	118	38.83	
3.3.1 E-Participation	115	23.26	
3.3.2 Socioeconomic gap in use of digital payments	73	71.20	●
3.3.3 Availability of local online content	107	34.38	
3.3.4 Gender gap in Internet use	NA	NA	
3.3.5 Rural gap in use of digital payments	113	26.49	
D. Impact pillar	**74**	**52.49**	
1st sub-pillar: Economy	111	16.04	
4.1.1 High-tech and medium-high-tech manufacturing	77	16.35	
4.1.2 High-tech exports	108	1.96	
4.1.3 PCT patent applications	99	0.00	○
4.1.4 Domestic market size	110	36.58	
4.1.5 Prevalence of gig economy	NA	NA	
4.1.6 ICT services exports	41	25.30	●
2nd sub-pillar: Quality of Life	61	69.55	
4.2.1 Happiness	33	75.14	●
4.2.2 Freedom to make life choices	19	89.78	●
4.2.3 Income inequality	100	42.21	
4.2.4 Healthy life expectancy at birth	72	71.08	●
3rd sub-pillar: SDG Contribution	46	71.87	
4.3.1 SDG 3: Good Health and Well-Being	68	68.44	●
4.3.2 SDG 4: Quality Education	NA	NA	
4.3.3 SDG 5: Women's economic opportunity	56	80.53	●
4.3.4 SDG 7: Affordable and Clean Energy	84	67.27	●
4.3.5 SDG 11: Sustainable Cities and Communities	55	71.25	●

NOTE: ● Indicates a strength and ○ a weakness.

Nigeria

	Rank (Out of 134)	Score
Network Readiness Index	**106**	**35.73**

Pillar/sub-pillar	Rank	Score
A. Technology pillar	**88**	**34.42**
1st sub-pillar: Access	89	55.57
2nd sub-pillar: Content	69	22.29
3rd sub-pillar: Future Technologies	99	25.40
B. People pillar	**96**	**33.89**
1st sub-pillar: Individuals	120	20.71
2nd sub-pillar: Businesses	44	52.97
3rd sub-pillar: Governments	95	28.00
C. Governance pillar	**114**	**37.40**
1st sub-pillar: Trust	82	35.41
2nd sub-pillar: Regulation	109	50.62
3rd sub-pillar: Inclusion	131	26.17
D. Impact pillar	**116**	**37.20**
1st sub-pillar: Economy	85	22.51
2nd sub-pillar: Quality of Life	109	50.53
3rd sub-pillar: SDG Contribution	131	38.56



The Network Readiness Index in detail

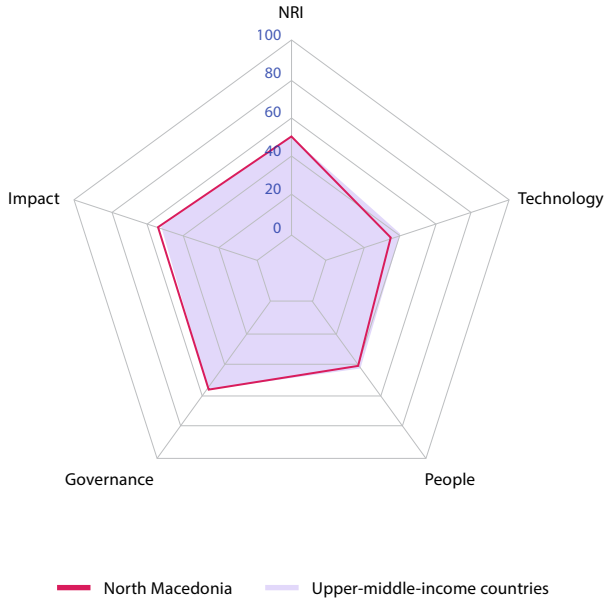
Indicator	Rank	Score	
A. Technology pillar	**88**	**34.42**	
1st sub-pillar: Access	89	55.57	
1.1.1 Mobile tariffs	96	44.76	
1.1.2 Handset prices	69	45.92	●
1.1.3 FTTH/building Internet subscriptions	89	20.16	
1.1.4 Population covered by at least a 3G mobile network	111	95.22	
1.1.5 International Internet bandwidth	63	71.81	●
1.1.6 Internet access in schools	NA	NA	
2nd sub-pillar: Content	69	22.29	
1.2.1 GitHub commits	83	3.90	
1.2.2 Internet domain registrations	108	0.49	
1.2.3 Mobile apps development	82	60.84	
1.2.4 AI scientific publications	18	23.91	●
3rd sub-pillar: Future Technologies	99	25.40	
1.3.1 Adoption of emerging technologies	75	43.17	
1.3.2 Investment in emerging technologies	115	22.75	
1.3.3 Robot density	NA	NA	
1.3.4 Computer software spending	88	10.29	
B. People pillar	**96**	**33.89**	
1st sub-pillar: Individuals	120	20.71	
2.1.1 Mobile broadband internet traffic within the country	72	7.52	
2.1.2 ICT skills in the education system	87	30.21	
2.1.3 Use of virtual social networks	114	11.34	
2.1.4 Tertiary enrollment	108	6.33	
2.1.5 Adult literacy rate	97	48.14	
2.1.6 AI talent concentration	NA	NA	
2nd sub-pillar: Businesses	44	52.97	
2.2.1 Firms with website	105	14.79	○
2.2.2 GERD financed by business enterprise	NA	NA	
2.2.3 Knowledge intensive employment	34	57.66	●
2.2.4 Annual investment in telecommunication services	19	86.47	●
2.2.5 GERD performed by business enterprise	NA	NA	
3rd sub-pillar: Governments	95	28.00	
2.3.1 Government online services	93	47.50	
2.3.2 Publication and use of open data	73	19.12	
2.3.3 Government promotion of investment in emerging tech	110	17.38	
2.3.4 R&D expenditure by governments and higher education	NA	NA	

Indicator	Rank	Score	
C. Governance pillar	**114**	**37.40**	
1st sub-pillar: Trust	82	35.41	
3.1.1 Secure Internet servers	107	34.23	
3.1.2 Cybersecurity	55	84.49	●
3.1.3 Online access to financial account	80	19.70	
3.1.4 Internet shopping	117	3.23	
2nd sub-pillar: Regulation	109	50.62	
3.2.1 Regulatory quality	123	28.53	
3.2.2 ICT regulatory environment	45	87.06	●
3.2.3 Regulation of emerging technologies	105	18.70	
3.2.4 E-commerce legislation	87	66.67	
3.2.5 Privacy protection by law content	90	52.16	
3rd sub-pillar: Inclusion	131	26.17	
3.3.1 E-Participation	104	29.07	
3.3.2 Socioeconomic gap in use of digital payments	124	33.24	○
3.3.3 Availability of local online content	117	27.40	
3.3.4 Gender gap in Internet use	NA	NA	
3.3.5 Rural gap in use of digital payments	122	14.97	○
D. Impact pillar	**116**	**37.20**	
1st sub-pillar: Economy	85	22.51	
4.1.1 High-tech and medium-high-tech manufacturing	NA	NA	
4.1.2 High-tech exports	67	11.52	●
4.1.3 PCT patent applications	96	0.13	
4.1.4 Domestic market size	26	69.32	●
4.1.5 Prevalence of gig economy	92	29.65	
4.1.6 ICT services exports	116	1.92	
2nd sub-pillar: Quality of Life	109	50.53	
4.2.1 Happiness	102	39.56	
4.2.2 Freedom to make life choices	99	58.45	
4.2.3 Income inequality	51	70.10	●
4.2.4 Healthy life expectancy at birth	125	34.00	○
3rd sub-pillar: SDG Contribution	131	38.56	
4.3.1 SDG 3: Good Health and Well-Being	121	26.65	
4.3.2 SDG 4: Quality Education	NA	NA	
4.3.3 SDG 5: Women's economic opportunity	115	52.21	
4.3.4 SDG 7: Affordable and Clean Energy	113	52.10	
4.3.5 SDG 11: Sustainable Cities and Communities	131	23.29	○

NOTE: ● Indicates a strength and ○ a weakness.

North Macedonia

	Rank (Out of 134)	Score
Network Readiness Index	**71**	**46.26**
Pillar/sub-pillar	**Rank**	**Score**
A. Technology pillar	**89**	**33.72**
1st sub-pillar: Access	81	58.98
2nd sub-pillar: Content	73	21.87
3rd sub-pillar: Future Technologies	109	20.30
B. People pillar	**84**	**38.59**
1st sub-pillar: Individuals	94	39.45
2nd sub-pillar: Businesses	75	42.67
3rd sub-pillar: Governments	83	33.66
C. Governance pillar	**62**	**57.98**
1st sub-pillar: Trust	61	49.16
2nd sub-pillar: Regulation	81	62.07
3rd sub-pillar: Inclusion	62	62.70
D. Impact pillar	**58**	**54.77**
1st sub-pillar: Economy	62	29.80
2nd sub-pillar: Quality of Life	48	73.74
3rd sub-pillar: SDG Contribution	75	60.76



The Network Readiness Index in detail

Indicator	Rank	Score	
A. Technology pillar	**89**	**33.72**	
1st sub-pillar: Access	81	58.98	
1.1.1 Mobile tariffs	99	42.78	
1.1.2 Handset prices	22	76.52	●
1.1.3 FTTH/building Internet subscriptions	90	19.45	
1.1.4 Population covered by at least a 3G mobile network	38	99.95	●
1.1.5 International Internet bandwidth	123	56.22	○
1.1.6 Internet access in schools	NA	NA	
2nd sub-pillar: Content	73	21.87	
1.2.1 GitHub commits	57	8.77	
1.2.2 Internet domain registrations	51	6.70	
1.2.3 Mobile apps development	56	69.62	
1.2.4 AI scientific publications	83	2.40	
3rd sub-pillar: Future Technologies	109	20.30	
1.3.1 Adoption of emerging technologies	97	32.55	
1.3.2 Investment in emerging technologies	123	17.50	○
1.3.3 Robot density	NA	NA	
1.3.4 Computer software spending	87	10.85	
B. People pillar	**84**	**38.59**	
1st sub-pillar: Individuals	94	39.45	
2.1.1 Mobile broadband internet traffic within the country	96	2.25	
2.1.2 ICT skills in the education system	101	17.52	○
2.1.3 Use of virtual social networks	82	53.57	
2.1.4 Tertiary enrollment	74	27.20	
2.1.5 Adult literacy rate	33	96.72	●
2.1.6 AI talent concentration	NA	NA	
2nd sub-pillar: Businesses	75	42.67	
2.2.1 Firms with website	44	62.38	
2.2.2 GERD financed by business enterprise	64	27.59	
2.2.3 Knowledge intensive employment	42	49.54	●
2.2.4 Annual investment in telecommunication services	110	71.28	○
2.2.5 GERD performed by business enterprise	61	2.54	
3rd sub-pillar: Governments	83	33.66	
2.3.1 Government online services	65	67.06	
2.3.2 Publication and use of open data	49	33.82	
2.3.3 Government promotion of investment in emerging tech	96	27.14	
2.3.4 R&D expenditure by governments and higher education	68	6.62	

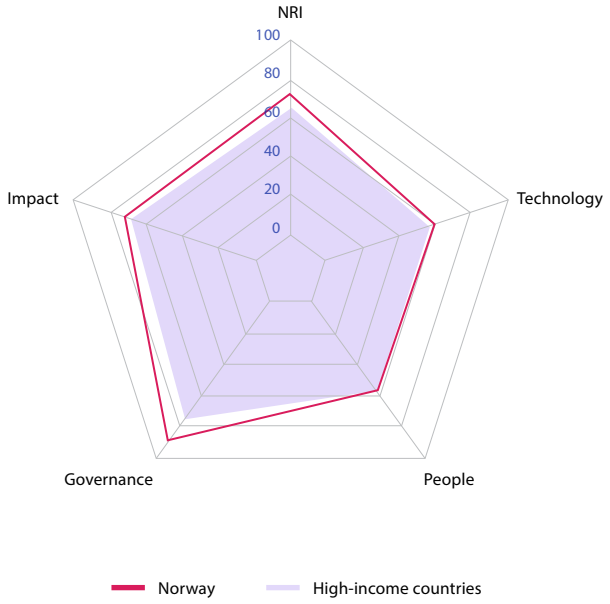
Indicator	Rank	Score	
C. Governance pillar	**62**	**57.98**	
1st sub-pillar: Trust	61	49.16	
3.1.1 Secure Internet servers	63	55.30	
3.1.2 Cybersecurity	46	89.74	●
3.1.3 Online access to financial account	88	16.85	
3.1.4 Internet shopping	57	34.75	
2nd sub-pillar: Regulation	81	62.07	
3.2.1 Regulatory quality	51	59.01	
3.2.2 ICT regulatory environment	45	87.06	
3.2.3 Regulation of emerging technologies	88	30.65	
3.2.4 E-commerce legislation	87	66.67	○
3.2.5 Privacy protection by law content	62	66.96	
3rd sub-pillar: Inclusion	62	62.70	
3.3.1 E-Participation	43	68.61	●
3.3.2 Socioeconomic gap in use of digital payments	74	69.91	
3.3.3 Availability of local online content	80	52.40	
3.3.4 Gender gap in Internet use	77	63.04	
3.3.5 Rural gap in use of digital payments	74	59.52	
D. Impact pillar	**58**	**54.77**	
1st sub-pillar: Economy	62	29.80	
4.1.1 High-tech and medium-high-tech manufacturing	11	62.57	●
4.1.2 High-tech exports	84	7.34	
4.1.3 PCT patent applications	60	3.91	
4.1.4 Domestic market size	117	35.05	
4.1.5 Prevalence of gig economy	68	38.37	
4.1.6 ICT services exports	28	31.56	●
2nd sub-pillar: Quality of Life	48	73.74	
4.2.1 Happiness	NA	NA	
4.2.2 Freedom to make life choices	NA	NA	
4.2.3 Income inequality	41	74.12	●
4.2.4 Healthy life expectancy at birth	63	73.37	
3rd sub-pillar: SDG Contribution	75	60.76	
4.3.1 SDG 3: Good Health and Well-Being	79	65.76	
4.3.2 SDG 4: Quality Education	64	26.92	
4.3.3 SDG 5: Women's economic opportunity	60	78.76	
4.3.4 SDG 7: Affordable and Clean Energy	43	76.52	●
4.3.5 SDG 11: Sustainable Cities and Communities	81	55.82	

NOTE: ● Indicates a strength and ○ a weakness.

Norway

	Rank (Out of 134)	Score
Network Readiness Index	**16**	**69.70**

Pillar/sub-pillar	Rank	Score
A. Technology pillar	**14**	**61.29**
1st sub-pillar: Access	14	78.25
2nd sub-pillar: Content	8	58.13
3rd sub-pillar: Future Technologies	29	47.50
B. People pillar	**24**	**57.23**
1st sub-pillar: Individuals	82	43.16
2nd sub-pillar: Businesses	21	66.45
3rd sub-pillar: Governments	19	62.09
C. Governance pillar	**4**	**89.44**
1st sub-pillar: Trust	2	95.30
2nd sub-pillar: Regulation	3	93.35
3rd sub-pillar: Inclusion	21	79.67
D. Impact pillar	**16**	**70.83**
1st sub-pillar: Economy	43	35.22
2nd sub-pillar: Quality of Life	5	91.35
3rd sub-pillar: SDG Contribution	10	85.92



The Network Readiness Index in detail

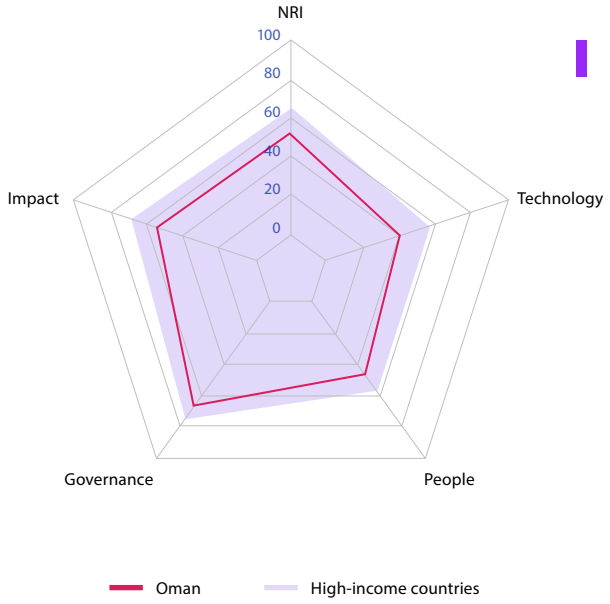
Indicator	Rank	Score	
A. Technology pillar	**14**	**61.29**	
1st sub-pillar: Access	14	78.25	
1.1.1 Mobile tariffs	9	91.25	●
1.1.2 Handset prices	14	80.01	
1.1.3 FTTH/building Internet subscriptions	63	29.20	○
1.1.4 Population covered by at least a 3G mobile network	28	99.97	
1.1.5 International Internet bandwidth	79	69.06	○
1.1.6 Internet access in schools	1	100.00	●
2nd sub-pillar: Content	8	58.13	
1.2.1 GitHub commits	6	87.47	●
1.2.2 Internet domain registrations	12	63.54	
1.2.3 Mobile apps development	35	73.56	
1.2.4 AI scientific publications	56	7.95	
3rd sub-pillar: Future Technologies	29	47.50	
1.3.1 Adoption of emerging technologies	NA	NA	
1.3.2 Investment in emerging technologies	16	73.50	
1.3.3 Robot density	23	14.06	
1.3.4 Computer software spending	18	54.95	
B. People pillar	**24**	**57.23**	
1st sub-pillar: Individuals	82	43.16	
2.1.1 Mobile broadband internet traffic within the country	61	10.28	○
2.1.2 ICT skills in the education system	NA	NA	
2.1.3 Use of virtual social networks	14	80.16	
2.1.4 Tertiary enrollment	18	55.16	
2.1.5 Adult literacy rate	NA	NA	
2.1.6 AI talent concentration	16	27.04	
2nd sub-pillar: Businesses	21	66.45	
2.2.1 Firms with website	9	85.44	
2.2.2 GERD financed by business enterprise	35	55.03	
2.2.3 Knowledge intensive employment	5	80.67	●
2.2.4 Annual investment in telecommunication services	34	84.35	
2.2.5 GERD performed by business enterprise	21	26.74	
3rd sub-pillar: Governments	19	62.09	
2.3.1 Government online services	39	77.97	
2.3.2 Publication and use of open data	11	73.53	
2.3.3 Government promotion of investment in emerging tech	NA	NA	
2.3.4 R&D expenditure by governments and higher education	20	34.76	

Indicator	Rank	Score	
C. Governance pillar	**4**	**89.44**	
1st sub-pillar: Trust	2	95.30	
3.1.1 Secure Internet servers	19	84.36	
3.1.2 Cybersecurity	23	96.84	
3.1.3 Online access to financial account	1	100.00	●
3.1.4 Internet shopping	1	100.00	●
2nd sub-pillar: Regulation	3	93.35	
3.2.1 Regulatory quality	10	86.54	●
3.2.2 ICT regulatory environment	11	94.71	
3.2.3 Regulation of emerging technologies	NA	NA	
3.2.4 E-commerce legislation	1	100.00	●
3.2.5 Privacy protection by law content	7	92.16	●
3rd sub-pillar: Inclusion	21	79.67	
3.3.1 E-Participation	43	68.61	
3.3.2 Socioeconomic gap in use of digital payments	12	97.56	
3.3.3 Availability of local online content	27	84.13	
3.3.4 Gender gap in Internet use	26	71.55	
3.3.5 Rural gap in use of digital payments	16	76.50	
D. Impact pillar	**16**	**70.83**	
1st sub-pillar: Economy	43	35.22	
4.1.1 High-tech and medium-high-tech manufacturing	68	20.65	○
4.1.2 High-tech exports	21	37.20	
4.1.3 PCT patent applications	16	46.27	
4.1.4 Domestic market size	50	58.62	
4.1.5 Prevalence of gig economy	NA	NA	
4.1.6 ICT services exports	66	13.34	
2nd sub-pillar: Quality of Life	5	91.35	
4.2.1 Happiness	7	91.92	●
4.2.2 Freedom to make life choices	8	93.94	●
4.2.3 Income inequality	12	88.69	
4.2.4 Healthy life expectancy at birth	15	90.85	
3rd sub-pillar: SDG Contribution	10	85.92	
4.3.1 SDG 3: Good Health and Well-Being	12	93.86	
4.3.2 SDG 4: Quality Education	22	66.48	
4.3.3 SDG 5: Women's economic opportunity	20	95.58	
4.3.4 SDG 7: Affordable and Clean Energy	55	74.49	
4.3.5 SDG 11: Sustainable Cities and Communities	2	99.19	●

NOTE: ● Indicates a strength and ○ a weakness.

Oman

	Rank (Out of 134)	Score
Network Readiness Index	**54**	**52.10**
Pillar/sub-pillar	**Rank**	**Score**
A. Technology pillar	**63**	**41.31**
1st sub-pillar: Access	56	67.80
2nd sub-pillar: Content	84	18.93
3rd sub-pillar: Future Technologies	53	37.21
B. People pillar	**53**	**46.48**
1st sub-pillar: Individuals	20	57.80
2nd sub-pillar: Businesses	94	35.44
3rd sub-pillar: Governments	45	46.18
C. Governance pillar	**44**	**67.48**
1st sub-pillar: Trust	33	70.20
2nd sub-pillar: Regulation	89	60.23
3rd sub-pillar: Inclusion	43	72.03
D. Impact pillar	**67**	**53.11**
1st sub-pillar: Economy	72	25.94
2nd sub-pillar: Quality of Life	24	80.77
3rd sub-pillar: SDG Contribution	102	52.62



The Network Readiness Index in detail

Indicator	Rank	Score	
A. Technology pillar	**63**	**41.31**	
1st sub-pillar: Access	56	67.80	
1.1.1 Mobile tariffs	62	62.97	
1.1.2 Handset prices	55	54.72	
1.1.3 FTTH/building Internet subscriptions	93	17.37	
1.1.4 Population covered by at least a 3G mobile network	1	100.00	●
1.1.5 International Internet bandwidth	56	73.23	
1.1.6 Internet access in schools	33	98.49	
2nd sub-pillar: Content	84	18.93	
1.2.1 GitHub commits	108	1.43	
1.2.2 Internet domain registrations	94	1.24	
1.2.3 Mobile apps development	44	71.86	
1.2.4 AI scientific publications	99	1.21	
3rd sub-pillar: Future Technologies	53	37.21	
1.3.1 Adoption of emerging technologies	44	57.47	
1.3.2 Investment in emerging technologies	42	50.00	
1.3.3 Robot density	NA	NA	
1.3.4 Computer software spending	104	4.16	○
B. People pillar	**53**	**46.48**	
1st sub-pillar: Individuals	20	57.80	
2.1.1 Mobile broadband internet traffic within the country	81	6.32	
2.1.2 ICT skills in the education system	23	72.63	●
2.1.3 Use of virtual social networks	5	85.83	●
2.1.4 Tertiary enrollment	68	30.16	
2.1.5 Adult literacy rate	46	94.06	
2.1.6 AI talent concentration	NA	NA	
2nd sub-pillar: Businesses	94	35.44	
2.2.1 Firms with website	NA	NA	
2.2.2 GERD financed by business enterprise	55	39.33	
2.2.3 Knowledge intensive employment	84	21.42	
2.2.4 Annual investment in telecommunication services	55	79.29	
2.2.5 GERD performed by business enterprise	64	1.73	
3rd sub-pillar: Governments	45	46.18	
2.3.1 Government online services	58	71.52	
2.3.2 Publication and use of open data	NA	NA	
2.3.3 Government promotion of investment in emerging tech	24	61.99	●
2.3.4 R&D expenditure by governments and higher education	79	5.04	

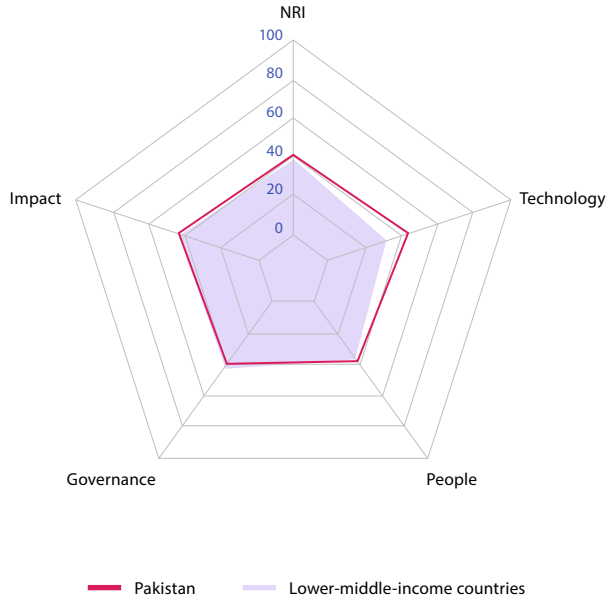
Indicator	Rank	Score	
C. Governance pillar	**44**	**67.48**	
1st sub-pillar: Trust	33	70.20	
3.1.1 Secure Internet servers	85	44.42	
3.1.2 Cybersecurity	28	95.97	●
3.1.3 Online access to financial account	NA	NA	
3.1.4 Internet shopping	NA	NA	
2nd sub-pillar: Regulation	89	60.23	
3.2.1 Regulatory quality	53	57.05	
3.2.2 ICT regulatory environment	34	89.41	
3.2.3 Regulation of emerging technologies	46	56.10	
3.2.4 E-commerce legislation	87	66.67	○
3.2.5 Privacy protection by law content	120	31.89	○
3rd sub-pillar: Inclusion	43	72.03	
3.3.1 E-Participation	50	65.12	
3.3.2 Socioeconomic gap in use of digital payments	NA	NA	
3.3.3 Availability of local online content	42	74.52	
3.3.4 Gender gap in Internet use	7	76.44	●
3.3.5 Rural gap in use of digital payments	NA	NA	
D. Impact pillar	**67**	**53.11**	
1st sub-pillar: Economy	72	25.94	
4.1.1 High-tech and medium-high-tech manufacturing	71	19.79	
4.1.2 High-tech exports	65	11.74	
4.1.3 PCT patent applications	75	1.72	
4.1.4 Domestic market size	71	50.71	
4.1.5 Prevalence of gig economy	30	61.92	●
4.1.6 ICT services exports	79	9.77	
2nd sub-pillar: Quality of Life	24	80.77	
4.2.1 Happiness	19	83.71	●
4.2.2 Freedom to make life choices	16	90.16	●
4.2.3 Income inequality	NA	NA	
4.2.4 Healthy life expectancy at birth	80	68.45	
3rd sub-pillar: SDG Contribution	102	52.62	
4.3.1 SDG 3: Good Health and Well-Being	78	66.17	
4.3.2 SDG 4: Quality Education	NA	NA	
4.3.3 SDG 5: Women's economic opportunity	131	13.27	○
4.3.4 SDG 7: Affordable and Clean Energy	121	44.00	○
4.3.5 SDG 11: Sustainable Cities and Communities	27	87.04	●

NOTE: ● Indicates a strength and ○ a weakness.

Pakistan

	Rank (Out of 134)	Score
Network Readiness Index	**90**	**41.26**

Pillar/sub-pillar	Rank	Score
A. Technology pillar	**49**	**45.20**
1st sub-pillar: Access	68	64.77
2nd sub-pillar: Content	47	29.12
3rd sub-pillar: Future Technologies	40	41.70
B. People pillar	**89**	**36.25**
1st sub-pillar: Individuals	103	35.25
2nd sub-pillar: Businesses	54	48.35
3rd sub-pillar: Governments	104	25.14
C. Governance pillar	**117**	**36.86**
1st sub-pillar: Trust	105	27.46
2nd sub-pillar: Regulation	110	50.31
3rd sub-pillar: Inclusion	122	32.82
D. Impact pillar	**93**	**46.74**
1st sub-pillar: Economy	41	36.11
2nd sub-pillar: Quality of Life	98	57.68
3rd sub-pillar: SDG Contribution	117	46.43



The Network Readiness Index in detail

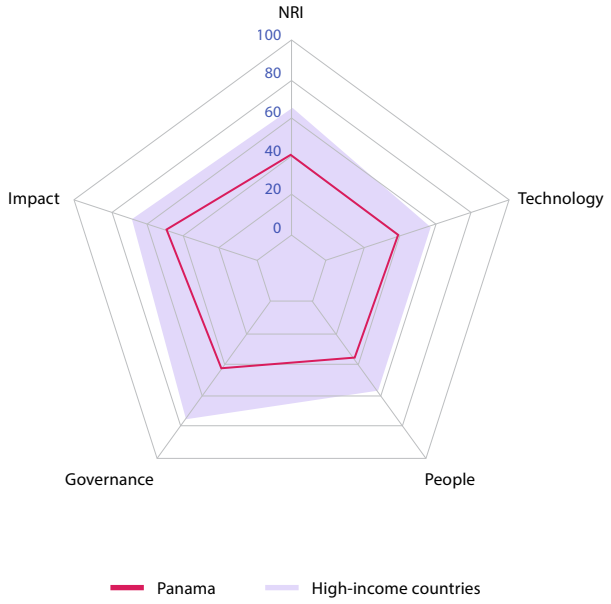
Indicator	Rank	Score	
A. Technology pillar	**49**	**45.20**	
1st sub-pillar: Access	68	64.77	
1.1.1 Mobile tariffs	56	67.25	
1.1.2 Handset prices	91	36.97	
1.1.3 FTTH/building Internet subscriptions	25	45.07	●
1.1.4 Population covered by at least a 3G mobile network	123	92.22	
1.1.5 International Internet bandwidth	17	82.31	●
1.1.6 Internet access in schools	NA	NA	
2nd sub-pillar: Content	47	29.12	
1.2.1 GitHub commits	103	1.80	
1.2.2 Internet domain registrations	111	0.40	
1.2.3 Mobile apps development	13	78.01	●
1.2.4 AI scientific publications	10	36.29	●
3rd sub-pillar: Future Technologies	40	41.70	
1.3.1 Adoption of emerging technologies	69	45.59	
1.3.2 Investment in emerging technologies	48	48.25	
1.3.3 Robot density	NA	NA	
1.3.4 Computer software spending	31	31.25	●
B. People pillar	**89**	**36.25**	
1st sub-pillar: Individuals	103	35.25	
2.1.1 Mobile broadband internet traffic within the country	16	43.65	●
2.1.2 ICT skills in the education system	44	56.74	
2.1.3 Use of virtual social networks	103	26.78	
2.1.4 Tertiary enrollment	107	6.41	
2.1.5 Adult literacy rate	99	42.65	
2.1.6 AI talent concentration	NA	NA	
2nd sub-pillar: Businesses	54	48.35	
2.2.1 Firms with website	67	45.40	
2.2.2 GERD financed by business enterprise	NA	NA	
2.2.3 Knowledge intensive employment	100	14.16	
2.2.4 Annual investment in telecommunication services	25	85.50	●
2.2.5 GERD performed by business enterprise	NA	NA	
3rd sub-pillar: Governments	104	25.14	
2.3.1 Government online services	87	52.01	
2.3.2 Publication and use of open data	100	2.94	○
2.3.3 Government promotion of investment in emerging tech	53	42.84	
2.3.4 R&D expenditure by governments and higher education	96	2.78	

Indicator	Rank	Score	
C. Governance pillar	**117**	**36.86**	
1st sub-pillar: Trust	105	27.46	
3.1.1 Secure Internet servers	108	34.06	
3.1.2 Cybersecurity	86	64.26	
3.1.3 Online access to financial account	103	11.51	
3.1.4 Internet shopping	129	0.00	○
2nd sub-pillar: Regulation	110	50.31	
3.2.1 Regulatory quality	111	33.07	
3.2.2 ICT regulatory environment	42	87.65	
3.2.3 Regulation of emerging technologies	50	52.21	
3.2.4 E-commerce legislation	121	33.33	○
3.2.5 Privacy protection by law content	107	45.26	
3rd sub-pillar: Inclusion	122	32.82	
3.3.1 E-Participation	94	34.88	
3.3.2 Socioeconomic gap in use of digital payments	71	72.53	
3.3.3 Availability of local online content	83	51.44	
3.3.4 Gender gap in Internet use	105	0.00	○
3.3.5 Rural gap in use of digital payments	125	5.25	○
D. Impact pillar	**93**	**46.74**	
1st sub-pillar: Economy	41	36.11	
4.1.1 High-tech and medium-high-tech manufacturing	59	25.11	
4.1.2 High-tech exports	105	2.45	
4.1.3 PCT patent applications	NA	NA	
4.1.4 Domestic market size	22	70.98	●
4.1.5 Prevalence of gig economy	53	45.35	
4.1.6 ICT services exports	22	36.69	●
2nd sub-pillar: Quality of Life	98	57.68	
4.2.1 Happiness	101	39.70	
4.2.2 Freedom to make life choices	87	64.82	
4.2.3 Income inequality	21	83.92	●
4.2.4 Healthy life expectancy at birth	114	42.29	
3rd sub-pillar: SDG Contribution	117	46.43	
4.3.1 SDG 3: Good Health and Well-Being	120	27.44	
4.3.2 SDG 4: Quality Education	NA	NA	
4.3.3 SDG 5: Women's economic opportunity	122	41.59	
4.3.4 SDG 7: Affordable and Clean Energy	88	66.55	
4.3.5 SDG 11: Sustainable Cities and Communities	91	50.12	

NOTE: ● Indicates a strength and ○ a weakness.

Panama

	Rank (Out of 134)	Score
Network Readiness Index	**86**	**43.03**
Pillar/sub-pillar	**Rank**	**Score**
A. Technology pillar	**77**	**38.25**
1st sub-pillar: Access	83	57.85
2nd sub-pillar: Content	70	22.22
3rd sub-pillar: Future Technologies	60	34.68
B. People pillar	**94**	**35.34**
1st sub-pillar: Individuals	51	51.04
2nd sub-pillar: Businesses	123	22.98
3rd sub-pillar: Governments	89	32.00
C. Governance pillar	**89**	**48.36**
1st sub-pillar: Trust	100	29.91
2nd sub-pillar: Regulation	83	61.97
3rd sub-pillar: Inclusion	88	53.19
D. Impact pillar	**85**	**50.17**
1st sub-pillar: Economy	109	16.80
2nd sub-pillar: Quality of Life	74	66.77
3rd sub-pillar: SDG Contribution	58	66.95



The Network Readiness Index in detail

Indicator	Rank	Score	
A. Technology pillar	**77**	**38.25**	
1st sub-pillar: Access	83	57.85	
1.1.1 Mobile tariffs	74	58.47	
1.1.2 Handset prices	24	72.51	●
1.1.3 FTTH/building Internet subscriptions	112	6.83	
1.1.4 Population covered by at least a 3G mobile network	93	98.31	
1.1.5 International Internet bandwidth	102	64.40	
1.1.6 Internet access in schools	54	46.58	
2nd sub-pillar: Content	70	22.22	
1.2.1 GitHub commits	78	4.21	
1.2.2 Internet domain registrations	37	17.46	●
1.2.3 Mobile apps development	62	66.94	
1.2.4 AI scientific publications	122	0.26	○
3rd sub-pillar: Future Technologies	60	34.68	
1.3.1 Adoption of emerging technologies	66	47.02	
1.3.2 Investment in emerging technologies	65	40.25	
1.3.3 Robot density	NA	NA	
1.3.4 Computer software spending	77	16.76	
B. People pillar	**94**	**35.34**	
1st sub-pillar: Individuals	51	51.04	
2.1.1 Mobile broadband internet traffic within the country	NA	NA	
2.1.2 ICT skills in the education system	98	21.76	○
2.1.3 Use of virtual social networks	74	60.12	
2.1.4 Tertiary enrollment	71	28.12	
2.1.5 Adult literacy rate	45	94.18	●
2.1.6 AI talent concentration	NA	NA	
2nd sub-pillar: Businesses	123	22.98	
2.2.1 Firms with website	NA	NA	
2.2.2 GERD financed by business enterprise	91	1.41	
2.2.3 Knowledge intensive employment	101	13.28	
2.2.4 Annual investment in telecommunication services	72	77.22	
2.2.5 GERD performed by business enterprise	92	0.00	○
3rd sub-pillar: Governments	89	32.00	
2.3.1 Government online services	71	63.98	
2.3.2 Publication and use of open data	55	32.35	
2.3.3 Government promotion of investment in emerging tech	93	28.86	
2.3.4 R&D expenditure by governments and higher education	94	2.80	

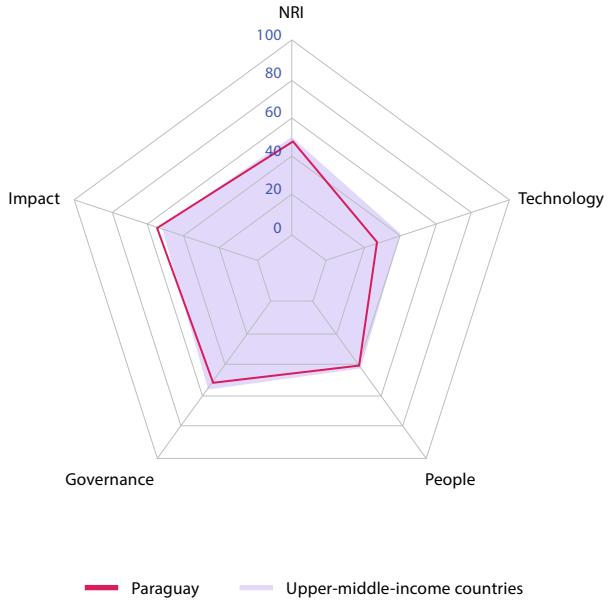
Indicator	Rank	Score	
C. Governance pillar	**89**	**48.36**	
1st sub-pillar: Trust	100	29.91	
3.1.1 Secure Internet servers	61	58.27	
3.1.2 Cybersecurity	104	32.95	
3.1.3 Online access to financial account	99	13.18	
3.1.4 Internet shopping	80	15.26	
2nd sub-pillar: Regulation	83	61.97	
3.2.1 Regulatory quality	60	53.95	
3.2.2 ICT regulatory environment	77	77.06	
3.2.3 Regulation of emerging technologies	64	44.16	
3.2.4 E-commerce legislation	87	66.67	
3.2.5 Privacy protection by law content	59	68.04	
3rd sub-pillar: Inclusion	88	53.19	
3.3.1 E-Participation	75	50.01	
3.3.2 Socioeconomic gap in use of digital payments	110	44.45	
3.3.3 Availability of local online content	74	56.01	
3.3.4 Gender gap in Internet use	23	72.59	●
3.3.5 Rural gap in use of digital payments	99	42.90	
D. Impact pillar	**85**	**50.17**	
1st sub-pillar: Economy	109	16.80	
4.1.1 High-tech and medium-high-tech manufacturing	94	7.52	
4.1.2 High-tech exports	129	0.22	○
4.1.3 PCT patent applications	72	2.04	
4.1.4 Domestic market size	76	48.98	
4.1.5 Prevalence of gig economy	89	31.98	
4.1.6 ICT services exports	78	10.04	
2nd sub-pillar: Quality of Life	74	66.77	
4.2.1 Happiness	55	67.46	●
4.2.2 Freedom to make life choices	26	87.34	●
4.2.3 Income inequality	107	30.40	
4.2.4 Healthy life expectancy at birth	37	81.88	●
3rd sub-pillar: SDG Contribution	58	66.95	
4.3.1 SDG 3: Good Health and Well-Being	42	80.25	●
4.3.2 SDG 4: Quality Education	73	12.53	○
4.3.3 SDG 5: Women's economic opportunity	85	70.80	
4.3.4 SDG 7: Affordable and Clean Energy	4	89.96	●
4.3.5 SDG 11: Sustainable Cities and Communities	33	81.21	●

NOTE: ● Indicates a strength and ○ a weakness.

Paraguay

	Rank (Out of 134)	Score
Network Readiness Index	**89**	**41.91**

Pillar/sub-pillar	Rank	Score
A. Technology pillar	**114**	**26.23**
1st sub-pillar: Access	106	47.02
2nd sub-pillar: Content	103	14.62
3rd sub-pillar: Future Technologies	124	17.05
B. People pillar	**82**	**39.17**
1st sub-pillar: Individuals	66	47.16
2nd sub-pillar: Businesses	69	44.35
3rd sub-pillar: Governments	101	26.02
C. Governance pillar	**84**	**49.36**
1st sub-pillar: Trust	98	30.83
2nd sub-pillar: Regulation	90	59.88
3rd sub-pillar: Inclusion	75	57.37
D. Impact pillar	**70**	**52.89**
1st sub-pillar: Economy	110	16.25
2nd sub-pillar: Quality of Life	58	71.05
3rd sub-pillar: SDG Contribution	47	71.37



The Network Readiness Index in detail

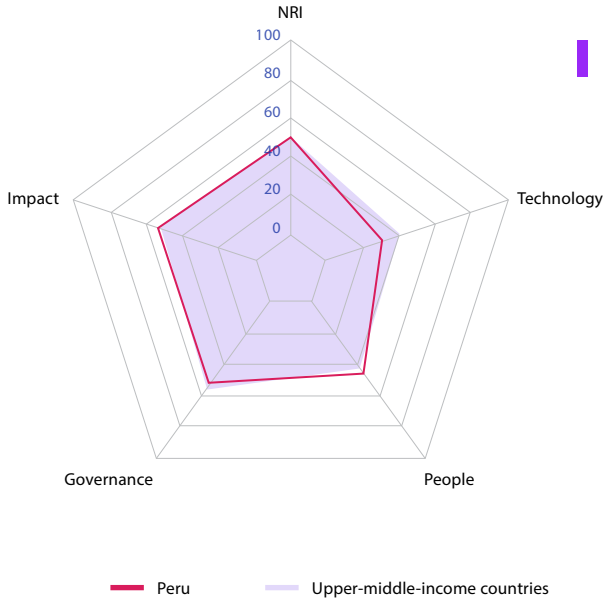
Indicator	Rank	Score	
A. Technology pillar	**114**	**26.23**	
1st sub-pillar: Access	106	47.02	
1.1.1 Mobile tariffs	90	47.87	
1.1.2 Handset prices	88	38.28	
1.1.3 FTTH/building Internet subscriptions	54	31.66	●
1.1.4 Population covered by at least a 3G mobile network	73	99.49	
1.1.5 International Internet bandwidth	118	59.38	
1.1.6 Internet access in schools	78	5.41	
2nd sub-pillar: Content	103	14.62	
1.2.1 GitHub commits	91	2.91	
1.2.2 Internet domain registrations	84	1.86	
1.2.3 Mobile apps development	100	53.19	
1.2.4 AI scientific publications	114	0.50	
3rd sub-pillar: Future Technologies	124	17.05	
1.3.1 Adoption of emerging technologies	105	28.79	
1.3.2 Investment in emerging technologies	121	19.00	
1.3.3 Robot density	NA	NA	
1.3.4 Computer software spending	109	3.37	
B. People pillar	**82**	**39.17**	
1st sub-pillar: Individuals	66	47.16	
2.1.1 Mobile broadband internet traffic within the country	NA	NA	
2.1.2 ICT skills in the education system	104	13.05	○
2.1.3 Use of virtual social networks	71	61.49	
2.1.4 Tertiary enrollment	83	21.54	
2.1.5 Adult literacy rate	53	92.55	
2.1.6 AI talent concentration	NA	NA	
2nd sub-pillar: Businesses	69	44.35	
2.2.1 Firms with website	29	71.74	●
2.2.2 GERD financed by business enterprise	97	0.30	○
2.2.3 Knowledge intensive employment	71	29.07	
2.2.4 Annual investment in telecommunication services	78	76.29	
2.2.5 GERD performed by business enterprise	NA	NA	
3rd sub-pillar: Governments	101	26.02	
2.3.1 Government online services	84	56.44	
2.3.2 Publication and use of open data	41	38.24	●
2.3.3 Government promotion of investment in emerging tech	121	6.74	○
2.3.4 R&D expenditure by governments and higher education	97	2.65	

Indicator	Rank	Score	
C. Governance pillar	**84**	**49.36**	
1st sub-pillar: Trust	98	30.83	
3.1.1 Secure Internet servers	69	49.78	
3.1.2 Cybersecurity	90	56.33	
3.1.3 Online access to financial account	107	10.29	
3.1.4 Internet shopping	103	6.91	
2nd sub-pillar: Regulation	90	59.88	
3.2.1 Regulatory quality	81	44.91	
3.2.2 ICT regulatory environment	119	59.06	
3.2.3 Regulation of emerging technologies	107	17.14	
3.2.4 E-commerce legislation	1	100.00	●
3.2.5 Privacy protection by law content	36	78.30	●
3rd sub-pillar: Inclusion	75	57.37	
3.3.1 E-Participation	75	50.01	
3.3.2 Socioeconomic gap in use of digital payments	65	76.27	
3.3.3 Availability of local online content	105	37.26	
3.3.4 Gender gap in Internet use	6	77.50	●
3.3.5 Rural gap in use of digital payments	96	45.81	
D. Impact pillar	**70**	**52.89**	
1st sub-pillar: Economy	110	16.25	
4.1.1 High-tech and medium-high-tech manufacturing	75	17.18	
4.1.2 High-tech exports	60	13.21	●
4.1.3 PCT patent applications	NA	NA	
4.1.4 Domestic market size	87	45.09	
4.1.5 Prevalence of gig economy	123	4.94	○
4.1.6 ICT services exports	129	0.83	○
2nd sub-pillar: Quality of Life	58	71.05	
4.2.1 Happiness	47	70.40	●
4.2.2 Freedom to make life choices	15	91.08	●
4.2.3 Income inequality	93	50.50	
4.2.4 Healthy life expectancy at birth	68	72.22	
3rd sub-pillar: SDG Contribution	47	71.37	
4.3.1 SDG 3: Good Health and Well-Being	95	54.31	
4.3.2 SDG 4: Quality Education	NA	NA	
4.3.3 SDG 5: Women's economic opportunity	27	92.04	●
4.3.4 SDG 7: Affordable and Clean Energy	50	75.43	●
4.3.5 SDG 11: Sustainable Cities and Communities	71	63.70	

NOTE: ● Indicates a strength and ○ a weakness.

Peru

	Rank (Out of 134)	Score
Network Readiness Index	**73**	**45.89**
Pillar/sub-pillar	**Rank**	**Score**
A. Technology pillar	**92**	**32.55**
1st sub-pillar: Access	84	57.63
2nd sub-pillar: Content	86	18.53
3rd sub-pillar: Future Technologies	107	21.49
B. People pillar	**45**	**48.33**
1st sub-pillar: Individuals	42	52.56
2nd sub-pillar: Businesses	38	56.82
3rd sub-pillar: Governments	75	35.62
C. Governance pillar	**80**	**50.57**
1st sub-pillar: Trust	93	33.04
2nd sub-pillar: Regulation	82	62.03
3rd sub-pillar: Inclusion	79	56.62
D. Impact pillar	**77**	**52.10**
1st sub-pillar: Economy	104	17.47
2nd sub-pillar: Quality of Life	67	68.15
3rd sub-pillar: SDG Contribution	49	70.67



The Network Readiness Index in detail

Indicator	Rank	Score	
A. Technology pillar	**92**	**32.55**	
1st sub-pillar: Access	84	57.63	
1.1.1 Mobile tariffs	84	51.62	
1.1.2 Handset prices	71	44.25	
1.1.3 FTTH/building Internet subscriptions	42	37.24	●
1.1.4 Population covered by at least a 3G mobile network	112	95.12	○
1.1.5 International Internet bandwidth	75	69.60	
1.1.6 Internet access in schools	53	47.92	
2nd sub-pillar: Content	86	18.53	
1.2.1 GitHub commits	71	5.20	
1.2.2 Internet domain registrations	67	3.57	
1.2.3 Mobile apps development	83	60.83	
1.2.4 AI scientific publications	72	4.50	
3rd sub-pillar: Future Technologies	107	21.49	
1.3.1 Adoption of emerging technologies	84	38.64	
1.3.2 Investment in emerging technologies	109	25.25	
1.3.3 Robot density	56	0.00	○
1.3.4 Computer software spending	63	22.08	
B. People pillar	**45**	**48.33**	
1st sub-pillar: Individuals	42	52.56	
2.1.1 Mobile broadband internet traffic within the country	54	11.55	
2.1.2 ICT skills in the education system	74	43.84	
2.1.3 Use of virtual social networks	51	69.01	
2.1.4 Tertiary enrollment	33	45.91	●
2.1.5 Adult literacy rate	54	92.49	
2.1.6 AI talent concentration	NA	NA	
2nd sub-pillar: Businesses	38	56.82	
2.2.1 Firms with website	36	68.97	●
2.2.2 GERD financed by business enterprise	NA	NA	
2.2.3 Knowledge intensive employment	87	19.85	
2.2.4 Annual investment in telecommunication services	43	81.65	
2.2.5 GERD performed by business enterprise	NA	NA	
3rd sub-pillar: Governments	75	35.62	
2.3.1 Government online services	37	78.99	●
2.3.2 Publication and use of open data	47	35.29	
2.3.3 Government promotion of investment in emerging tech	100	25.28	
2.3.4 R&D expenditure by governments and higher education	93	2.92	

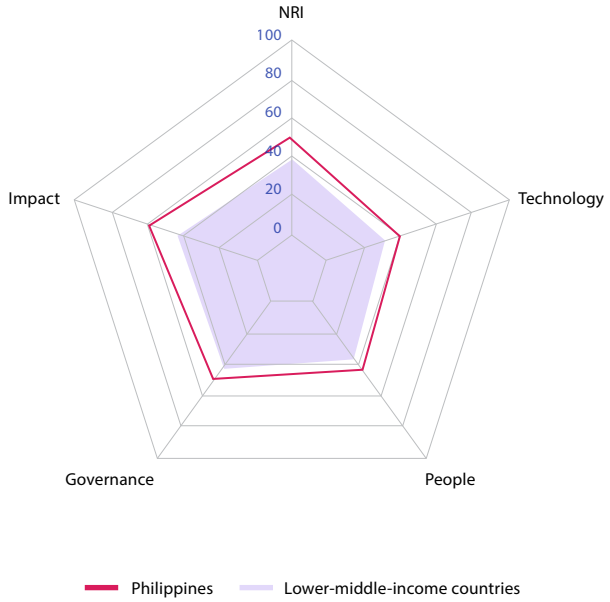
Indicator	Rank	Score	
C. Governance pillar	**80**	**50.57**	
1st sub-pillar: Trust	93	33.04	
3.1.1 Secure Internet servers	74	48.76	
3.1.2 Cybersecurity	91	54.89	
3.1.3 Online access to financial account	108	10.13	○
3.1.4 Internet shopping	72	18.38	
2nd sub-pillar: Regulation	82	62.03	
3.2.1 Regulatory quality	67	51.47	
3.2.2 ICT regulatory environment	58	84.71	
3.2.3 Regulation of emerging technologies	98	24.42	
3.2.4 E-commerce legislation	1	100.00	●
3.2.5 Privacy protection by law content	99	49.58	
3rd sub-pillar: Inclusion	79	56.62	
3.3.1 E-Participation	22	75.59	●
3.3.2 Socioeconomic gap in use of digital payments	88	58.83	
3.3.3 Availability of local online content	99	40.38	
3.3.4 Gender gap in Internet use	81	62.30	
3.3.5 Rural gap in use of digital payments	94	46.01	
D. Impact pillar	**77**	**52.10**	
1st sub-pillar: Economy	104	17.47	
4.1.1 High-tech and medium-high-tech manufacturing	82	13.74	
4.1.2 High-tech exports	78	8.45	
4.1.3 PCT patent applications	68	2.56	
4.1.4 Domestic market size	45	60.61	●
4.1.5 Prevalence of gig economy	113	18.02	○
4.1.6 ICT services exports	122	1.43	○
2nd sub-pillar: Quality of Life	67	68.15	
4.2.1 Happiness	63	65.83	
4.2.2 Freedom to make life choices	86	64.86	
4.2.3 Income inequality	78	57.29	
4.2.4 Healthy life expectancy at birth	32	84.60	●
3rd sub-pillar: SDG Contribution	49	70.67	
4.3.1 SDG 3: Good Health and Well-Being	36	81.99	●
4.3.2 SDG 4: Quality Education	63	27.52	
4.3.3 SDG 5: Women's economic opportunity	25	92.92	●
4.3.4 SDG 7: Affordable and Clean Energy	20	81.21	●
4.3.5 SDG 11: Sustainable Cities and Communities	56	69.72	

NOTE: ● Indicates a strength and ○ a weakness.

Philippines

	Rank (Out of 134)	Score
Network Readiness Index	**69**	**47.24**

Pillar/sub-pillar	Rank	Score
A. Technology pillar	**84**	**36.81**
1st sub-pillar: Access	93	54.17
2nd sub-pillar: Content	72	22.09
3rd sub-pillar: Future Technologies	62	34.17
B. People pillar	**59**	**45.64**
1st sub-pillar: Individuals	23	57.12
2nd sub-pillar: Businesses	79	41.31
3rd sub-pillar: Governments	68	38.50
C. Governance pillar	**85**	**49.09**
1st sub-pillar: Trust	70	42.18
2nd sub-pillar: Regulation	88	60.91
3rd sub-pillar: Inclusion	105	44.18
D. Impact pillar	**48**	**57.41**
1st sub-pillar: Economy	14	54.33
2nd sub-pillar: Quality of Life	69	67.76
3rd sub-pillar: SDG Contribution	113	50.15



The Network Readiness Index in detail

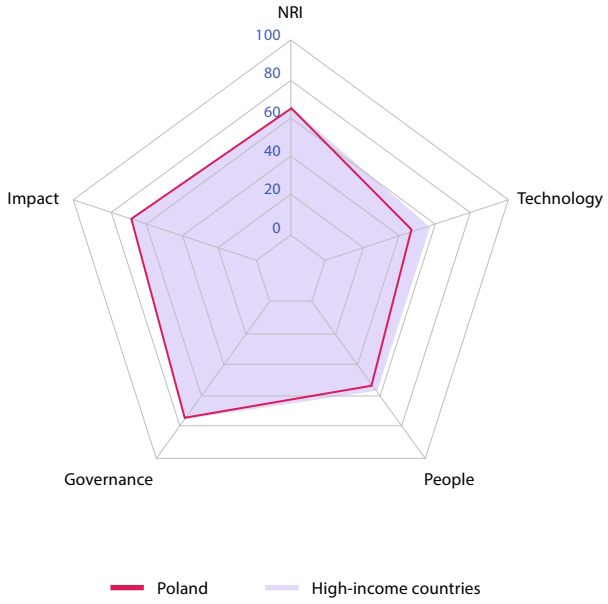
Indicator	Rank	Score	
A. Technology pillar	**84**	**36.81**	
1st sub-pillar: Access	93	54.17	
1.1.1 Mobile tariffs	61	63.63	
1.1.2 Handset prices	131	3.71	○
1.1.3 FTTH/building Internet subscriptions	NA	NA	
1.1.4 Population covered by at least a 3G mobile network	87	98.66	
1.1.5 International Internet bandwidth	53	73.78	
1.1.6 Internet access in schools	62	31.08	
2nd sub-pillar: Content	72	22.09	
1.2.1 GitHub commits	84	3.46	
1.2.2 Internet domain registrations	102	0.79	
1.2.3 Mobile apps development	42	72.07	
1.2.4 AI scientific publications	41	12.03	
3rd sub-pillar: Future Technologies	62	34.17	
1.3.1 Adoption of emerging technologies	52	51.83	
1.3.2 Investment in emerging technologies	31	61.00	●
1.3.3 Robot density	50	0.79	○
1.3.4 Computer software spending	57	23.08	
B. People pillar	**59**	**45.64**	
1st sub-pillar: Individuals	23	57.12	
2.1.1 Mobile broadband internet traffic within the country	19	37.91	●
2.1.2 ICT skills in the education system	37	62.43	
2.1.3 Use of virtual social networks	57	68.23	
2.1.4 Tertiary enrollment	81	22.14	
2.1.5 Adult literacy rate	42	94.92	
2.1.6 AI talent concentration	NA	NA	
2nd sub-pillar: Businesses	79	41.31	
2.2.1 Firms with website	60	49.56	
2.2.2 GERD financed by business enterprise	47	46.96	
2.2.3 Knowledge intensive employment	82	24.05	
2.2.4 Annual investment in telecommunication services	33	84.52	●
2.2.5 GERD performed by business enterprise	67	1.46	
3rd sub-pillar: Governments	68	38.50	
2.3.1 Government online services	76	59.14	
2.3.2 Publication and use of open data	27	50.00	●
2.3.3 Government promotion of investment in emerging tech	59	39.22	
2.3.4 R&D expenditure by governments and higher education	74	5.63	

Indicator	Rank	Score	
C. Governance pillar	**85**	**49.09**	
1st sub-pillar: Trust	70	42.18	
3.1.1 Secure Internet servers	100	37.56	
3.1.2 Cybersecurity	69	76.60	
3.1.3 Online access to financial account	98	13.55	
3.1.4 Internet shopping	50	41.03	
2nd sub-pillar: Regulation	88	60.91	
3.2.1 Regulatory quality	68	51.33	
3.2.2 ICT regulatory environment	109	64.94	
3.2.3 Regulation of emerging technologies	94	26.49	
3.2.4 E-commerce legislation	1	100.00	●
3.2.5 Privacy protection by law content	72	61.81	
3rd sub-pillar: Inclusion	105	44.18	
3.3.1 E-Participation	79	47.67	
3.3.2 Socioeconomic gap in use of digital payments	117	39.89	○
3.3.3 Availability of local online content	50	67.55	
3.3.4 Gender gap in Internet use	NA	NA	
3.3.5 Rural gap in use of digital payments	117	21.61	○
D. Impact pillar	**48**	**57.41**	
1st sub-pillar: Economy	14	54.33	
4.1.1 High-tech and medium-high-tech manufacturing	26	50.10	●
4.1.2 High-tech exports	1	100.00	●
4.1.3 PCT patent applications	80	1.11	
4.1.4 Domestic market size	29	68.36	●
4.1.5 Prevalence of gig economy	36	57.85	
4.1.6 ICT services exports	17	48.55	●
2nd sub-pillar: Quality of Life	69	67.76	
4.2.1 Happiness	56	67.19	
4.2.2 Freedom to make life choices	21	88.33	●
4.2.3 Income inequality	81	56.03	
4.2.4 Healthy life expectancy at birth	97	59.48	
3rd sub-pillar: SDG Contribution	113	50.15	
4.3.1 SDG 3: Good Health and Well-Being	103	44.44	
4.3.2 SDG 4: Quality Education	75	6.37	○
4.3.3 SDG 5: Women's economic opportunity	88	69.91	
4.3.4 SDG 7: Affordable and Clean Energy	25	79.99	●
4.3.5 SDG 11: Sustainable Cities and Communities	92	50.03	

NOTE: ● Indicates a strength and ○ a weakness.

Poland

	Rank (Out of 134)	Score
Network Readiness Index	**34**	**60.20**
Pillar/sub-pillar	**Rank**	**Score**
A. Technology pillar	**39**	**48.95**
1st sub-pillar: Access	11	79.18
2nd sub-pillar: Content	37	36.33
3rd sub-pillar: Future Technologies	71	31.35
B. People pillar	**37**	**53.19**
1st sub-pillar: Individuals	35	53.95
2nd sub-pillar: Businesses	29	61.26
3rd sub-pillar: Governments	51	44.37
C. Governance pillar	**31**	**75.16**
1st sub-pillar: Trust	16	80.76
2nd sub-pillar: Regulation	49	71.96
3rd sub-pillar: Inclusion	41	72.76
D. Impact pillar	**33**	**63.50**
1st sub-pillar: Economy	45	34.62
2nd sub-pillar: Quality of Life	27	79.70
3rd sub-pillar: SDG Contribution	32	76.17



The Network Readiness Index in detail

Indicator	Rank	Score	
A. Technology pillar	**39**	**48.95**	
1st sub-pillar: Access	11	79.18	
1.1.1 Mobile tariffs	31	78.42	
1.1.2 Handset prices	10	82.53	●
1.1.3 FTTH/building Internet subscriptions	29	43.45	
1.1.4 Population covered by at least a 3G mobile network	1	100.00	●
1.1.5 International Internet bandwidth	68	70.66	
1.1.6 Internet access in schools	1	100.00	●
2nd sub-pillar: Content	37	36.33	
1.2.1 GitHub commits	34	30.85	
1.2.2 Internet domain registrations	36	18.28	
1.2.3 Mobile apps development	36	73.14	
1.2.4 AI scientific publications	21	23.08	●
3rd sub-pillar: Future Technologies	71	31.35	
1.3.1 Adoption of emerging technologies	61	48.92	
1.3.2 Investment in emerging technologies	74	37.25	○
1.3.3 Robot density	28	9.61	
1.3.4 Computer software spending	40	29.62	
B. People pillar	**37**	**53.19**	
1st sub-pillar: Individuals	35	53.95	
2.1.1 Mobile broadband internet traffic within the country	17	38.20	●
2.1.2 ICT skills in the education system	54	54.71	
2.1.3 Use of virtual social networks	69	62.17	
2.1.4 Tertiary enrollment	35	45.73	
2.1.5 Adult literacy rate	6	99.73	●
2.1.6 AI talent concentration	18	23.18	
2nd sub-pillar: Businesses	29	61.26	
2.2.1 Firms with website	31	71.52	
2.2.2 GERD financed by business enterprise	26	62.64	
2.2.3 Knowledge intensive employment	27	63.15	
2.2.4 Annual investment in telecommunication services	23	85.77	
2.2.5 GERD performed by business enterprise	26	23.20	
3rd sub-pillar: Governments	51	44.37	
2.3.1 Government online services	43	77.11	
2.3.2 Publication and use of open data	45	36.76	
2.3.3 Government promotion of investment in emerging tech	65	37.92	●
2.3.4 R&D expenditure by governments and higher education	29	25.70	

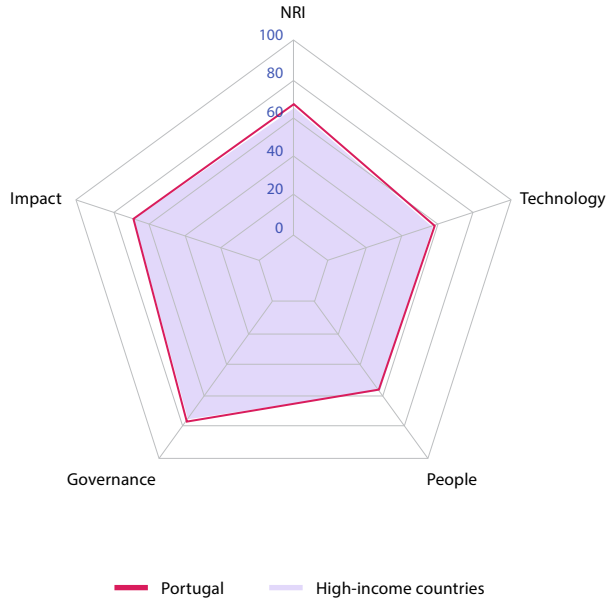
Indicator	Rank	Score	
C. Governance pillar	**31**	**75.16**	
1st sub-pillar: Trust	16	80.76	
3.1.1 Secure Internet servers	26	80.86	
3.1.2 Cybersecurity	37	93.75	
3.1.3 Online access to financial account	15	70.34	●
3.1.4 Internet shopping	18	78.11	●
2nd sub-pillar: Regulation	49	71.96	
3.2.1 Regulatory quality	36	68.58	
3.2.2 ICT regulatory environment	42	87.65	
3.2.3 Regulation of emerging technologies	74	41.04	○
3.2.4 E-commerce legislation	1	100.00	●
3.2.5 Privacy protection by law content	70	62.56	
3rd sub-pillar: Inclusion	41	72.76	
3.3.1 E-Participation	51	63.95	
3.3.2 Socioeconomic gap in use of digital payments	35	90.29	
3.3.3 Availability of local online content	52	67.07	
3.3.4 Gender gap in Internet use	52	68.72	
3.3.5 Rural gap in use of digital payments	35	73.79	
D. Impact pillar	**33**	**63.50**	
1st sub-pillar: Economy	45	34.62	
4.1.1 High-tech and medium-high-tech manufacturing	45	33.49	
4.1.2 High-tech exports	52	16.89	
4.1.3 PCT patent applications	39	9.03	
4.1.4 Domestic market size	21	71.52	●
4.1.5 Prevalence of gig economy	47	52.62	
4.1.6 ICT services exports	44	24.16	
2nd sub-pillar: Quality of Life	27	79.70	
4.2.1 Happiness	25	80.23	
4.2.2 Freedom to make life choices	71	70.81	○
4.2.3 Income inequality	15	85.93	●
4.2.4 Healthy life expectancy at birth	38	81.81	
3rd sub-pillar: SDG Contribution	32	76.17	
4.3.1 SDG 3: Good Health and Well-Being	52	74.86	
4.3.2 SDG 4: Quality Education	9	72.98	●
4.3.3 SDG 5: Women's economic opportunity	29	91.15	
4.3.4 SDG 7: Affordable and Clean Energy	61	73.48	
4.3.5 SDG 11: Sustainable Cities and Communities	60	68.39	

NOTE: ● Indicates a strength and ○ a weakness.

Portugal

	Rank (Out of 134)	Score
Network Readiness Index	**28**	**63.08**

Pillar/sub-pillar	Rank	Score
A. Technology pillar	**26**	**56.00**
1st sub-pillar: Access	33	74.04
2nd sub-pillar: Content	25	44.04
3rd sub-pillar: Future Technologies	24	49.91
B. People pillar	**32**	**54.26**
1st sub-pillar: Individuals	43	52.21
2nd sub-pillar: Businesses	34	59.42
3rd sub-pillar: Governments	31	51.15
C. Governance pillar	**29**	**75.69**
1st sub-pillar: Trust	43	64.67
2nd sub-pillar: Regulation	14	86.87
3rd sub-pillar: Inclusion	32	75.54
D. Impact pillar	**29**	**66.37**
1st sub-pillar: Economy	44	35.21
2nd sub-pillar: Quality of Life	32	78.89
3rd sub-pillar: SDG Contribution	13	85.02



The Network Readiness Index in detail

Indicator	Rank	Score	
A. Technology pillar	**26**	**56.00**	
1st sub-pillar: Access	33	74.04	
1.1.1 Mobile tariffs	65	61.35	○
1.1.2 Handset prices	38	65.66	
1.1.3 FTTH/building Internet subscriptions	32	41.90	
1.1.4 Population covered by at least a 3G mobile network	1	100.00	●
1.1.5 International Internet bandwidth	43	75.32	
1.1.6 Internet access in schools	1	100.00	●
2nd sub-pillar: Content	25	44.04	
1.2.1 GitHub commits	27	41.51	
1.2.2 Internet domain registrations	16	48.60	●
1.2.3 Mobile apps development	51	70.85	
1.2.4 AI scientific publications	34	15.19	
3rd sub-pillar: Future Technologies	24	49.91	
1.3.1 Adoption of emerging technologies	27	70.91	
1.3.2 Investment in emerging technologies	39	52.75	
1.3.3 Robot density	25	12.08	
1.3.4 Computer software spending	6	63.90	●
B. People pillar	**32**	**54.26**	
1st sub-pillar: Individuals	43	52.21	
2.1.1 Mobile broadband internet traffic within the country	55	11.16	
2.1.2 ICT skills in the education system	21	74.10	
2.1.3 Use of virtual social networks	37	74.10	
2.1.4 Tertiary enrollment	36	45.67	
2.1.5 Adult literacy rate	39	95.60	
2.1.6 AI talent concentration	31	12.66	○
2nd sub-pillar: Businesses	34	59.42	
2.2.1 Firms with website	49	60.69	
2.2.2 GERD financed by business enterprise	24	64.51	
2.2.3 Knowledge intensive employment	26	63.82	
2.2.4 Annual investment in telecommunication services	38	82.48	
2.2.5 GERD performed by business enterprise	22	25.62	
3rd sub-pillar: Governments	31	51.15	
2.3.1 Government online services	40	77.39	
2.3.2 Publication and use of open data	36	42.65	
2.3.3 Government promotion of investment in emerging tech	30	54.46	
2.3.4 R&D expenditure by governments and higher education	23	30.11	

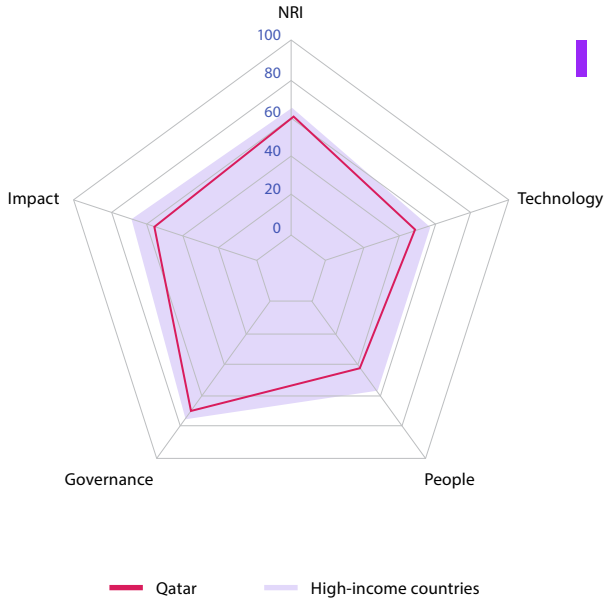
Indicator	Rank	Score	
C. Governance pillar	**29**	**75.69**	
1st sub-pillar: Trust	43	64.67	
3.1.1 Secure Internet servers	31	79.85	
3.1.2 Cybersecurity	20	97.27	●
3.1.3 Online access to financial account	53	34.56	
3.1.4 Internet shopping	46	47.00	
2nd sub-pillar: Regulation	14	86.87	
3.2.1 Regulatory quality	40	66.23	
3.2.2 ICT regulatory environment	14	94.12	●
3.2.3 Regulation of emerging technologies	23	74.03	
3.2.4 E-commerce legislation	1	100.00	●
3.2.5 Privacy protection by law content	1	100.00	●
3rd sub-pillar: Inclusion	32	75.54	
3.3.1 E-Participation	32	72.10	
3.3.2 Socioeconomic gap in use of digital payments	48	84.24	
3.3.3 Availability of local online content	37	77.64	
3.3.4 Gender gap in Internet use	58	67.88	○
3.3.5 Rural gap in use of digital payments	22	75.82	
D. Impact pillar	**29**	**66.37**	
1st sub-pillar: Economy	44	35.21	
4.1.1 High-tech and medium-high-tech manufacturing	40	35.94	
4.1.2 High-tech exports	68	11.09	○
4.1.3 PCT patent applications	32	17.93	
4.1.4 Domestic market size	49	58.77	
4.1.5 Prevalence of gig economy	36	57.85	
4.1.6 ICT services exports	31	29.66	
2nd sub-pillar: Quality of Life	32	78.89	
4.2.1 Happiness	57	66.96	
4.2.2 Freedom to make life choices	24	87.99	
4.2.3 Income inequality	47	71.11	
4.2.4 Healthy life expectancy at birth	20	89.50	●
3rd sub-pillar: SDG Contribution	13	85.02	
4.3.1 SDG 3: Good Health and Well-Being	18	91.85	●
4.3.2 SDG 4: Quality Education	26	64.46	
4.3.3 SDG 5: Women's economic opportunity	1	100.00	●
4.3.4 SDG 7: Affordable and Clean Energy	21	81.00	●
4.3.5 SDG 11: Sustainable Cities and Communities	24	87.79	

NOTE: ● Indicates a strength and ○ a weakness.

Qatar

	Rank (Out of 134)	Score
Network Readiness Index	**46**	**54.15**

Pillar/sub-pillar	Rank	Score
A. Technology pillar	**34**	**49.59**
1st sub-pillar: Access	20	76.32
2nd sub-pillar: Content	91	17.83
3rd sub-pillar: Future Technologies	20	54.63
B. People pillar	**68**	**43.51**
1st sub-pillar: Individuals	12	60.44
2nd sub-pillar: Businesses	107	30.56
3rd sub-pillar: Governments	65	39.52
C. Governance pillar	**40**	**69.18**
1st sub-pillar: Trust	28	71.59
2nd sub-pillar: Regulation	43	73.14
3rd sub-pillar: Inclusion	61	62.80
D. Impact pillar	**63**	**54.31**
1st sub-pillar: Economy	58	31.47
2nd sub-pillar: Quality of Life	23	80.92
3rd sub-pillar: SDG Contribution	108	50.55



The Network Readiness Index in detail

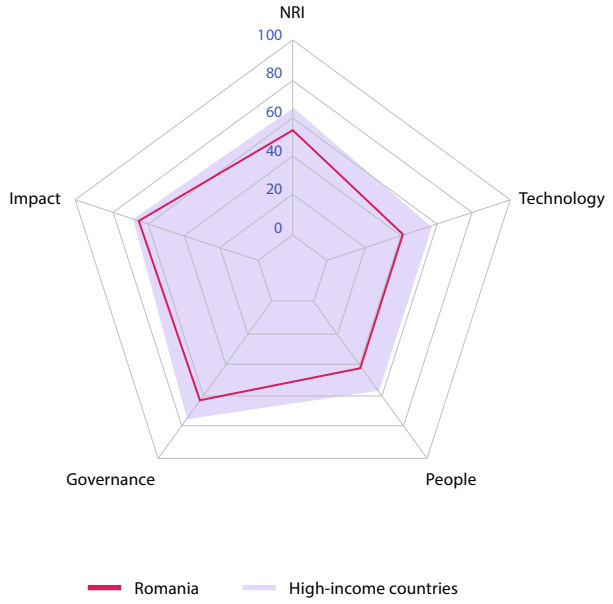
Indicator	Rank	Score	
A. Technology pillar	**34**	**49.59**	
1st sub-pillar: Access	20	76.32	
1.1.1 Mobile tariffs	27	80.73	●
1.1.2 Handset prices	4	93.39	●
1.1.3 FTTH/building Internet subscriptions	102	12.94	○
1.1.4 Population covered by at least a 3G mobile network	1	100.00	●
1.1.5 International Internet bandwidth	66	70.88	
1.1.6 Internet access in schools	1	100.00	●
2nd sub-pillar: Content	91	17.83	
1.2.1 GitHub commits	81	3.97	
1.2.2 Internet domain registrations	69	3.51	
1.2.3 Mobile apps development	77	62.91	
1.2.4 AI scientific publications	106	0.91	○
3rd sub-pillar: Future Technologies	20	54.63	
1.3.1 Adoption of emerging technologies	35	62.68	
1.3.2 Investment in emerging technologies	17	71.00	●
1.3.3 Robot density	NA	NA	
1.3.4 Computer software spending	37	30.20	
B. People pillar	**68**	**43.51**	
1st sub-pillar: Individuals	12	60.44	
2.1.1 Mobile broadband internet traffic within the country	68	9.06	
2.1.2 ICT skills in the education system	4	89.16	●
2.1.3 Use of virtual social networks	3	91.98	●
2.1.4 Tertiary enrollment	92	15.06	
2.1.5 Adult literacy rate	32	96.92	
2.1.6 AI talent concentration	NA	NA	
2nd sub-pillar: Businesses	107	30.56	
2.2.1 Firms with website	NA	NA	
2.2.2 GERD financed by business enterprise	75	11.45	
2.2.3 Knowledge intensive employment	66	31.17	
2.2.4 Annual investment in telecommunication services	65	78.07	
2.2.5 GERD performed by business enterprise	66	1.56	
3rd sub-pillar: Governments	65	39.52	
2.3.1 Government online services	83	56.83	
2.3.2 Publication and use of open data	73	19.12	
2.3.3 Government promotion of investment in emerging tech	19	70.03	●
2.3.4 R&D expenditure by governments and higher education	53	12.09	

Indicator	Rank	Score	
C. Governance pillar	**40**	**69.18**	
1st sub-pillar: Trust	28	71.59	
3.1.1 Secure Internet servers	72	48.78	
3.1.2 Cybersecurity	34	94.40	
3.1.3 Online access to financial account	NA	NA	
3.1.4 Internet shopping	NA	NA	
2nd sub-pillar: Regulation	43	73.14	
3.2.1 Regulatory quality	33	69.11	
3.2.2 ICT regulatory environment	96	69.06	
3.2.3 Regulation of emerging technologies	25	73.51	
3.2.4 E-commerce legislation	1	100.00	●
3.2.5 Privacy protection by law content	89	54.05	
3rd sub-pillar: Inclusion	61	62.80	
3.3.1 E-Participation	90	36.05	
3.3.2 Socioeconomic gap in use of digital payments	NA	NA	
3.3.3 Availability of local online content	30	81.97	
3.3.4 Gender gap in Internet use	36	70.39	
3.3.5 Rural gap in use of digital payments	NA	NA	
D. Impact pillar	**63**	**54.31**	
1st sub-pillar: Economy	58	31.47	
4.1.1 High-tech and medium-high-tech manufacturing	30	46.74	
4.1.2 High-tech exports	101	2.86	○
4.1.3 PCT patent applications	61	3.82	
4.1.4 Domestic market size	60	55.31	
4.1.5 Prevalence of gig economy	14	71.22	●
4.1.6 ICT services exports	83	8.84	
2nd sub-pillar: Quality of Life	23	80.92	
4.2.1 Happiness	35	74.81	
4.2.2 Freedom to make life choices	14	91.50	●
4.2.3 Income inequality	NA	NA	
4.2.4 Healthy life expectancy at birth	51	76.44	
3rd sub-pillar: SDG Contribution	108	50.55	
4.3.1 SDG 3: Good Health and Well-Being	51	75.55	
4.3.2 SDG 4: Quality Education	57	32.41	
4.3.3 SDG 5: Women's economic opportunity	134	0.00	○
4.3.4 SDG 7: Affordable and Clean Energy	117	50.07	○
4.3.5 SDG 11: Sustainable Cities and Communities	12	94.70	●

NOTE: ● Indicates a strength and ○ a weakness.

Romania

	Rank (Out of 134)	Score
Network Readiness Index	**52**	**52.41**
Pillar/sub-pillar	**Rank**	**Score**
A. Technology pillar	**57**	**42.76**
1st sub-pillar: Access	48	70.12
2nd sub-pillar: Content	50	28.72
3rd sub-pillar: Future Technologies	78	29.45
B. People pillar	**66**	**43.57**
1st sub-pillar: Individuals	70	46.54
2nd sub-pillar: Businesses	52	48.95
3rd sub-pillar: Governments	78	35.22
C. Governance pillar	**52**	**63.55**
1st sub-pillar: Trust	51	55.41
2nd sub-pillar: Regulation	45	72.56
3rd sub-pillar: Inclusion	63	62.67
D. Impact pillar	**42**	**59.75**
1st sub-pillar: Economy	33	38.83
2nd sub-pillar: Quality of Life	41	74.98
3rd sub-pillar: SDG Contribution	63	65.43



The Network Readiness Index in detail

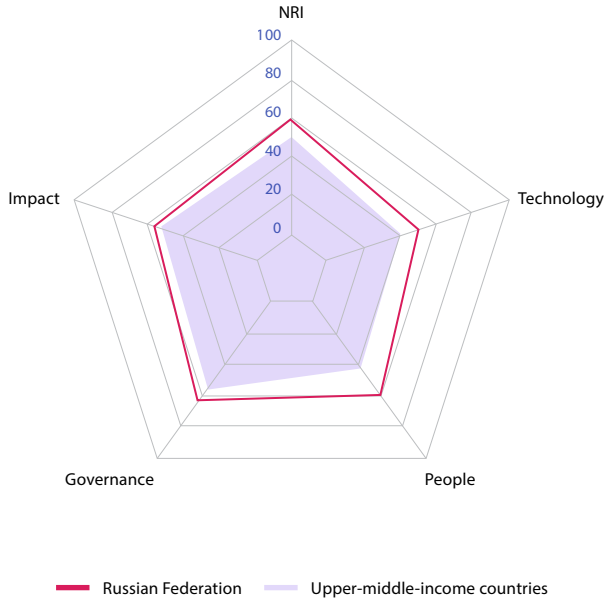
Indicator	Rank	Score	
A. Technology pillar	**57**	**42.76**	
1st sub-pillar: Access	48	70.12	
1.1.1 Mobile tariffs	20	83.85	●
1.1.2 Handset prices	62	48.27	
1.1.3 FTTH/building Internet subscriptions	21	48.13	●
1.1.4 Population covered by at least a 3G mobile network	25	99.99	●
1.1.5 International Internet bandwidth	73	70.37	
1.1.6 Internet access in schools	NA	NA	
2nd sub-pillar: Content	50	28.72	
1.2.1 GitHub commits	43	20.54	
1.2.2 Internet domain registrations	43	10.46	
1.2.3 Mobile apps development	54	70.24	
1.2.4 AI scientific publications	38	13.65	
3rd sub-pillar: Future Technologies	78	29.45	
1.3.1 Adoption of emerging technologies	50	52.70	
1.3.2 Investment in emerging technologies	93	31.25	○
1.3.3 Robot density	38	5.14	○
1.3.4 Computer software spending	43	28.69	
B. People pillar	**66**	**43.57**	
1st sub-pillar: Individuals	70	46.54	
2.1.1 Mobile broadband internet traffic within the country	40	18.99	
2.1.2 ICT skills in the education system	46	56.38	
2.1.3 Use of virtual social networks	66	63.15	
2.1.4 Tertiary enrollment	65	34.09	
2.1.5 Adult literacy rate	22	98.50	●
2.1.6 AI talent concentration	39	8.15	○
2nd sub-pillar: Businesses	52	48.95	
2.2.1 Firms with website	62	48.20	
2.2.2 GERD financed by business enterprise	21	68.80	●
2.2.3 Knowledge intensive employment	47	41.53	
2.2.4 Annual investment in telecommunication services	58	78.89	
2.2.5 GERD performed by business enterprise	47	7.34	
3rd sub-pillar: Governments	78	35.22	
2.3.1 Government online services	69	64.79	
2.3.2 Publication and use of open data	NA	NA	
2.3.3 Government promotion of investment in emerging tech	81	32.48	
2.3.4 R&D expenditure by governments and higher education	62	8.38	

Indicator	Rank	Score	
C. Governance pillar	**52**	**63.55**	
1st sub-pillar: Trust	51	55.41	
3.1.1 Secure Internet servers	33	79.56	
3.1.2 Cybersecurity	70	75.87	
3.1.3 Online access to financial account	74	23.59	
3.1.4 Internet shopping	49	42.63	
2nd sub-pillar: Regulation	45	72.56	
3.2.1 Regulatory quality	54	56.58	
3.2.2 ICT regulatory environment	28	90.59	●
3.2.3 Regulation of emerging technologies	54	48.83	
3.2.4 E-commerce legislation	1	100.00	●
3.2.5 Privacy protection by law content	63	66.81	
3rd sub-pillar: Inclusion	63	62.67	
3.3.1 E-Participation	54	61.63	
3.3.2 Socioeconomic gap in use of digital payments	86	61.43	
3.3.3 Availability of local online content	45	71.88	
3.3.4 Gender gap in Internet use	53	68.68	
3.3.5 Rural gap in use of digital payments	91	49.73	○
D. Impact pillar	**42**	**59.75**	
1st sub-pillar: Economy	33	38.83	
4.1.1 High-tech and medium-high-tech manufacturing	21	54.64	●
4.1.2 High-tech exports	43	20.59	
4.1.3 PCT patent applications	71	2.28	
4.1.4 Domestic market size	35	63.91	
4.1.5 Prevalence of gig economy	76	36.34	
4.1.6 ICT services exports	11	55.23	●
2nd sub-pillar: Quality of Life	41	74.98	
4.2.1 Happiness	30	75.97	●
4.2.2 Freedom to make life choices	58	76.86	
4.2.3 Income inequality	46	71.36	
4.2.4 Healthy life expectancy at birth	56	75.73	
3rd sub-pillar: SDG Contribution	63	65.43	
4.3.1 SDG 3: Good Health and Well-Being	62	70.74	
4.3.2 SDG 4: Quality Education	48	38.25	
4.3.3 SDG 5: Women's economic opportunity	39	86.73	
4.3.4 SDG 7: Affordable and Clean Energy	18	81.72	●
4.3.5 SDG 11: Sustainable Cities and Communities	93	49.71	○

NOTE: ● Indicates a strength and ○ a weakness.

Russian Federation

	Rank (Out of 134)	Score
Network Readiness Index	**38**	**57.27**
Pillar/sub-pillar	**Rank**	**Score**
A. Technology pillar	**40**	**48.76**
1st sub-pillar: Access	8	80.76
2nd sub-pillar: Content	41	33.63
3rd sub-pillar: Future Technologies	67	31.88
B. People pillar	**19**	**59.23**
1st sub-pillar: Individuals	3	72.59
2nd sub-pillar: Businesses	42	53.57
3rd sub-pillar: Governments	30	51.53
C. Governance pillar	**49**	**66.33**
1st sub-pillar: Trust	34	69.33
2nd sub-pillar: Regulation	102	56.10
3rd sub-pillar: Inclusion	40	73.55
D. Impact pillar	**57**	**54.77**
1st sub-pillar: Economy	39	36.35
2nd sub-pillar: Quality of Life	70	67.56
3rd sub-pillar: SDG Contribution	77	60.40



The Network Readiness Index in detail

Indicator	Rank	Score	
A. Technology pillar	**40**	**48.76**	
1st sub-pillar: Access	8	80.76	
1.1.1 Mobile tariffs	14	86.73	●
1.1.2 Handset prices	36	67.17	
1.1.3 FTTH/building Internet subscriptions	6	67.47	●
1.1.4 Population covered by at least a 3G mobile network	85	98.87	
1.1.5 International Internet bandwidth	16	83.55	●
1.1.6 Internet access in schools	NA	NA	
2nd sub-pillar: Content	41	33.63	
1.2.1 GitHub commits	48	16.09	
1.2.2 Internet domain registrations	45	9.70	
1.2.3 Mobile apps development	31	73.80	
1.2.4 AI scientific publications	12	34.94	●
3rd sub-pillar: Future Technologies	67	31.88	
1.3.1 Adoption of emerging technologies	42	58.81	
1.3.2 Investment in emerging technologies	47	48.75	
1.3.3 Robot density	48	1.06	○
1.3.4 Computer software spending	73	18.92	
B. People pillar	**19**	**59.23**	
1st sub-pillar: Individuals	3	72.59	
2.1.1 Mobile broadband internet traffic within the country	3	65.29	●
2.1.2 ICT skills in the education system	NA	NA	
2.1.3 Use of virtual social networks	51	69.01	
2.1.4 Tertiary enrollment	16	56.48	●
2.1.5 Adult literacy rate	10	99.59	●
2.1.6 AI talent concentration	NA	NA	
2nd sub-pillar: Businesses	42	53.57	
2.2.1 Firms with website	53	56.61	
2.2.2 GERD financed by business enterprise	59	36.15	
2.2.3 Knowledge intensive employment	22	69.60	
2.2.4 Annual investment in telecommunication services	13	89.58	●
2.2.5 GERD performed by business enterprise	35	15.91	
3rd sub-pillar: Governments	30	51.53	
2.3.1 Government online services	61	70.91	
2.3.2 Publication and use of open data	19	63.24	
2.3.3 Government promotion of investment in emerging tech	34	52.37	
2.3.4 R&D expenditure by governments and higher education	37	19.61	

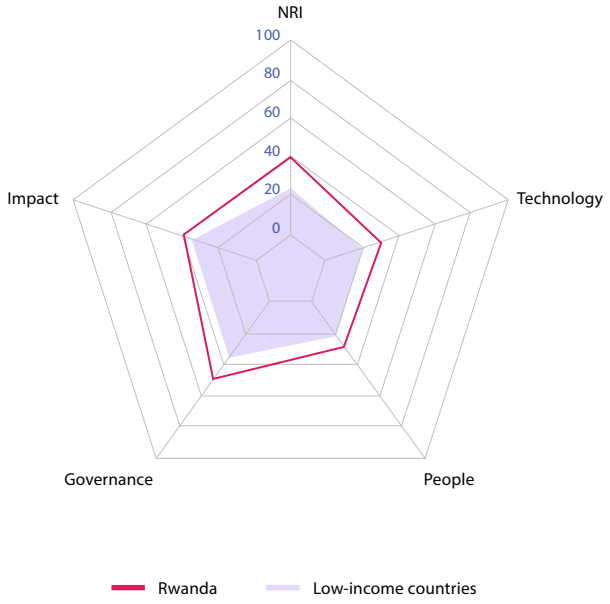
Indicator	Rank	Score	
C. Governance pillar	**49**	**66.33**	
1st sub-pillar: Trust	34	69.33	
3.1.1 Secure Internet servers	39	75.80	
3.1.2 Cybersecurity	8	98.03	●
3.1.3 Online access to financial account	34	50.60	
3.1.4 Internet shopping	42	52.91	
2nd sub-pillar: Regulation	102	56.10	
3.2.1 Regulatory quality	99	37.63	
3.2.2 ICT regulatory environment	124	55.88	○
3.2.3 Regulation of emerging technologies	52	50.13	
3.2.4 E-commerce legislation	1	100.00	●
3.2.5 Privacy protection by law content	117	36.86	○
3rd sub-pillar: Inclusion	40	73.55	
3.3.1 E-Participation	57	59.31	
3.3.2 Socioeconomic gap in use of digital payments	38	89.13	
3.3.3 Availability of local online content	39	76.68	
3.3.4 Gender gap in Internet use	40	69.91	
3.3.5 Rural gap in use of digital payments	39	72.70	
D. Impact pillar	**57**	**54.77**	
1st sub-pillar: Economy	39	36.35	
4.1.1 High-tech and medium-high-tech manufacturing	42	35.44	
4.1.2 High-tech exports	49	17.33	
4.1.3 PCT patent applications	48	6.98	
4.1.4 Domestic market size	6	81.89	●
4.1.5 Prevalence of gig economy	25	63.66	
4.1.6 ICT services exports	68	12.82	
2nd sub-pillar: Quality of Life	70	67.56	
4.2.1 Happiness	50	68.66	
4.2.2 Freedom to make life choices	81	66.82	
4.2.3 Income inequality	56	67.84	
4.2.4 Healthy life expectancy at birth	85	66.90	
3rd sub-pillar: SDG Contribution	77	60.40	
4.3.1 SDG 3: Good Health and Well-Being	48	77.13	
4.3.2 SDG 4: Quality Education	31	60.11	
4.3.3 SDG 5: Women's economic opportunity	107	61.95	○
4.3.4 SDG 7: Affordable and Clean Energy	125	41.33	○
4.3.5 SDG 11: Sustainable Cities and Communities	74	61.48	

NOTE: ● Indicates a strength and ○ a weakness.

Rwanda

	Rank (Out of 134)	Score
Network Readiness Index	**99**	**38.26**

Pillar/sub-pillar	Rank	Score
A. Technology pillar	**101**	**29.14**
1st sub-pillar: Access	113	42.83
2nd sub-pillar: Content	109	12.61
3rd sub-pillar: Future Technologies	66	31.98
B. People pillar	**107**	**29.97**
1st sub-pillar: Individuals	116	25.62
2nd sub-pillar: Businesses	122	23.33
3rd sub-pillar: Governments	57	40.97
C. Governance pillar	**79**	**51.47**
1st sub-pillar: Trust	96	32.34
2nd sub-pillar: Regulation	60	67.07
3rd sub-pillar: Inclusion	84	55.00
D. Impact pillar	**104**	**42.46**
1st sub-pillar: Economy	107	17.18
2nd sub-pillar: Quality of Life	110	50.32
3rd sub-pillar: SDG Contribution	83	59.89



The Network Readiness Index in detail

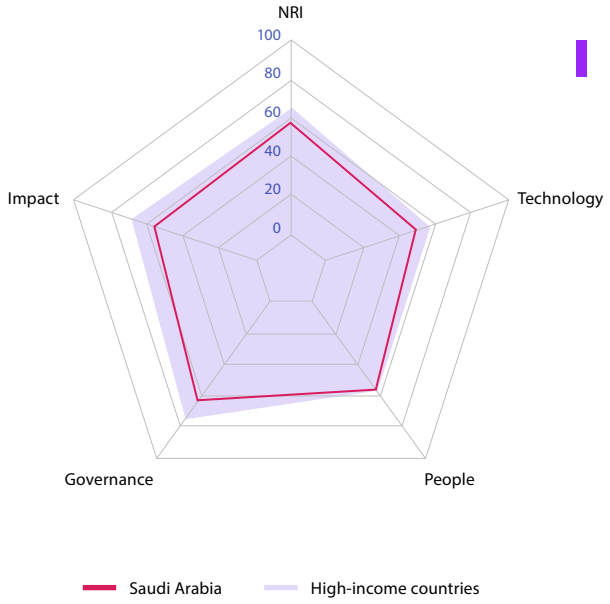
Indicator	Rank	Score	
A. Technology pillar	**101**	**29.14**	
1st sub-pillar: Access	113	42.83	
1.1.1 Mobile tariffs	115	26.02	
1.1.2 Handset prices	127	14.77	
1.1.3 FTTH/building Internet subscriptions	78	24.52	
1.1.4 Population covered by at least a 3G mobile network	70	99.59	
1.1.5 International Internet bandwidth	116	60.29	
1.1.6 Internet access in schools	61	31.78	
2nd sub-pillar: Content	109	12.61	
1.2.1 GitHub commits	92	2.88	
1.2.2 Internet domain registrations	121	0.18	
1.2.3 Mobile apps development	109	45.63	
1.2.4 AI scientific publications	92	1.75	
3rd sub-pillar: Future Technologies	66	31.98	
1.3.1 Adoption of emerging technologies	78	41.88	
1.3.2 Investment in emerging technologies	42	50.00	●
1.3.3 Robot density	NA	NA	
1.3.4 Computer software spending	105	4.06	
B. People pillar	**107**	**29.97**	
1st sub-pillar: Individuals	116	25.62	
2.1.1 Mobile broadband internet traffic within the country	98	2.18	
2.1.2 ICT skills in the education system	58	52.82	
2.1.3 Use of virtual social networks	128	2.93	○
2.1.4 Tertiary enrollment	119	3.07	
2.1.5 Adult literacy rate	87	67.09	
2.1.6 AI talent concentration	NA	NA	
2nd sub-pillar: Businesses	122	23.33	
2.2.1 Firms with website	76	38.24	
2.2.2 GERD financed by business enterprise	95	0.78	○
2.2.3 Knowledge intensive employment	116	6.15	
2.2.4 Annual investment in telecommunication services	114	70.37	
2.2.5 GERD performed by business enterprise	72	1.11	
3rd sub-pillar: Governments	57	40.97	
2.3.1 Government online services	41	77.18	●
2.3.2 Publication and use of open data	73	19.12	
2.3.3 Government promotion of investment in emerging tech	32	54.09	●
2.3.4 R&D expenditure by governments and higher education	48	13.48	●

Indicator	Rank	Score	
C. Governance pillar	**79**	**51.47**	
1st sub-pillar: Trust	96	32.34	
3.1.1 Secure Internet servers	106	35.01	
3.1.2 Cybersecurity	65	79.60	
3.1.3 Online access to financial account	96	14.35	
3.1.4 Internet shopping	128	0.40	○
2nd sub-pillar: Regulation	60	67.07	
3.2.1 Regulatory quality	69	51.20	
3.2.2 ICT regulatory environment	45	87.06	●
3.2.3 Regulation of emerging technologies	57	46.75	●
3.2.4 E-commerce legislation	1	100.00	●
3.2.5 Privacy protection by law content	95	50.33	
3rd sub-pillar: Inclusion	84	55.00	
3.3.1 E-Participation	53	62.80	●
3.3.2 Socioeconomic gap in use of digital payments	123	36.12	
3.3.3 Availability of local online content	83	51.44	
3.3.4 Gender gap in Internet use	NA	NA	
3.3.5 Rural gap in use of digital payments	52	69.65	●
D. Impact pillar	**104**	**42.46**	
1st sub-pillar: Economy	107	17.18	
4.1.1 High-tech and medium-high-tech manufacturing	95	7.17	
4.1.2 High-tech exports	76	8.99	
4.1.3 PCT patent applications	99	0.00	○
4.1.4 Domestic market size	120	34.13	
4.1.5 Prevalence of gig economy	56	44.77	●
4.1.6 ICT services exports	88	8.02	
2nd sub-pillar: Quality of Life	110	50.32	
4.2.1 Happiness	127	17.03	○
4.2.2 Freedom to make life choices	39	82.29	●
4.2.3 Income inequality	95	48.49	
4.2.4 Healthy life expectancy at birth	103	53.47	
3rd sub-pillar: SDG Contribution	83	59.89	
4.3.1 SDG 3: Good Health and Well-Being	106	41.78	
4.3.2 SDG 4: Quality Education	NA	NA	
4.3.3 SDG 5: Women's economic opportunity	69	76.99	
4.3.4 SDG 7: Affordable and Clean Energy	69	71.60	
4.3.5 SDG 11: Sustainable Cities and Communities	94	49.19	

NOTE: ● Indicates a strength and ○ a weakness.

Saudi Arabia

	Rank (Out of 134)	Score
Network Readiness Index	**41**	**56.14**
Pillar/sub-pillar	**Rank**	**Score**
A. Technology pillar	**36**	**49.52**
1st sub-pillar: Access	30	74.45
2nd sub-pillar: Content	80	19.26
3rd sub-pillar: Future Technologies	19	54.85
B. People pillar	**31**	**55.02**
1st sub-pillar: Individuals	10	60.97
2nd sub-pillar: Businesses	40	54.69
3rd sub-pillar: Governments	35	49.39
C. Governance pillar	**50**	**65.69**
1st sub-pillar: Trust	44	63.80
2nd sub-pillar: Regulation	98	57.05
3rd sub-pillar: Inclusion	30	76.21
D. Impact pillar	**62**	**54.34**
1st sub-pillar: Economy	47	34.38
2nd sub-pillar: Quality of Life	38	76.35
3rd sub-pillar: SDG Contribution	104	52.29



The Network Readiness Index in detail

Indicator	Rank	Score	
A. Technology pillar	**36**	**49.52**	
1st sub-pillar: Access	30	74.45	
1.1.1 Mobile tariffs	48	71.74	
1.1.2 Handset prices	90	37.70	
1.1.3 FTTH/building Internet subscriptions	17	49.29	●
1.1.4 Population covered by at least a 3G mobile network	1	100.00	●
1.1.5 International Internet bandwidth	9	87.99	●
1.1.6 Internet access in schools	1	100.00	●
2nd sub-pillar: Content	80	19.26	
1.2.1 GitHub commits	100	1.97	
1.2.2 Internet domain registrations	83	1.92	
1.2.3 Mobile apps development	68	65.03	
1.2.4 AI scientific publications	52	8.13	
3rd sub-pillar: Future Technologies	19	54.85	
1.3.1 Adoption of emerging technologies	23	72.31	
1.3.2 Investment in emerging technologies	30	61.50	
1.3.3 Robot density	NA	NA	
1.3.4 Computer software spending	35	30.74	
B. People pillar	**31**	**55.02**	
1st sub-pillar: Individuals	10	60.97	
2.1.1 Mobile broadband internet traffic within the country	8	54.68	●
2.1.2 ICT skills in the education system	8	83.33	●
2.1.3 Use of virtual social networks	35	74.88	
2.1.4 Tertiary enrollment	31	46.36	
2.1.5 Adult literacy rate	34	96.70	
2.1.6 AI talent concentration	35	9.87	
2nd sub-pillar: Businesses	40	54.69	
2.2.1 Firms with website	94	22.64	○
2.2.2 GERD financed by business enterprise	NA	NA	
2.2.3 Knowledge intensive employment	NA	NA	
2.2.4 Annual investment in telecommunication services	18	86.74	●
2.2.5 GERD performed by business enterprise	NA	NA	
3rd sub-pillar: Governments	35	49.39	
2.3.1 Government online services	32	80.33	
2.3.2 Publication and use of open data	65	25.00	
2.3.3 Government promotion of investment in emerging tech	5	84.06	●
2.3.4 R&D expenditure by governments and higher education	63	8.19	

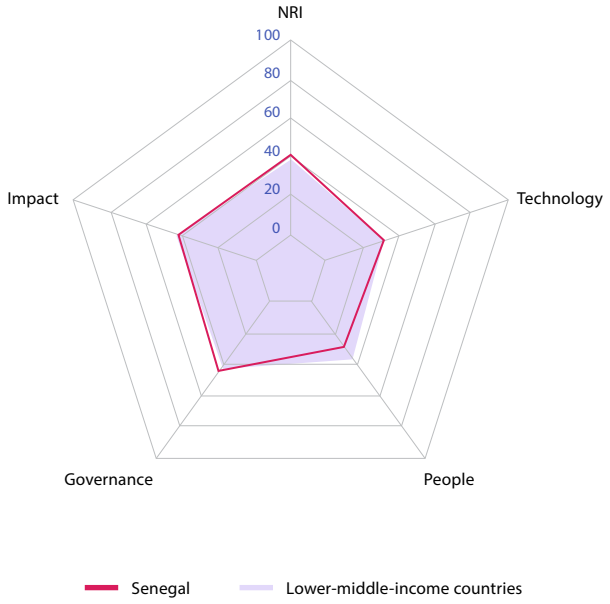
Indicator	Rank	Score	
C. Governance pillar	**50**	**65.69**	
1st sub-pillar: Trust	44	63.80	
3.1.1 Secure Internet servers	88	43.09	
3.1.2 Cybersecurity	2	99.53	●
3.1.3 Online access to financial account	44	40.98	
3.1.4 Internet shopping	21	71.59	
2nd sub-pillar: Regulation	98	57.05	
3.2.1 Regulatory quality	52	57.18	
3.2.2 ICT regulatory environment	14	94.12	
3.2.3 Regulation of emerging technologies	18	77.14	
3.2.4 E-commerce legislation	121	33.33	○
3.2.5 Privacy protection by law content	127	23.47	○
3rd sub-pillar: Inclusion	30	76.21	
3.3.1 E-Participation	43	68.61	
3.3.2 Socioeconomic gap in use of digital payments	61	78.24	
3.3.3 Availability of local online content	11	91.11	●
3.3.4 Gender gap in Internet use	26	71.55	
3.3.5 Rural gap in use of digital payments	42	71.56	
D. Impact pillar	**62**	**54.34**	
1st sub-pillar: Economy	47	34.38	
4.1.1 High-tech and medium-high-tech manufacturing	46	31.89	
4.1.2 High-tech exports	120	0.85	○
4.1.3 PCT patent applications	42	8.83	
4.1.4 Domestic market size	17	73.78	●
4.1.5 Prevalence of gig economy	5	86.05	●
4.1.6 ICT services exports	97	4.87	
2nd sub-pillar: Quality of Life	38	76.35	
4.2.1 Happiness	34	74.94	
4.2.2 Freedom to make life choices	25	87.86	
4.2.3 Income inequality	NA	NA	
4.2.4 Healthy life expectancy at birth	86	66.24	
3rd sub-pillar: SDG Contribution	104	52.29	
4.3.1 SDG 3: Good Health and Well-Being	57	73.04	
4.3.2 SDG 4: Quality Education	68	21.27	○
4.3.3 SDG 5: Women's economic opportunity	109	59.29	
4.3.4 SDG 7: Affordable and Clean Energy	103	59.68	
4.3.5 SDG 11: Sustainable Cities and Communities	96	48.16	

NOTE: ● Indicates a strength and ○ a weakness.

Senegal

	Rank (Out of 134)	Score
Network Readiness Index	**102**	**37.66**

Pillar/sub-pillar	Rank	Score
A. Technology pillar	**91**	**32.57**
1st sub-pillar: Access	97	50.68
2nd sub-pillar: Content	116	10.40
3rd sub-pillar: Future Technologies	55	36.62
B. People pillar	**116**	**26.55**
1st sub-pillar: Individuals	115	26.02
2nd sub-pillar: Businesses	115	27.68
3rd sub-pillar: Governments	103	25.96
C. Governance pillar	**93**	**47.39**
1st sub-pillar: Trust	106	26.13
2nd sub-pillar: Regulation	54	69.19
3rd sub-pillar: Inclusion	99	46.85
D. Impact pillar	**102**	**44.12**
1st sub-pillar: Economy	91	21.23
2nd sub-pillar: Quality of Life	100	56.16
3rd sub-pillar: SDG Contribution	95	54.96



The Network Readiness Index in detail

Indicator	Rank	Score	
A. Technology pillar	**91**	**32.57**	
1st sub-pillar: Access	97	50.68	
1.1.1 Mobile tariffs	98	42.90	
1.1.2 Handset prices	110	28.20	
1.1.3 FTTH/building Internet subscriptions	NA	NA	
1.1.4 Population covered by at least a 3G mobile network	54	99.80	●
1.1.5 International Internet bandwidth	126	54.13	○
1.1.6 Internet access in schools	64	28.39	
2nd sub-pillar: Content	116	10.40	
1.2.1 GitHub commits	112	0.97	
1.2.2 Internet domain registrations	105	0.62	
1.2.3 Mobile apps development	116	37.52	○
1.2.4 AI scientific publications	81	2.50	
3rd sub-pillar: Future Technologies	55	36.62	
1.3.1 Adoption of emerging technologies	74	43.93	
1.3.2 Investment in emerging technologies	60	41.25	●
1.3.3 Robot density	NA	NA	
1.3.4 Computer software spending	54	24.69	●
B. People pillar	**116**	**26.55**	
1st sub-pillar: Individuals	115	26.02	
2.1.1 Mobile broadband internet traffic within the country	70	8.63	
2.1.2 ICT skills in the education system	41	58.04	●
2.1.3 Use of virtual social networks	111	14.37	
2.1.4 Tertiary enrollment	103	8.71	
2.1.5 Adult literacy rate	100	40.33	○
2.1.6 AI talent concentration	NA	NA	
2nd sub-pillar: Businesses	115	27.68	
2.2.1 Firms with website	91	29.00	
2.2.2 GERD financed by business enterprise	87	2.58	
2.2.3 Knowledge intensive employment	119	3.06	○
2.2.4 Annual investment in telecommunication services	79	76.10	
2.2.5 GERD performed by business enterprise	NA	NA	
3rd sub-pillar: Governments	103	25.96	
2.3.1 Government online services	98	44.01	
2.3.2 Publication and use of open data	91	8.82	
2.3.3 Government promotion of investment in emerging tech	56	40.80	●
2.3.4 R&D expenditure by governments and higher education	57	10.22	

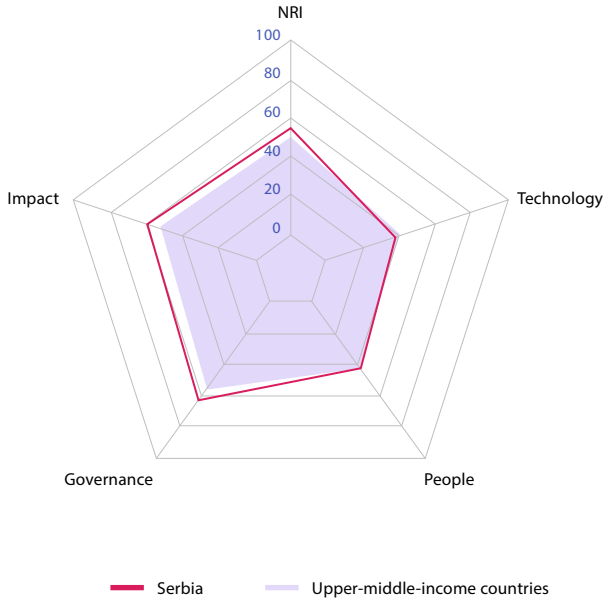
Indicator	Rank	Score	
C. Governance pillar	**93**	**47.39**	
1st sub-pillar: Trust	106	26.13	
3.1.1 Secure Internet servers	121	26.17	
3.1.2 Cybersecurity	103	34.72	
3.1.3 Online access to financial account	61	30.80	●
3.1.4 Internet shopping	84	12.85	
2nd sub-pillar: Regulation	54	69.19	
3.2.1 Regulatory quality	86	42.55	
3.2.2 ICT regulatory environment	55	85.88	●
3.2.3 Regulation of emerging technologies	44	56.62	●
3.2.4 E-commerce legislation	1	100.00	●
3.2.5 Privacy protection by law content	78	60.88	
3rd sub-pillar: Inclusion	99	46.85	
3.3.1 E-Participation	98	32.56	
3.3.2 Socioeconomic gap in use of digital payments	76	67.58	
3.3.3 Availability of local online content	90	49.52	
3.3.4 Gender gap in Internet use	NA	NA	
3.3.5 Rural gap in use of digital payments	105	37.75	
D. Impact pillar	**102**	**44.12**	
1st sub-pillar: Economy	91	21.23	
4.1.1 High-tech and medium-high-tech manufacturing	58	26.40	
4.1.2 High-tech exports	100	3.16	
4.1.3 PCT patent applications	99	0.00	○
4.1.4 Domestic market size	96	41.05	
4.1.5 Prevalence of gig economy	55	45.06	●
4.1.6 ICT services exports	71	11.69	
2nd sub-pillar: Quality of Life	100	56.16	
4.2.1 Happiness	93	47.51	
4.2.2 Freedom to make life choices	91	63.90	
4.2.3 Income inequality	67	62.56	
4.2.4 Healthy life expectancy at birth	106	50.66	
3rd sub-pillar: SDG Contribution	95	54.96	
4.3.1 SDG 3: Good Health and Well-Being	112	34.01	
4.3.2 SDG 4: Quality Education	NA	NA	
4.3.3 SDG 5: Women's economic opportunity	108	61.06	
4.3.4 SDG 7: Affordable and Clean Energy	60	73.70	●
4.3.5 SDG 11: Sustainable Cities and Communities	87	51.07	

NOTE: ● Indicates a strength and ○ a weakness.

Serbia

	Rank (Out of 134)	Score
Network Readiness Index	**55**	**51.68**

Pillar/sub-pillar	Rank	Score
A. Technology pillar	**83**	**36.94**
1st sub-pillar: Access	66	64.98
2nd sub-pillar: Content	54	26.72
3rd sub-pillar: Future Technologies	115	19.11
B. People pillar	**58**	**45.92**
1st sub-pillar: Individuals	36	53.56
2nd sub-pillar: Businesses	72	43.35
3rd sub-pillar: Governments	59	40.85
C. Governance pillar	**48**	**66.33**
1st sub-pillar: Trust	53	54.87
2nd sub-pillar: Regulation	48	72.18
3rd sub-pillar: Inclusion	44	71.93
D. Impact pillar	**46**	**57.55**
1st sub-pillar: Economy	52	34.08
2nd sub-pillar: Quality of Life	45	74.44
3rd sub-pillar: SDG Contribution	67	64.13



The Network Readiness Index in detail

Indicator	Rank	Score	
A. Technology pillar	**83**	**36.94**	
1st sub-pillar: Access	66	64.98	
1.1.1 Mobile tariffs	51	69.53	
1.1.2 Handset prices	59	52.40	
1.1.3 FTTH/building Internet subscriptions	68	27.95	
1.1.4 Population covered by at least a 3G mobile network	53	99.83	
1.1.5 International Internet bandwidth	45	75.18	
1.1.6 Internet access in schools	NA	NA	
2nd sub-pillar: Content	54	26.72	
1.2.1 GitHub commits	46	19.00	
1.2.2 Internet domain registrations	59	5.19	
1.2.3 Mobile apps development	28	74.61	●
1.2.4 AI scientific publications	53	8.09	
3rd sub-pillar: Future Technologies	115	19.11	
1.3.1 Adoption of emerging technologies	81	40.36	
1.3.2 Investment in emerging technologies	93	31.25	○
1.3.3 Robot density	45	1.92	○
1.3.4 Computer software spending	110	2.90	○
B. People pillar	**58**	**45.92**	
1st sub-pillar: Individuals	36	53.56	
2.1.1 Mobile broadband internet traffic within the country	56	11.12	
2.1.2 ICT skills in the education system	67	46.93	
2.1.3 Use of virtual social networks	65	65.59	
2.1.4 Tertiary enrollment	41	44.86	
2.1.5 Adult literacy rate	14	99.29	●
2.1.6 AI talent concentration	NA	NA	
2nd sub-pillar: Businesses	72	43.35	
2.2.1 Firms with website	21	80.41	●
2.2.2 GERD financed by business enterprise	86	2.60	○
2.2.3 Knowledge intensive employment	46	41.58	
2.2.4 Annual investment in telecommunication services	50	80.65	
2.2.5 GERD performed by business enterprise	42	11.51	
3rd sub-pillar: Governments	59	40.85	
2.3.1 Government online services	26	83.58	●
2.3.2 Publication and use of open data	68	23.53	
2.3.3 Government promotion of investment in emerging tech	61	38.62	
2.3.4 R&D expenditure by governments and higher education	40	17.67	

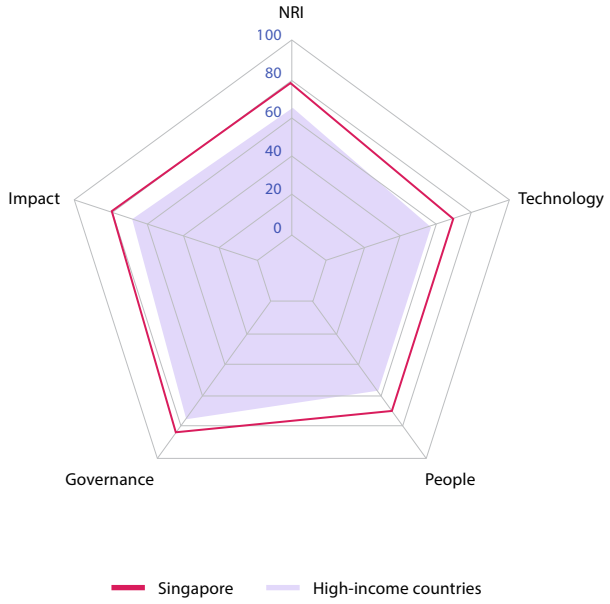
Indicator	Rank	Score	
C. Governance pillar	**48**	**66.33**	
1st sub-pillar: Trust	53	54.87	
3.1.1 Secure Internet servers	42	72.97	
3.1.2 Cybersecurity	47	89.62	
3.1.3 Online access to financial account	83	18.74	
3.1.4 Internet shopping	52	38.17	
2nd sub-pillar: Regulation	48	72.18	
3.2.1 Regulatory quality	70	50.78	
3.2.2 ICT regulatory environment	11	94.71	●
3.2.3 Regulation of emerging technologies	80	34.55	
3.2.4 E-commerce legislation	1	100.00	●
3.2.5 Privacy protection by law content	31	80.86	●
3rd sub-pillar: Inclusion	44	71.93	
3.3.1 E-Participation	15	80.23	●
3.3.2 Socioeconomic gap in use of digital payments	40	88.33	●
3.3.3 Availability of local online content	53	66.59	
3.3.4 Gender gap in Internet use	79	62.51	
3.3.5 Rural gap in use of digital payments	70	62.00	
D. Impact pillar	**46**	**57.55**	
1st sub-pillar: Economy	52	34.08	
4.1.1 High-tech and medium-high-tech manufacturing	53	29.22	
4.1.2 High-tech exports	NA	NA	
4.1.3 PCT patent applications	49	6.82	
4.1.4 Domestic market size	75	49.28	
4.1.5 Prevalence of gig economy	81	35.17	
4.1.6 ICT services exports	16	49.92	●
2nd sub-pillar: Quality of Life	45	74.44	
4.2.1 Happiness	43	72.40	
4.2.2 Freedom to make life choices	53	79.19	
4.2.3 Income inequality	49	70.35	
4.2.4 Healthy life expectancy at birth	55	75.83	
3rd sub-pillar: SDG Contribution	67	64.13	
4.3.1 SDG 3: Good Health and Well-Being	65	69.51	
4.3.2 SDG 4: Quality Education	43	44.27	
4.3.3 SDG 5: Women's economic opportunity	29	91.15	●
4.3.4 SDG 7: Affordable and Clean Energy	98	61.71	○
4.3.5 SDG 11: Sustainable Cities and Communities	84	54.01	

NOTE: ● Indicates a strength and ○ a weakness.

Singapore

	Rank (Out of 134)	Score
Network Readiness Index	**2**	**76.81**

Pillar/sub-pillar	Rank	Score
A. Technology pillar	**5**	**70.57**
1st sub-pillar: Access	2	86.01
2nd sub-pillar: Content	13	53.20
3rd sub-pillar: Future Technologies	2	72.51
B. People pillar	**6**	**69.89**
1st sub-pillar: Individuals	8	67.81
2nd sub-pillar: Businesses	15	70.56
3rd sub-pillar: Governments	11	71.30
C. Governance pillar	**10**	**85.58**
1st sub-pillar: Trust	17	79.12
2nd sub-pillar: Regulation	10	87.76
3rd sub-pillar: Inclusion	1	89.86
D. Impact pillar	**1**	**81.20**
1st sub-pillar: Economy	1	70.45
2nd sub-pillar: Quality of Life	10	86.95
3rd sub-pillar: SDG Contribution	8	86.22



The Network Readiness Index in detail

Indicator	Rank	Score	
A. Technology pillar	**5**	**70.57**	
1st sub-pillar: Access	2	86.01	
1.1.1 Mobile tariffs	4	97.76	
1.1.2 Handset prices	1	100.00	●
1.1.3 FTTH/building Internet subscriptions	73	25.95	○
1.1.4 Population covered by at least a 3G mobile network	1	100.00	●
1.1.5 International Internet bandwidth	4	92.37	
1.1.6 Internet access in schools	1	100.00	●
2nd sub-pillar: Content	13	53.20	
1.2.1 GitHub commits	1	100.00	●
1.2.2 Internet domain registrations	33	20.33	
1.2.3 Mobile apps development	4	85.46	
1.2.4 AI scientific publications	60	7.01	
3rd sub-pillar: Future Technologies	2	72.51	
1.3.1 Adoption of emerging technologies	8	88.54	
1.3.2 Investment in emerging technologies	13	78.50	
1.3.3 Robot density	1	100.00	●
1.3.4 Computer software spending	59	22.99	
B. People pillar	**6**	**69.89**	
1st sub-pillar: Individuals	8	67.81	
2.1.1 Mobile broadband internet traffic within the country	53	11.92	
2.1.2 ICT skills in the education system	3	89.85	●
2.1.3 Use of virtual social networks	14	80.16	
2.1.4 Tertiary enrollment	9	61.03	
2.1.5 Adult literacy rate	37	96.08	
2.1.6 AI talent concentration	NA	NA	
2nd sub-pillar: Businesses	15	70.56	
2.2.1 Firms with website	NA	NA	
2.2.2 GERD financed by business enterprise	16	72.11	
2.2.3 Knowledge intensive employment	2	93.05	●
2.2.4 Annual investment in telecommunication services	47	81.04	
2.2.5 GERD performed by business enterprise	18	36.03	
3rd sub-pillar: Governments	11	71.30	
2.3.1 Government online services	5	95.80	
2.3.2 Publication and use of open data	27	50.00	
2.3.3 Government promotion of investment in emerging tech	2	99.63	●
2.3.4 R&D expenditure by governments and higher education	16	39.78	

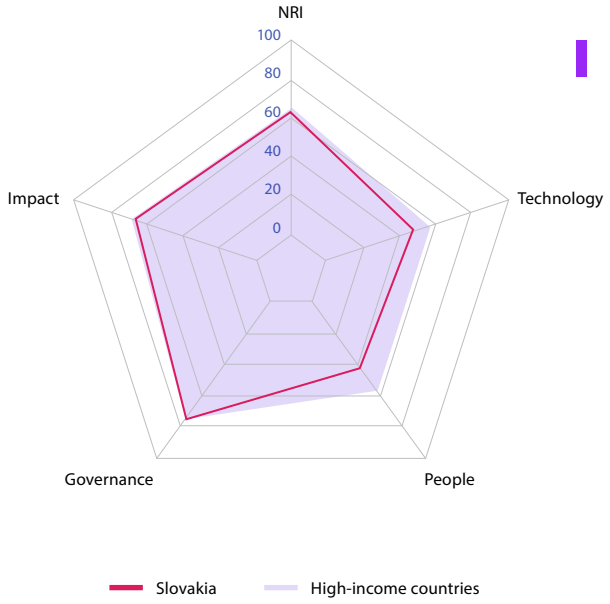
Indicator	Rank	Score	
C. Governance pillar	**10**	**85.58**	
1st sub-pillar: Trust	17	79.12	
3.1.1 Secure Internet servers	4	93.86	
3.1.2 Cybersecurity	5	98.49	
3.1.3 Online access to financial account	26	56.92	
3.1.4 Internet shopping	25	67.20	
2nd sub-pillar: Regulation	10	87.76	
3.2.1 Regulatory quality	1	100.00	●
3.2.2 ICT regulatory environment	21	93.53	
3.2.3 Regulation of emerging technologies	3	93.77	●
3.2.4 E-commerce legislation	1	100.00	●
3.2.5 Privacy protection by law content	93	51.49	○
3rd sub-pillar: Inclusion	1	89.86	
3.3.1 E-Participation	3	97.68	●
3.3.2 Socioeconomic gap in use of digital payments	28	92.85	
3.3.3 Availability of local online content	10	91.59	
3.3.4 Gender gap in Internet use	56	68.31	○
3.3.5 Rural gap in use of digital payments	2	98.86	●
D. Impact pillar	**1**	**81.20**	
1st sub-pillar: Economy	1	70.45	
4.1.1 High-tech and medium-high-tech manufacturing	1	100.00	●
4.1.2 High-tech exports	1	100.00	●
4.1.3 PCT patent applications	11	54.87	
4.1.4 Domestic market size	37	63.49	
4.1.5 Prevalence of gig economy	10	81.40	
4.1.6 ICT services exports	46	22.92	
2nd sub-pillar: Quality of Life	10	86.95	
4.2.1 Happiness	28	78.75	
4.2.2 Freedom to make life choices	34	83.91	
4.2.3 Income inequality	NA	NA	
4.2.4 Healthy life expectancy at birth	2	98.18	●
3rd sub-pillar: SDG Contribution	8	86.22	
4.3.1 SDG 3: Good Health and Well-Being	10	94.30	
4.3.2 SDG 4: Quality Education	2	90.79	●
4.3.3 SDG 5: Women's economic opportunity	71	75.22	○
4.3.4 SDG 7: Affordable and Clean Energy	30	79.26	
4.3.5 SDG 11: Sustainable Cities and Communities	18	91.51	

NOTE: ● Indicates a strength and ○ a weakness.

Slovakia

	Rank (Out of 134)	Score
Network Readiness Index	**39**	**57.08**

Pillar/sub-pillar	Rank	Score
A. Technology pillar	**42**	**48.42**
1st sub-pillar: Access	21	76.09
2nd sub-pillar: Content	44	30.03
3rd sub-pillar: Future Technologies	47	39.13
B. People pillar	**74**	**41.84**
1st sub-pillar: Individuals	112	28.41
2nd sub-pillar: Businesses	39	56.25
3rd sub-pillar: Governments	58	40.85
C. Governance pillar	**28**	**76.06**
1st sub-pillar: Trust	22	77.60
2nd sub-pillar: Regulation	32	78.75
3rd sub-pillar: Inclusion	45	71.82
D. Impact pillar	**35**	**62.01**
1st sub-pillar: Economy	51	34.09
2nd sub-pillar: Quality of Life	28	79.52
3rd sub-pillar: SDG Contribution	44	72.41



The Network Readiness Index in detail

Indicator	Rank	Score	
A. Technology pillar	**42**	**48.42**	
1st sub-pillar: Access	21	76.09	
1.1.1 Mobile tariffs	12	89.35	●
1.1.2 Handset prices	33	69.12	
1.1.3 FTTH/building Internet subscriptions	61	29.80	
1.1.4 Population covered by at least a 3G mobile network	57	99.67	
1.1.5 International Internet bandwidth	81	68.88	
1.1.6 Internet access in schools	28	99.70	
2nd sub-pillar: Content	44	30.03	
1.2.1 GitHub commits	42	22.00	
1.2.2 Internet domain registrations	32	20.43	
1.2.3 Mobile apps development	43	72.06	
1.2.4 AI scientific publications	67	5.65	
3rd sub-pillar: Future Technologies	47	39.13	
1.3.1 Adoption of emerging technologies	40	59.51	
1.3.2 Investment in emerging technologies	44	49.25	
1.3.3 Robot density	21	21.49	
1.3.4 Computer software spending	49	26.26	
B. People pillar	**74**	**41.84**	
1st sub-pillar: Individuals	112	28.41	
2.1.1 Mobile broadband internet traffic within the country	73	7.45	
2.1.2 ICT skills in the education system	NA	NA	
2.1.3 Use of virtual social networks	62	66.86	
2.1.4 Tertiary enrollment	67	30.31	
2.1.5 Adult literacy rate	NA	NA	
2.1.6 AI talent concentration	36	9.01	○
2nd sub-pillar: Businesses	39	56.25	
2.2.1 Firms with website	26	76.53	●
2.2.2 GERD financed by business enterprise	37	54.04	
2.2.3 Knowledge intensive employment	33	57.93	
2.2.4 Annual investment in telecommunication services	54	79.35	
2.2.5 GERD performed by business enterprise	38	13.37	
3rd sub-pillar: Governments	58	40.85	
2.3.1 Government online services	62	69.72	
2.3.2 Publication and use of open data	31	47.06	
2.3.3 Government promotion of investment in emerging tech	89	30.02	○
2.3.4 R&D expenditure by governments and higher education	44	16.62	

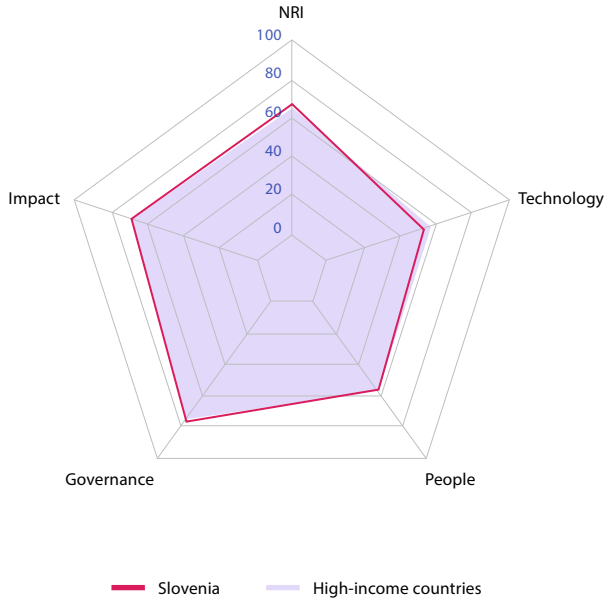
Indicator	Rank	Score	
C. Governance pillar	**28**	**76.06**	
1st sub-pillar: Trust	22	77.60	
3.1.1 Secure Internet servers	25	81.09	●
3.1.2 Cybersecurity	42	92.23	
3.1.3 Online access to financial account	24	58.94	●
3.1.4 Internet shopping	17	78.15	●
2nd sub-pillar: Regulation	32	78.75	
3.2.1 Regulatory quality	32	69.35	
3.2.2 ICT regulatory environment	42	87.65	
3.2.3 Regulation of emerging technologies	48	54.29	
3.2.4 E-commerce legislation	1	100.00	●
3.2.5 Privacy protection by law content	27	82.47	●
3rd sub-pillar: Inclusion	45	71.82	
3.3.1 E-Participation	80	45.35	
3.3.2 Socioeconomic gap in use of digital payments	45	85.89	
3.3.3 Availability of local online content	29	82.93	●
3.3.4 Gender gap in Internet use	44	69.52	
3.3.5 Rural gap in use of digital payments	24	75.42	●
D. Impact pillar	**35**	**62.01**	
1st sub-pillar: Economy	51	34.09	
4.1.1 High-tech and medium-high-tech manufacturing	3	77.71	●
4.1.2 High-tech exports	54	16.08	
4.1.3 PCT patent applications	46	7.97	
4.1.4 Domestic market size	67	51.73	
4.1.5 Prevalence of gig economy	77	36.05	○
4.1.6 ICT services exports	62	15.02	
2nd sub-pillar: Quality of Life	28	79.52	
4.2.1 Happiness	31	75.63	
4.2.2 Freedom to make life choices	93	61.08	○
4.2.3 Income inequality	1	100.00	●
4.2.4 Healthy life expectancy at birth	40	81.38	
3rd sub-pillar: SDG Contribution	44	72.41	
4.3.1 SDG 3: Good Health and Well-Being	44	79.06	
4.3.2 SDG 4: Quality Education	37	55.24	
4.3.3 SDG 5: Women's economic opportunity	60	78.76	
4.3.4 SDG 7: Affordable and Clean Energy	73	69.94	
4.3.5 SDG 11: Sustainable Cities and Communities	39	79.04	

NOTE: ● Indicates a strength and ○ a weakness.

Slovenia

	Rank (Out of 134)	Score
Network Readiness Index	**29**	**62.57**

Pillar/sub-pillar	Rank	Score
A. Technology pillar	**32**	**51.25**
1st sub-pillar: Access	24	75.62
2nd sub-pillar: Content	36	36.50
3rd sub-pillar: Future Technologies	41	41.63
B. People pillar	**29**	**55.60**
1st sub-pillar: Individuals	83	43.11
2nd sub-pillar: Businesses	19	67.19
3rd sub-pillar: Governments	23	56.50
C. Governance pillar	**30**	**75.69**
1st sub-pillar: Trust	36	69.07
2nd sub-pillar: Regulation	22	82.75
3rd sub-pillar: Inclusion	34	75.25
D. Impact pillar	**26**	**67.73**
1st sub-pillar: Economy	54	32.33
2nd sub-pillar: Quality of Life	6	90.14
3rd sub-pillar: SDG Contribution	22	80.73



The Network Readiness Index in detail

Indicator	Rank	Score	
A. Technology pillar	**32**	**51.25**	
1st sub-pillar: Access	24	75.62	
1.1.1 Mobile tariffs	5	96.90	●
1.1.2 Handset prices	40	64.04	
1.1.3 FTTH/building Internet subscriptions	86	20.86	○
1.1.4 Population covered by at least a 3G mobile network	44	99.92	
1.1.5 International Internet bandwidth	62	72.00	
1.1.6 Internet access in schools	1	100.00	●
2nd sub-pillar: Content	36	36.50	
1.2.1 GitHub commits	30	36.24	
1.2.2 Internet domain registrations	26	27.56	
1.2.3 Mobile apps development	12	78.04	●
1.2.4 AI scientific publications	75	4.15	
3rd sub-pillar: Future Technologies	41	41.63	
1.3.1 Adoption of emerging technologies	28	69.85	
1.3.2 Investment in emerging technologies	41	51.50	
1.3.3 Robot density	10	38.88	
1.3.4 Computer software spending	94	6.27	○
B. People pillar	**29**	**55.60**	
1st sub-pillar: Individuals	83	43.11	
2.1.1 Mobile broadband internet traffic within the country	86	4.75	○
2.1.2 ICT skills in the education system	31	67.86	
2.1.3 Use of virtual social networks	41	73.02	
2.1.4 Tertiary enrollment	23	52.11	
2.1.5 Adult literacy rate	NA	NA	
2.1.6 AI talent concentration	24	17.81	
2nd sub-pillar: Businesses	19	67.19	
2.2.1 Firms with website	12	85.26	●
2.2.2 GERD financed by business enterprise	31	61.23	
2.2.3 Knowledge intensive employment	18	71.53	●
2.2.4 Annual investment in telecommunication services	68	77.69	
2.2.5 GERD performed by business enterprise	15	40.24	
3rd sub-pillar: Governments	23	56.50	
2.3.1 Government online services	22	85.26	
2.3.2 Publication and use of open data	NA	NA	
2.3.3 Government promotion of investment in emerging tech	49	45.86	
2.3.4 R&D expenditure by governments and higher education	18	38.39	●

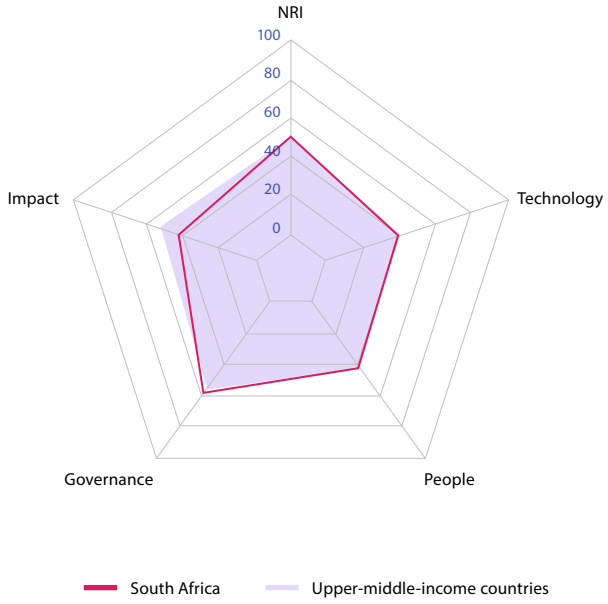
Indicator	Rank	Score	
C. Governance pillar	**30**	**75.69**	
1st sub-pillar: Trust	36	69.07	
3.1.1 Secure Internet servers	13	86.19	●
3.1.2 Cybersecurity	75	74.49	
3.1.3 Online access to financial account	30	52.32	
3.1.4 Internet shopping	30	63.26	
2nd sub-pillar: Regulation	22	82.75	
3.2.1 Regulatory quality	37	68.45	
3.2.2 ICT regulatory environment	3	97.65	●
3.2.3 Regulation of emerging technologies	32	64.68	
3.2.4 E-commerce legislation	1	100.00	●
3.2.5 Privacy protection by law content	25	83.00	
3rd sub-pillar: Inclusion	34	75.25	
3.3.1 E-Participation	25	74.42	
3.3.2 Socioeconomic gap in use of digital payments	34	90.40	
3.3.3 Availability of local online content	49	68.27	
3.3.4 Gender gap in Internet use	54	68.60	
3.3.5 Rural gap in use of digital payments	30	74.54	
D. Impact pillar	**26**	**67.73**	
1st sub-pillar: Economy	54	32.33	
4.1.1 High-tech and medium-high-tech manufacturing	25	52.39	
4.1.2 High-tech exports	66	11.65	
4.1.3 PCT patent applications	25	33.06	
4.1.4 Domestic market size	88	44.82	○
4.1.5 Prevalence of gig economy	71	37.50	
4.1.6 ICT services exports	63	14.56	
2nd sub-pillar: Quality of Life	6	90.14	
4.2.1 Happiness	21	81.30	
4.2.2 Freedom to make life choices	11	92.51	●
4.2.3 Income inequality	2	97.99	●
4.2.4 Healthy life expectancy at birth	25	88.76	
3rd sub-pillar: SDG Contribution	22	80.73	
4.3.1 SDG 3: Good Health and Well-Being	31	84.21	
4.3.2 SDG 4: Quality Education	11	69.26	●
4.3.3 SDG 5: Women's economic opportunity	20	95.58	
4.3.4 SDG 7: Affordable and Clean Energy	62	73.41	
4.3.5 SDG 11: Sustainable Cities and Communities	34	81.18	

NOTE: ● Indicates a strength and ○ a weakness.

South Africa

	Rank (Out of 134)	Score
Network Readiness Index	**74**	**45.85**

Pillar/sub-pillar	Rank	Score
A. Technology pillar	**59**	**41.74**
1st sub-pillar: Access	71	62.87
2nd sub-pillar: Content	61	24.01
3rd sub-pillar: Future Technologies	49	38.34
B. People pillar	**77**	**40.31**
1st sub-pillar: Individuals	104	34.18
2nd sub-pillar: Businesses	58	47.48
3rd sub-pillar: Governments	66	39.28
C. Governance pillar	**60**	**59.14**
1st sub-pillar: Trust	60	49.52
2nd sub-pillar: Regulation	67	65.80
3rd sub-pillar: Inclusion	65	62.10
D. Impact pillar	**105**	**42.20**
1st sub-pillar: Economy	75	25.47
2nd sub-pillar: Quality of Life	124	38.76
3rd sub-pillar: SDG Contribution	70	62.36



The Network Readiness Index in detail

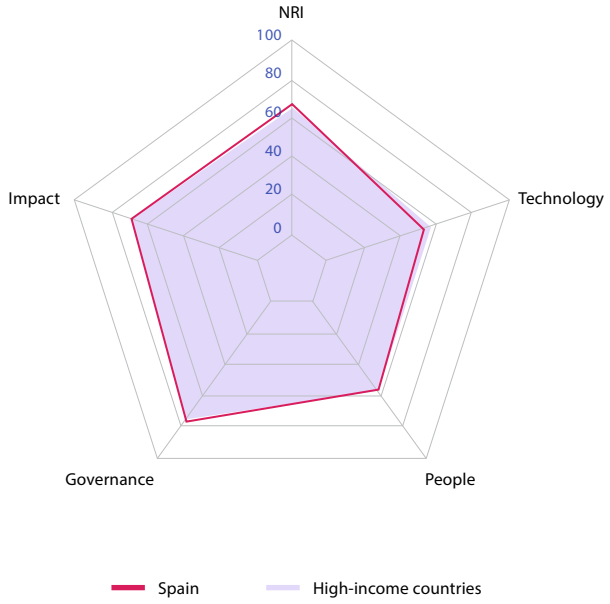
Indicator	Rank	Score	
A. Technology pillar	**59**	**41.74**	
1st sub-pillar: Access	71	62.87	
1.1.1 Mobile tariffs	83	52.35	
1.1.2 Handset prices	74	42.96	
1.1.3 FTTH/building Internet subscriptions	31	42.18	●
1.1.4 Population covered by at least a 3G mobile network	36	99.96	●
1.1.5 International Internet bandwidth	33	76.88	●
1.1.6 Internet access in schools	NA	NA	
2nd sub-pillar: Content	61	24.01	
1.2.1 GitHub commits	72	4.95	
1.2.2 Internet domain registrations	49	7.26	
1.2.3 Mobile apps development	81	61.55	
1.2.4 AI scientific publications	25	22.30	●
3rd sub-pillar: Future Technologies	49	38.34	
1.3.1 Adoption of emerging technologies	33	64.29	●
1.3.2 Investment in emerging technologies	40	51.75	
1.3.3 Robot density	39	5.07	
1.3.4 Computer software spending	28	32.26	●
B. People pillar	**77**	**40.31**	
1st sub-pillar: Individuals	104	34.18	
2.1.1 Mobile broadband internet traffic within the country	34	23.26	
2.1.2 ICT skills in the education system	85	34.79	
2.1.3 Use of virtual social networks	95	39.30	
2.1.4 Tertiary enrollment	94	14.52	
2.1.5 Adult literacy rate	51	93.20	
2.1.6 AI talent concentration	47	0.00	○
2nd sub-pillar: Businesses	58	47.48	
2.2.1 Firms with website	20	80.98	●
2.2.2 GERD financed by business enterprise	60	33.57	
2.2.3 Knowledge intensive employment	64	31.84	
2.2.4 Annual investment in telecommunication services	24	85.61	●
2.2.5 GERD performed by business enterprise	51	5.38	
3rd sub-pillar: Governments	66	39.28	
2.3.1 Government online services	55	72.23	
2.3.2 Publication and use of open data	38	41.18	
2.3.3 Government promotion of investment in emerging tech	84	31.64	
2.3.4 R&D expenditure by governments and higher education	54	12.06	

Indicator	Rank	Score	
C. Governance pillar	**60**	**59.14**	
1st sub-pillar: Trust	60	49.52	
3.1.1 Secure Internet servers	37	76.48	●
3.1.2 Cybersecurity	67	78.08	
3.1.3 Online access to financial account	66	28.13	
3.1.4 Internet shopping	79	15.39	
2nd sub-pillar: Regulation	67	65.80	
3.2.1 Regulatory quality	74	47.95	
3.2.2 ICT regulatory environment	69	83.88	
3.2.3 Regulation of emerging technologies	60	45.45	
3.2.4 E-commerce legislation	1	100.00	●
3.2.5 Privacy protection by law content	92	51.70	
3rd sub-pillar: Inclusion	65	62.10	
3.3.1 E-Participation	61	58.14	
3.3.2 Socioeconomic gap in use of digital payments	69	72.97	
3.3.3 Availability of local online content	89	49.76	
3.3.4 Gender gap in Internet use	NA	NA	
3.3.5 Rural gap in use of digital payments	54	67.52	
D. Impact pillar	**105**	**42.20**	
1st sub-pillar: Economy	75	25.47	
4.1.1 High-tech and medium-high-tech manufacturing	55	28.12	
4.1.2 High-tech exports	72	9.95	
4.1.3 PCT patent applications	40	8.86	
4.1.4 Domestic market size	32	66.45	●
4.1.5 Prevalence of gig economy	86	33.72	
4.1.6 ICT services exports	94	5.73	
2nd sub-pillar: Quality of Life	124	38.76	
4.2.1 Happiness	76	60.38	
4.2.2 Freedom to make life choices	109	54.76	○
4.2.3 Income inequality	116	0.00	○
4.2.4 Healthy life expectancy at birth	115	39.90	○
3rd sub-pillar: SDG Contribution	70	62.36	
4.3.1 SDG 3: Good Health and Well-Being	80	64.22	
4.3.2 SDG 4: Quality Education	NA	NA	
4.3.3 SDG 5: Women's economic opportunity	48	83.19	
4.3.4 SDG 7: Affordable and Clean Energy	119	44.36	○
4.3.5 SDG 11: Sustainable Cities and Communities	80	57.67	

NOTE: ● Indicates a strength and ○ a weakness.

Spain

	Rank (Out of 134)	Score
Network Readiness Index	**26**	**64.77**
Pillar/sub-pillar	**Rank**	**Score**
A. Technology pillar	**25**	**56.34**
1st sub-pillar: Access	12	79.04
2nd sub-pillar: Content	28	40.76
3rd sub-pillar: Future Technologies	25	49.23
B. People pillar	**21**	**58.31**
1st sub-pillar: Individuals	18	59.00
2nd sub-pillar: Businesses	31	60.60
3rd sub-pillar: Governments	27	55.32
C. Governance pillar	**26**	**77.39**
1st sub-pillar: Trust	32	70.23
2nd sub-pillar: Regulation	25	80.27
3rd sub-pillar: Inclusion	16	81.68
D. Impact pillar	**27**	**67.05**
1st sub-pillar: Economy	32	39.11
2nd sub-pillar: Quality of Life	37	76.43
3rd sub-pillar: SDG Contribution	12	85.61



The Network Readiness Index in detail

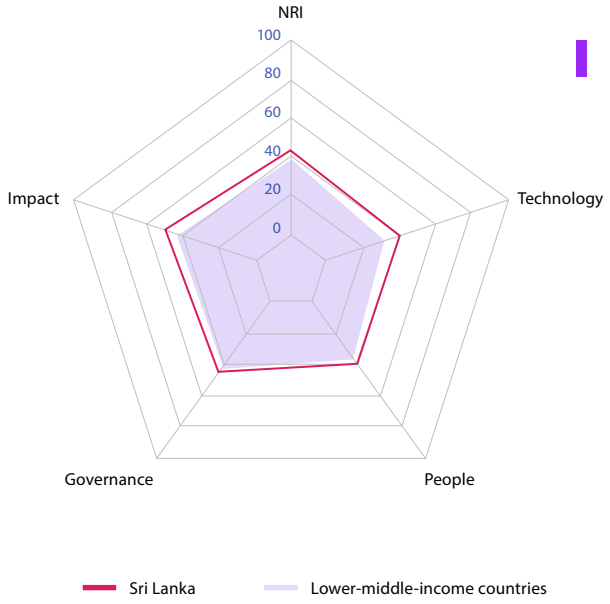
Indicator	Rank	Score	
A. Technology pillar	**25**	**56.34**	
1st sub-pillar: Access	12	79.04	
1.1.1 Mobile tariffs	42	73.18	
1.1.2 Handset prices	26	71.34	
1.1.3 FTTH/building Internet subscriptions	15	56.58	
1.1.4 Population covered by at least a 3G mobile network	40	99.93	
1.1.5 International Internet bandwidth	57	73.17	
1.1.6 Internet access in schools	1	100.00	●
2nd sub-pillar: Content	28	40.76	
1.2.1 GitHub commits	32	33.74	
1.2.2 Internet domain registrations	30	24.38	
1.2.3 Mobile apps development	32	73.78	
1.2.4 AI scientific publications	15	31.15	
3rd sub-pillar: Future Technologies	25	49.23	
1.3.1 Adoption of emerging technologies	29	68.80	
1.3.2 Investment in emerging technologies	56	43.00	
1.3.3 Robot density	19	23.04	
1.3.4 Computer software spending	12	62.09	●
B. People pillar	**21**	**58.31**	
1st sub-pillar: Individuals	18	59.00	
2.1.1 Mobile broadband internet traffic within the country	22	35.58	
2.1.2 ICT skills in the education system	53	54.77	○
2.1.3 Use of virtual social networks	12	80.55	●
2.1.4 Tertiary enrollment	6	62.94	●
2.1.5 Adult literacy rate	25	98.08	
2.1.6 AI talent concentration	22	22.10	
2nd sub-pillar: Businesses	31	60.60	
2.2.1 Firms with website	25	77.72	
2.2.2 GERD financed by business enterprise	33	60.84	
2.2.3 Knowledge intensive employment	38	53.70	
2.2.4 Annual investment in telecommunication services	11	90.17	●
2.2.5 GERD performed by business enterprise	30	20.58	
3rd sub-pillar: Governments	27	55.32	
2.3.1 Government online services	25	84.07	
2.3.2 Publication and use of open data	11	73.53	
2.3.3 Government promotion of investment in emerging tech	63	38.10	○
2.3.4 R&D expenditure by governments and higher education	30	25.59	

Indicator	Rank	Score	
C. Governance pillar	**26**	**77.39**	
1st sub-pillar: Trust	32	70.23	
3.1.1 Secure Internet servers	32	79.63	
3.1.2 Cybersecurity	5	98.49	●
3.1.3 Online access to financial account	49	36.31	
3.1.4 Internet shopping	26	66.48	
2nd sub-pillar: Regulation	25	80.27	
3.2.1 Regulatory quality	39	67.92	
3.2.2 ICT regulatory environment	70	83.53	○
3.2.3 Regulation of emerging technologies	30	65.45	
3.2.4 E-commerce legislation	1	100.00	●
3.2.5 Privacy protection by law content	21	84.42	
3rd sub-pillar: Inclusion	16	81.68	
3.3.1 E-Participation	25	74.42	
3.3.2 Socioeconomic gap in use of digital payments	3	99.47	●
3.3.3 Availability of local online content	22	85.58	
3.3.4 Gender gap in Internet use	26	71.55	
3.3.5 Rural gap in use of digital payments	11	77.36	●
D. Impact pillar	**27**	**67.05**	
1st sub-pillar: Economy	32	39.11	
4.1.1 High-tech and medium-high-tech manufacturing	31	45.91	
4.1.2 High-tech exports	53	16.79	
4.1.3 PCT patent applications	28	21.66	
4.1.4 Domestic market size	16	74.69	
4.1.5 Prevalence of gig economy	48	51.16	
4.1.6 ICT services exports	43	24.48	
2nd sub-pillar: Quality of Life	37	76.43	
4.2.1 Happiness	37	74.11	
4.2.2 Freedom to make life choices	80	67.71	○
4.2.3 Income inequality	48	70.60	
4.2.4 Healthy life expectancy at birth	7	93.28	●
3rd sub-pillar: SDG Contribution	12	85.61	
4.3.1 SDG 3: Good Health and Well-Being	13	93.79	●
4.3.2 SDG 4: Quality Education	29	60.51	
4.3.3 SDG 5: Women's economic opportunity	1	100.00	●
4.3.4 SDG 7: Affordable and Clean Energy	25	79.99	
4.3.5 SDG 11: Sustainable Cities and Communities	13	93.74	●

NOTE: ● Indicates a strength and ○ a weakness.

Sri Lanka

	Rank (Out of 134)	Score
Network Readiness Index	**80**	**44.14**
Pillar/sub-pillar	**Rank**	**Score**
A. Technology pillar	**61**	**41.41**
1st sub-pillar: Access	86	56.34
2nd sub-pillar: Content	81	19.23
3rd sub-pillar: Future Technologies	28	48.65
B. People pillar	**86**	**37.79**
1st sub-pillar: Individuals	95	38.82
2nd sub-pillar: Businesses	81	40.26
3rd sub-pillar: Governments	82	34.28
C. Governance pillar	**97**	**46.71**
1st sub-pillar: Trust	97	31.83
2nd sub-pillar: Regulation	106	53.59
3rd sub-pillar: Inclusion	85	54.72
D. Impact pillar	**79**	**50.66**
1st sub-pillar: Economy	64	29.33
2nd sub-pillar: Quality of Life	94	59.65
3rd sub-pillar: SDG Contribution	68	63.01



The Network Readiness Index in detail

Indicator	Rank	Score	
A. Technology pillar	**61**	**41.41**	
1st sub-pillar: Access	86	56.34	
1.1.1 Mobile tariffs	34	77.25	●
1.1.2 Handset prices	78	41.33	
1.1.3 FTTH/building Internet subscriptions	56	31.33	
1.1.4 Population covered by at least a 3G mobile network	82	99.00	
1.1.5 International Internet bandwidth	69	70.58	
1.1.6 Internet access in schools	69	18.57	
2nd sub-pillar: Content	81	19.23	
1.2.1 GitHub commits	50	12.21	●
1.2.2 Internet domain registrations	99	0.96	
1.2.3 Mobile apps development	93	57.27	
1.2.4 AI scientific publications	63	6.48	
3rd sub-pillar: Future Technologies	28	48.65	
1.3.1 Adoption of emerging technologies	45	56.01	●
1.3.2 Investment in emerging technologies	71	38.25	
1.3.3 Robot density	NA	NA	
1.3.4 Computer software spending	20	51.68	●
B. People pillar	**86**	**37.79**	
1st sub-pillar: Individuals	95	38.82	
2.1.1 Mobile broadband internet traffic within the country	42	17.67	●
2.1.2 ICT skills in the education system	73	44.13	
2.1.3 Use of virtual social networks	101	29.52	
2.1.4 Tertiary enrollment	96	13.13	
2.1.5 Adult literacy rate	59	89.66	
2.1.6 AI talent concentration	NA	NA	
2nd sub-pillar: Businesses	81	40.26	
2.2.1 Firms with website	NA	NA	
2.2.2 GERD financed by business enterprise	41	49.81	
2.2.3 Knowledge intensive employment	67	30.93	
2.2.4 Annual investment in telecommunication services	57	79.01	
2.2.5 GERD performed by business enterprise	70	1.29	
3rd sub-pillar: Governments	82	34.28	
2.3.1 Government online services	88	51.86	
2.3.2 Publication and use of open data	NA	NA	
2.3.3 Government promotion of investment in emerging tech	41	49.02	●
2.3.4 R&D expenditure by governments and higher education	102	1.97	○

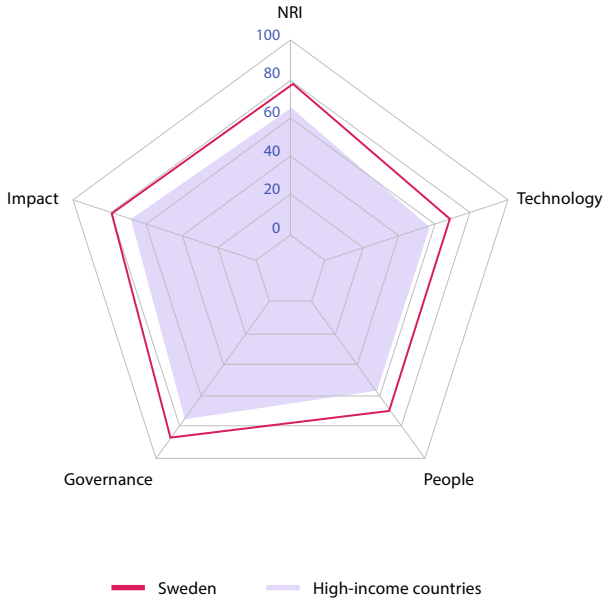
Indicator	Rank	Score	
C. Governance pillar	**97**	**46.71**	
1st sub-pillar: Trust	97	31.83	
3.1.1 Secure Internet servers	79	47.48	
3.1.2 Cybersecurity	89	57.92	
3.1.3 Online access to financial account	111	9.76	○
3.1.4 Internet shopping	86	12.17	
2nd sub-pillar: Regulation	106	53.59	
3.2.1 Regulatory quality	90	41.24	
3.2.2 ICT regulatory environment	125	55.65	○
3.2.3 Regulation of emerging technologies	71	42.60	
3.2.4 E-commerce legislation	87	66.67	○
3.2.5 Privacy protection by law content	73	61.79	
3rd sub-pillar: Inclusion	85	54.72	
3.3.1 E-Participation	95	33.73	
3.3.2 Socioeconomic gap in use of digital payments	62	77.51	
3.3.3 Availability of local online content	93	47.12	
3.3.4 Gender gap in Internet use	93	49.14	
3.3.5 Rural gap in use of digital payments	60	66.10	
D. Impact pillar	**79**	**50.66**	
1st sub-pillar: Economy	64	29.33	
4.1.1 High-tech and medium-high-tech manufacturing	93	7.95	
4.1.2 High-tech exports	112	1.65	
4.1.3 PCT patent applications	69	2.55	
4.1.4 Domestic market size	58	55.79	
4.1.5 Prevalence of gig economy	45	53.49	●
4.1.6 ICT services exports	13	54.58	●
2nd sub-pillar: Quality of Life	94	59.65	
4.2.1 Happiness	114	32.57	○
4.2.2 Freedom to make life choices	84	66.05	
4.2.3 Income inequality	64	63.57	
4.2.4 Healthy life expectancy at birth	52	76.39	●
3rd sub-pillar: SDG Contribution	68	63.01	
4.3.1 SDG 3: Good Health and Well-Being	83	63.12	
4.3.2 SDG 4: Quality Education	NA	NA	
4.3.3 SDG 5: Women's economic opportunity	117	51.33	
4.3.4 SDG 7: Affordable and Clean Energy	7	87.28	●
4.3.5 SDG 11: Sustainable Cities and Communities	90	50.30	

NOTE: ● Indicates a strength and ○ a weakness.

Sweden

	Rank (Out of 134)	Score
Network Readiness Index	**5**	**75.68**

Pillar/sub-pillar	Rank	Score
A. Technology pillar	**9**	**67.21**
1st sub-pillar: Access	35	73.75
2nd sub-pillar: Content	11	55.42
3rd sub-pillar: Future Technologies	3	72.45
B. People pillar	**9**	**68.23**
1st sub-pillar: Individuals	52	50.68
2nd sub-pillar: Businesses	2	81.23
3rd sub-pillar: Governments	9	72.80
C. Governance pillar	**5**	**87.74**
1st sub-pillar: Trust	5	90.26
2nd sub-pillar: Regulation	6	89.29
3rd sub-pillar: Inclusion	11	83.68
D. Impact pillar	**4**	**79.52**
1st sub-pillar: Economy	7	59.79
2nd sub-pillar: Quality of Life	4	91.71
3rd sub-pillar: SDG Contribution	4	87.07



The Network Readiness Index in detail

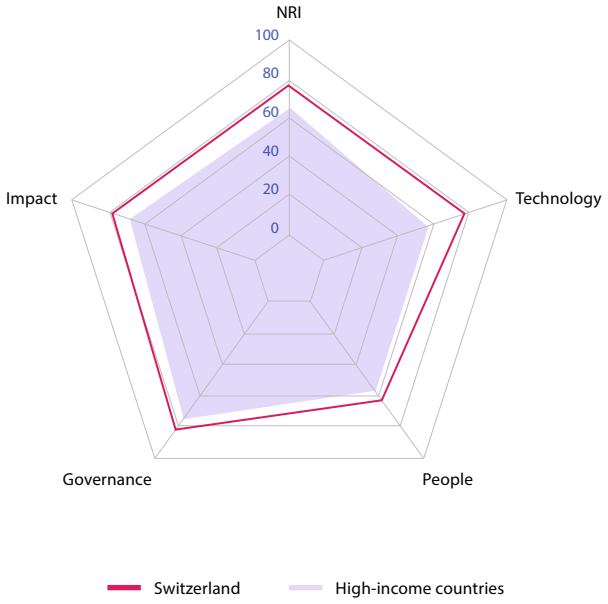
Indicator	Rank	Score	
A. Technology pillar	**9**	**67.21**	
1st sub-pillar: Access	35	73.75	
1.1.1 Mobile tariffs	13	88.33	
1.1.2 Handset prices	31	70.26	
1.1.3 FTTH/building Internet subscriptions	34	39.67	
1.1.4 Population covered by at least a 3G mobile network	1	100.00	●
1.1.5 International Internet bandwidth	70	70.50	○
1.1.6 Internet access in schools	NA	NA	
2nd sub-pillar: Content	11	55.42	
1.2.1 GitHub commits	12	70.22	
1.2.2 Internet domain registrations	14	56.82	
1.2.3 Mobile apps development	10	80.43	
1.2.4 AI scientific publications	36	14.23	
3rd sub-pillar: Future Technologies	3	72.45	
1.3.1 Adoption of emerging technologies	5	96.31	
1.3.2 Investment in emerging technologies	3	92.00	●
1.3.3 Robot density	6	46.92	
1.3.4 Computer software spending	19	54.56	
B. People pillar	**9**	**68.23**	
1st sub-pillar: Individuals	52	50.68	
2.1.1 Mobile broadband internet traffic within the country	35	21.93	
2.1.2 ICT skills in the education system	17	75.57	
2.1.3 Use of virtual social networks	23	77.71	
2.1.4 Tertiary enrollment	17	55.21	
2.1.5 Adult literacy rate	NA	NA	
2.1.6 AI talent concentration	21	22.96	○
2nd sub-pillar: Businesses	2	81.23	
2.2.1 Firms with website	5	93.91	
2.2.2 GERD financed by business enterprise	13	77.21	
2.2.3 Knowledge intensive employment	3	88.61	●
2.2.4 Annual investment in telecommunication services	31	84.68	
2.2.5 GERD performed by business enterprise	6	61.73	
3rd sub-pillar: Governments	9	72.80	
2.3.1 Government online services	13	88.97	
2.3.2 Publication and use of open data	14	70.59	
2.3.3 Government promotion of investment in emerging tech	17	71.42	
2.3.4 R&D expenditure by governments and higher education	4	60.21	●

Indicator	Rank	Score	
C. Governance pillar	**5**	**87.74**	
1st sub-pillar: Trust	5	90.26	
3.1.1 Secure Internet servers	24	82.96	
3.1.2 Cybersecurity	33	94.45	
3.1.3 Online access to financial account	4	93.08	●
3.1.4 Internet shopping	4	90.56	●
2nd sub-pillar: Regulation	6	89.29	
3.2.1 Regulatory quality	8	89.19	
3.2.2 ICT regulatory environment	45	87.06	○
3.2.3 Regulation of emerging technologies	15	79.48	
3.2.4 E-commerce legislation	1	100.00	●
3.2.5 Privacy protection by law content	9	90.74	
3rd sub-pillar: Inclusion	11	83.68	
3.3.1 E-Participation	32	72.10	
3.3.2 Socioeconomic gap in use of digital payments	16	96.66	
3.3.3 Availability of local online content	1	100.00	●
3.3.4 Gender gap in Internet use	18	73.65	
3.3.5 Rural gap in use of digital payments	20	75.98	
D. Impact pillar	**4**	**79.52**	
1st sub-pillar: Economy	7	59.79	
4.1.1 High-tech and medium-high-tech manufacturing	14	59.44	
4.1.2 High-tech exports	37	25.02	
4.1.3 PCT patent applications	4	90.47	●
4.1.4 Domestic market size	38	63.26	
4.1.5 Prevalence of gig economy	18	68.90	
4.1.6 ICT services exports	15	51.62	
2nd sub-pillar: Quality of Life	4	91.71	
4.2.1 Happiness	5	94.46	●
4.2.2 Freedom to make life choices	7	94.02	
4.2.3 Income inequality	16	85.68	
4.2.4 Healthy life expectancy at birth	11	92.69	
3rd sub-pillar: SDG Contribution	4	87.07	
4.3.1 SDG 3: Good Health and Well-Being	3	96.42	●
4.3.2 SDG 4: Quality Education	14	68.77	
4.3.3 SDG 5: Women's economic opportunity	1	100.00	●
4.3.4 SDG 7: Affordable and Clean Energy	66	72.18	○
4.3.5 SDG 11: Sustainable Cities and Communities	3	97.98	●

NOTE: ● Indicates a strength and ○ a weakness.

Switzerland

	Rank (Out of 134)	Score
Network Readiness Index	**6**	**74.76**
Pillar/sub-pillar	**Rank**	**Score**
A. Technology pillar	**2**	**74.90**
1st sub-pillar: Access	6	81.24
2nd sub-pillar: Content	3	71.90
3rd sub-pillar: Future Technologies	5	71.55
B. People pillar	**14**	**64.26**
1st sub-pillar: Individuals	26	56.05
2nd sub-pillar: Businesses	7	75.16
3rd sub-pillar: Governments	20	61.59
C. Governance pillar	**13**	**83.75**
1st sub-pillar: Trust	25	76.10
2nd sub-pillar: Regulation	4	93.16
3rd sub-pillar: Inclusion	14	81.97
D. Impact pillar	**6**	**76.12**
1st sub-pillar: Economy	9	58.94
2nd sub-pillar: Quality of Life	16	83.25
3rd sub-pillar: SDG Contribution	9	86.16



The Network Readiness Index in detail

Indicator	Rank	Score	
A. Technology pillar	**2**	**74.90**	
1st sub-pillar: Access	6	81.24	
1.1.1 Mobile tariffs	1	100.00	●
1.1.2 Handset prices	7	90.46	
1.1.3 FTTH/building Internet subscriptions	70	26.46	○
1.1.4 Population covered by at least a 3G mobile network	1	100.00	●
1.1.5 International Internet bandwidth	70	70.50	○
1.1.6 Internet access in schools	1	100.00	●
2nd sub-pillar: Content	3	71.90	
1.2.1 GitHub commits	1	100.00	●
1.2.2 Internet domain registrations	4	99.77	●
1.2.3 Mobile apps development	18	76.18	
1.2.4 AI scientific publications	42	11.65	
3rd sub-pillar: Future Technologies	5	71.55	
1.3.1 Adoption of emerging technologies	6	93.09	
1.3.2 Investment in emerging technologies	4	89.25	●
1.3.3 Robot density	8	40.53	
1.3.4 Computer software spending	9	63.34	
B. People pillar	**14**	**64.26**	
1st sub-pillar: Individuals	26	56.05	
2.1.1 Mobile broadband internet traffic within the country	41	18.41	
2.1.2 ICT skills in the education system	2	96.97	●
2.1.3 Use of virtual social networks	21	78.59	
2.1.4 Tertiary enrollment	46	42.26	
2.1.5 Adult literacy rate	NA	NA	
2.1.6 AI talent concentration	6	43.99	
2nd sub-pillar: Businesses	7	75.16	
2.2.1 Firms with website	NA	NA	
2.2.2 GERD financed by business enterprise	7	80.00	
2.2.3 Knowledge intensive employment	10	78.49	
2.2.4 Annual investment in telecommunication services	17	86.88	
2.2.5 GERD performed by business enterprise	8	55.26	
3rd sub-pillar: Governments	20	61.59	
2.3.1 Government online services	49	74.33	
2.3.2 Publication and use of open data	23	57.35	
2.3.3 Government promotion of investment in emerging tech	28	57.30	
2.3.4 R&D expenditure by governments and higher education	7	57.37	

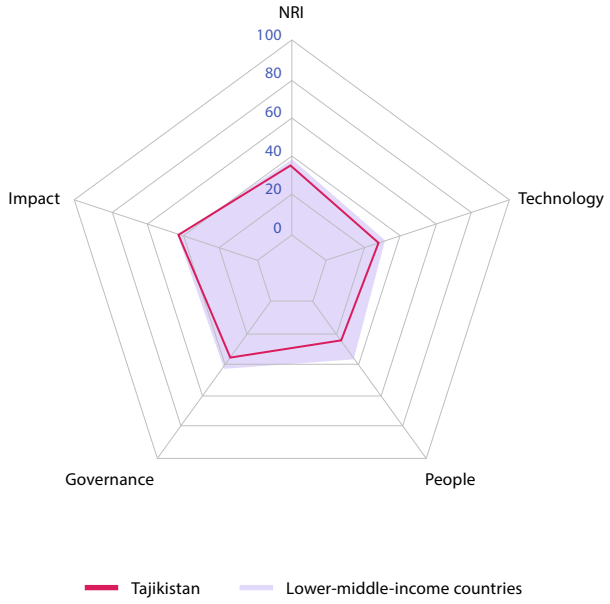
Indicator	Rank	Score	
C. Governance pillar	**13**	**83.75**	
1st sub-pillar: Trust	25	76.10	
3.1.1 Secure Internet servers	5	93.32	
3.1.2 Cybersecurity	50	86.74	
3.1.3 Online access to financial account	19	66.23	
3.1.4 Internet shopping	38	58.12	
2nd sub-pillar: Regulation	4	93.16	
3.2.1 Regulatory quality	9	88.75	
3.2.2 ICT regulatory environment	21	93.53	
3.2.3 Regulation of emerging technologies	5	89.61	
3.2.4 E-commerce legislation	1	100.00	●
3.2.5 Privacy protection by law content	3	93.93	●
3rd sub-pillar: Inclusion	14	81.97	
3.3.1 E-Participation	41	69.76	
3.3.2 Socioeconomic gap in use of digital payments	1	100.00	●
3.3.3 Availability of local online content	6	95.43	
3.3.4 Gender gap in Internet use	50	69.15	○
3.3.5 Rural gap in use of digital payments	23	75.53	
D. Impact pillar	**6**	**76.12**	
1st sub-pillar: Economy	9	58.94	
4.1.1 High-tech and medium-high-tech manufacturing	2	85.30	●
4.1.2 High-tech exports	36	25.58	
4.1.3 PCT patent applications	3	94.85	●
4.1.4 Domestic market size	34	63.99	
4.1.5 Prevalence of gig economy	28	62.79	
4.1.6 ICT services exports	49	21.15	
2nd sub-pillar: Quality of Life	16	83.25	
4.2.1 Happiness	16	84.28	
4.2.2 Freedom to make life choices	54	78.86	○
4.2.3 Income inequality	39	75.13	
4.2.4 Healthy life expectancy at birth	4	94.74	●
3rd sub-pillar: SDG Contribution	9	86.16	
4.3.1 SDG 3: Good Health and Well-Being	5	96.38	
4.3.2 SDG 4: Quality Education	21	66.99	
4.3.3 SDG 5: Women's economic opportunity	48	83.19	
4.3.4 SDG 7: Affordable and Clean Energy	6	87.64	
4.3.5 SDG 11: Sustainable Cities and Communities	6	96.62	

NOTE: ● Indicates a strength and ○ a weakness.

Tajikistan

	Rank (Out of 134)	Score
Network Readiness Index	**113**	**33.75**

Pillar/sub-pillar	Rank	Score
A. Technology pillar	**107**	**27.45**
1st sub-pillar: Access	123	38.96
2nd sub-pillar: Content	97	17.19
3rd sub-pillar: Future Technologies	95	26.20
B. People pillar	**119**	**25.89**
1st sub-pillar: Individuals	72	46.48
2nd sub-pillar: Businesses	133	11.82
3rd sub-pillar: Governments	115	19.38
C. Governance pillar	**123**	**34.64**
1st sub-pillar: Trust	119	17.96
2nd sub-pillar: Regulation	133	29.14
3rd sub-pillar: Inclusion	78	56.83
D. Impact pillar	**90**	**47.00**
1st sub-pillar: Economy	130	10.59
2nd sub-pillar: Quality of Life	77	65.77
3rd sub-pillar: SDG Contribution	65	64.63



The Network Readiness Index in detail

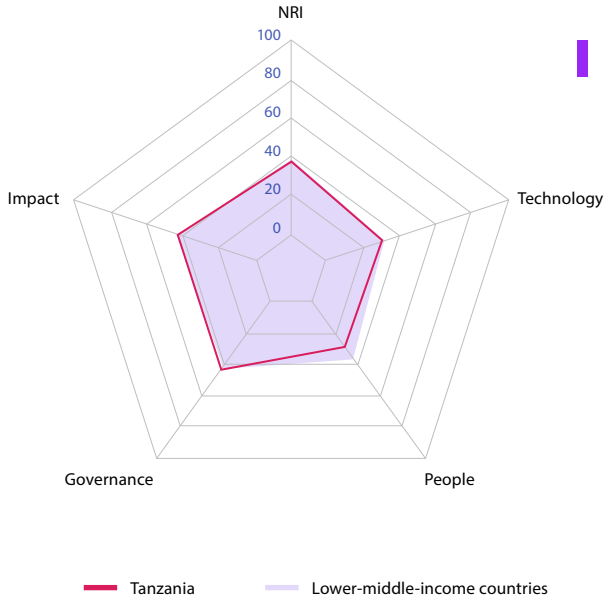
Indicator	Rank	Score	
A. Technology pillar	**107**	**27.45**	
1st sub-pillar: Access	123	38.96	
1.1.1 Mobile tariffs	122	19.54	
1.1.2 Handset prices	132	0.00	○
1.1.3 FTTH/building Internet subscriptions	NA	NA	
1.1.4 Population covered by at least a 3G mobile network	106	96.48	
1.1.5 International Internet bandwidth	133	39.83	○
1.1.6 Internet access in schools	NA	NA	
2nd sub-pillar: Content	97	17.19	
1.2.1 GitHub commits	125	0.37	
1.2.2 Internet domain registrations	117	0.25	
1.2.3 Mobile apps development	75	63.69	
1.2.4 AI scientific publications	73	4.47	●
3rd sub-pillar: Future Technologies	95	26.20	
1.3.1 Adoption of emerging technologies	101	31.62	
1.3.2 Investment in emerging technologies	58	41.75	●
1.3.3 Robot density	NA	NA	
1.3.4 Computer software spending	100	5.22	
B. People pillar	**119**	**25.89**	
1st sub-pillar: Individuals	72	46.48	
2.1.1 Mobile broadband internet traffic within the country	5	59.04	●
2.1.2 ICT skills in the education system	NA	NA	
2.1.3 Use of virtual social networks	119	8.02	
2.1.4 Tertiary enrollment	86	19.26	
2.1.5 Adult literacy rate	10	99.59	●
2.1.6 AI talent concentration	NA	NA	
2nd sub-pillar: Businesses	133	11.82	
2.2.1 Firms with website	95	21.60	
2.2.2 GERD financed by business enterprise	89	2.04	
2.2.3 Knowledge intensive employment	NA	NA	
2.2.4 Annual investment in telecommunication services	NA	NA	
2.2.5 GERD performed by business enterprise	NA	NA	
3rd sub-pillar: Governments	115	19.38	
2.3.1 Government online services	113	33.33	
2.3.2 Publication and use of open data	91	8.82	
2.3.3 Government promotion of investment in emerging tech	75	33.92	●
2.3.4 R&D expenditure by governments and higher education	106	1.43	

Indicator	Rank	Score	
C. Governance pillar	**123**	**34.64**	
1st sub-pillar: Trust	119	17.96	
3.1.1 Secure Internet servers	104	36.08	
3.1.2 Cybersecurity	122	15.64	
3.1.3 Online access to financial account	81	19.40	
3.1.4 Internet shopping	126	0.73	
2nd sub-pillar: Regulation	133	29.14	
3.2.1 Regulatory quality	127	24.17	
3.2.2 ICT regulatory environment	134	0.00	○
3.2.3 Regulation of emerging technologies	88	30.65	
3.2.4 E-commerce legislation	87	66.67	
3.2.5 Privacy protection by law content	126	24.19	
3rd sub-pillar: Inclusion	78	56.83	
3.3.1 E-Participation	115	23.26	
3.3.2 Socioeconomic gap in use of digital payments	27	92.97	●
3.3.3 Availability of local online content	79	53.61	●
3.3.4 Gender gap in Internet use	NA	NA	
3.3.5 Rural gap in use of digital payments	75	57.47	
D. Impact pillar	**90**	**47.00**	
1st sub-pillar: Economy	130	10.59	
4.1.1 High-tech and medium-high-tech manufacturing	107	0.96	○
4.1.2 High-tech exports	111	1.65	
4.1.3 PCT patent applications	99	0.00	○
4.1.4 Domestic market size	111	36.57	
4.1.5 Prevalence of gig economy	105	23.26	
4.1.6 ICT services exports	125	1.11	
2nd sub-pillar: Quality of Life	77	65.77	
4.2.1 Happiness	86	54.58	
4.2.2 Freedom to make life choices	60	76.13	●
4.2.3 Income inequality	43	72.86	●
4.2.4 Healthy life expectancy at birth	96	59.51	
3rd sub-pillar: SDG Contribution	65	64.63	
4.3.1 SDG 3: Good Health and Well-Being	85	62.25	
4.3.2 SDG 4: Quality Education	NA	NA	
4.3.3 SDG 5: Women's economic opportunity	88	69.91	
4.3.4 SDG 7: Affordable and Clean Energy	94	63.87	
4.3.5 SDG 11: Sustainable Cities and Communities	72	62.49	●

NOTE: ● Indicates a strength and ○ a weakness.

Tanzania

	Rank (Out of 134)	Score
Network Readiness Index	**104**	**36.31**
Pillar/sub-pillar	**Rank**	**Score**
A. Technology pillar	**93**	**32.02**
1st sub-pillar: Access	87	56.19
2nd sub-pillar: Content	108	13.38
3rd sub-pillar: Future Technologies	94	26.48
B. People pillar	**112**	**27.91**
1st sub-pillar: Individuals	114	26.55
2nd sub-pillar: Businesses	108	30.36
3rd sub-pillar: Governments	98	26.81
C. Governance pillar	**101**	**45.77**
1st sub-pillar: Trust	74	40.25
2nd sub-pillar: Regulation	85	61.76
3rd sub-pillar: Inclusion	120	35.28
D. Impact pillar	**110**	**39.55**
1st sub-pillar: Economy	108	16.81
2nd sub-pillar: Quality of Life	106	51.95
3rd sub-pillar: SDG Contribution	114	49.90



The Network Readiness Index in detail

Indicator	Rank	Score	
A. Technology pillar	**93**	**32.02**	
1st sub-pillar: Access	87	56.19	
1.1.1 Mobile tariffs	108	32.44	
1.1.2 Handset prices	101	32.17	
1.1.3 FTTH/building Internet subscriptions	16	53.07	●
1.1.4 Population covered by at least a 3G mobile network	114	94.47	
1.1.5 International Internet bandwidth	82	68.78	
1.1.6 Internet access in schools	NA	NA	
2nd sub-pillar: Content	108	13.38	
1.2.1 GitHub commits	122	0.43	
1.2.2 Internet domain registrations	120	0.19	
1.2.3 Mobile apps development	106	46.62	
1.2.4 AI scientific publications	64	6.30	●
3rd sub-pillar: Future Technologies	94	26.48	
1.3.1 Adoption of emerging technologies	88	37.57	
1.3.2 Investment in emerging technologies	59	41.50	●
1.3.3 Robot density	NA	NA	
1.3.4 Computer software spending	127	0.38	○
B. People pillar	**112**	**27.91**	
1st sub-pillar: Individuals	114	26.55	
2.1.1 Mobile broadband internet traffic within the country	63	10.17	●
2.1.2 ICT skills in the education system	79	39.39	
2.1.3 Use of virtual social networks	126	4.59	○
2.1.4 Tertiary enrollment	117	3.45	
2.1.5 Adult literacy rate	78	75.15	
2.1.6 AI talent concentration	NA	NA	
2nd sub-pillar: Businesses	108	30.36	
2.2.1 Firms with website	102	15.13	
2.2.2 GERD financed by business enterprise	NA	NA	
2.2.3 Knowledge intensive employment	126	0.78	○
2.2.4 Annual investment in telecommunication services	86	75.16	
2.2.5 GERD performed by business enterprise	NA	NA	
3rd sub-pillar: Governments	98	26.81	
2.3.1 Government online services	104	41.42	
2.3.2 Publication and use of open data	69	22.06	
2.3.3 Government promotion of investment in emerging tech	73	34.67	
2.3.4 R&D expenditure by governments and higher education	61	9.09	●

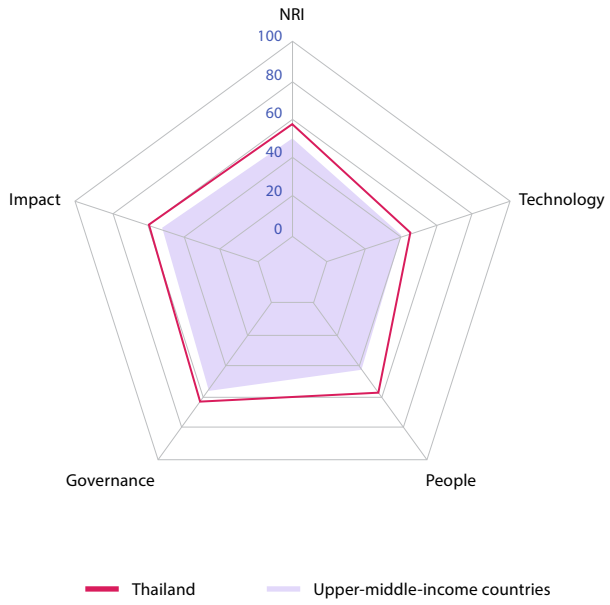
Indicator	Rank	Score	
C. Governance pillar	**101**	**45.77**	
1st sub-pillar: Trust	74	40.25	
3.1.1 Secure Internet servers	117	28.75	
3.1.2 Cybersecurity	45	90.41	●
3.1.3 Online access to financial account	51	35.69	●
3.1.4 Internet shopping	105	6.16	
2nd sub-pillar: Regulation	85	61.76	
3.2.1 Regulatory quality	107	35.44	
3.2.2 ICT regulatory environment	74	80.00	
3.2.3 Regulation of emerging technologies	77	35.58	
3.2.4 E-commerce legislation	87	66.67	
3.2.5 Privacy protection by law content	8	91.12	●
3rd sub-pillar: Inclusion	120	35.28	
3.3.1 E-Participation	111	25.58	
3.3.2 Socioeconomic gap in use of digital payments	104	52.28	
3.3.3 Availability of local online content	95	44.71	
3.3.4 Gender gap in Internet use	105	0.00	○
3.3.5 Rural gap in use of digital payments	85	53.84	
D. Impact pillar	**110**	**39.55**	
1st sub-pillar: Economy	108	16.81	
4.1.1 High-tech and medium-high-tech manufacturing	96	6.62	
4.1.2 High-tech exports	102	2.80	
4.1.3 PCT patent applications	99	0.00	○
4.1.4 Domestic market size	68	51.56	●
4.1.5 Prevalence of gig economy	70	38.08	
4.1.6 ICT services exports	117	1.77	
2nd sub-pillar: Quality of Life	106	51.95	
4.2.1 Happiness	121	23.50	
4.2.2 Freedom to make life choices	47	80.15	●
4.2.3 Income inequality	79	56.53	
4.2.4 Healthy life expectancy at birth	107	47.63	
3rd sub-pillar: SDG Contribution	114	49.90	
4.3.1 SDG 3: Good Health and Well-Being	117	29.80	
4.3.2 SDG 4: Quality Education	NA	NA	
4.3.3 SDG 5: Women's economic opportunity	76	73.45	
4.3.4 SDG 7: Affordable and Clean Energy	108	55.27	
4.3.5 SDG 11: Sustainable Cities and Communities	110	41.06	

NOTE: ● Indicates a strength and ○ a weakness.

Thailand

	Rank (Out of 134)	Score
Network Readiness Index	**42**	**55.73**

Pillar/sub-pillar	Rank	Score
A. Technology pillar	**50**	**44.73**
1st sub-pillar: Access	32	74.07
2nd sub-pillar: Content	68	22.73
3rd sub-pillar: Future Technologies	52	37.39
B. People pillar	**34**	**53.79**
1st sub-pillar: Individuals	11	60.49
2nd sub-pillar: Businesses	43	53.04
3rd sub-pillar: Governments	41	47.84
C. Governance pillar	**46**	**66.67**
1st sub-pillar: Trust	50	56.85
2nd sub-pillar: Regulation	56	68.21
3rd sub-pillar: Inclusion	37	74.95
D. Impact pillar	**45**	**57.72**
1st sub-pillar: Economy	34	38.68
2nd sub-pillar: Quality of Life	39	75.69
3rd sub-pillar: SDG Contribution	87	58.78



The Network Readiness Index in detail

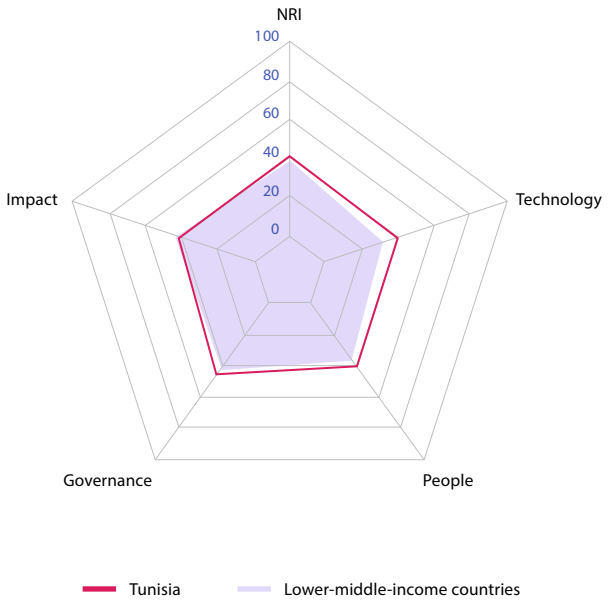
Indicator	Rank	Score	
A. Technology pillar	**50**	**44.73**	
1st sub-pillar: Access	32	74.07	
1.1.1 Mobile tariffs	75	58.09	
1.1.2 Handset prices	86	38.90	
1.1.3 FTTH/building Internet subscriptions	9	62.28	●
1.1.4 Population covered by at least a 3G mobile network	69	99.61	
1.1.5 International Internet bandwidth	11	85.63	●
1.1.6 Internet access in schools	26	99.94	
2nd sub-pillar: Content	68	22.73	
1.2.1 GitHub commits	76	4.28	
1.2.2 Internet domain registrations	73	2.97	
1.2.3 Mobile apps development	63	66.73	
1.2.4 AI scientific publications	32	16.94	
3rd sub-pillar: Future Technologies	52	37.39	
1.3.1 Adoption of emerging technologies	39	60.58	
1.3.2 Investment in emerging technologies	37	54.50	
1.3.3 Robot density	32	8.53	
1.3.4 Computer software spending	52	25.97	
B. People pillar	**34**	**53.79**	
1st sub-pillar: Individuals	11	60.49	
2.1.1 Mobile broadband internet traffic within the country	6	58.54	●
2.1.2 ICT skills in the education system	50	55.61	
2.1.3 Use of virtual social networks	56	68.52	
2.1.4 Tertiary enrollment	72	27.85	
2.1.5 Adult literacy rate	57	91.94	
2.1.6 AI talent concentration	NA	NA	
2nd sub-pillar: Businesses	43	53.04	
2.2.1 Firms with website	73	41.59	
2.2.2 GERD financed by business enterprise	1	100.00	●
2.2.3 Knowledge intensive employment	92	17.78	○
2.2.4 Annual investment in telecommunication services	26	85.32	
2.2.5 GERD performed by business enterprise	31	20.53	
3rd sub-pillar: Governments	41	47.84	
2.3.1 Government online services	47	75.28	
2.3.2 Publication and use of open data	58	27.94	
2.3.3 Government promotion of investment in emerging tech	23	64.36	●
2.3.4 R&D expenditure by governments and higher education	32	23.80	

Indicator	Rank	Score	
C. Governance pillar	**46**	**66.67**	
1st sub-pillar: Trust	50	56.85	
3.1.1 Secure Internet servers	58	60.09	
3.1.2 Cybersecurity	52	86.26	
3.1.3 Online access to financial account	77	22.52	
3.1.4 Internet shopping	36	58.54	
2nd sub-pillar: Regulation	56	68.21	
3.2.1 Regulatory quality	64	51.73	
3.2.2 ICT regulatory environment	64	84.12	
3.2.3 Regulation of emerging technologies	66	43.64	
3.2.4 E-commerce legislation	1	100.00	●
3.2.5 Privacy protection by law content	74	61.54	
3rd sub-pillar: Inclusion	37	74.95	
3.3.1 E-Participation	18	77.91	●
3.3.2 Socioeconomic gap in use of digital payments	8	98.84	●
3.3.3 Availability of local online content	60	63.94	
3.3.4 Gender gap in Internet use	67	66.74	
3.3.5 Rural gap in use of digital payments	55	67.30	
D. Impact pillar	**45**	**57.72**	
1st sub-pillar: Economy	34	38.68	
4.1.1 High-tech and medium-high-tech manufacturing	20	54.99	
4.1.2 High-tech exports	12	49.95	●
4.1.3 PCT patent applications	57	4.69	
4.1.4 Domestic market size	23	70.77	●
4.1.5 Prevalence of gig economy	49	50.87	
4.1.6 ICT services exports	130	0.82	○
2nd sub-pillar: Quality of Life	39	75.69	
4.2.1 Happiness	53	67.97	
4.2.2 Freedom to make life choices	33	84.22	
4.2.3 Income inequality	51	70.10	
4.2.4 Healthy life expectancy at birth	44	80.45	
3rd sub-pillar: SDG Contribution	87	58.78	
4.3.1 SDG 3: Good Health and Well-Being	23	89.56	●
4.3.2 SDG 4: Quality Education	58	31.97	○
4.3.3 SDG 5: Women's economic opportunity	93	69.03	○
4.3.4 SDG 7: Affordable and Clean Energy	84	67.27	
4.3.5 SDG 11: Sustainable Cities and Communities	117	36.09	○

NOTE: ● Indicates a strength and ○ a weakness.

Tunisia

	Rank (Out of 134)	Score
Network Readiness Index	**88**	**42.25**
Pillar/sub-pillar	**Rank**	**Score**
A. Technology pillar	**76**	**38.29**
1st sub-pillar: Access	73	62.40
2nd sub-pillar: Content	77	20.61
3rd sub-pillar: Future Technologies	68	31.86
B. People pillar	**79**	**39.89**
1st sub-pillar: Individuals	67	47.08
2nd sub-pillar: Businesses	93	35.58
3rd sub-pillar: Governments	71	37.01
C. Governance pillar	**87**	**48.72**
1st sub-pillar: Trust	73	40.31
2nd sub-pillar: Regulation	97	57.06
3rd sub-pillar: Inclusion	94	48.79
D. Impact pillar	**106**	**42.11**
1st sub-pillar: Economy	92	21.07
2nd sub-pillar: Quality of Life	107	50.96
3rd sub-pillar: SDG Contribution	96	54.29



The Network Readiness Index in detail

Indicator	Rank	Score	
A. Technology pillar	**76**	**38.29**	
1st sub-pillar: Access	73	62.40	
1.1.1 Mobile tariffs	70	59.94	
1.1.2 Handset prices	83	39.80	
1.1.3 FTTH/building Internet subscriptions	85	22.15	
1.1.4 Population covered by at least a 3G mobile network	57	99.67	
1.1.5 International Internet bandwidth	52	73.83	●
1.1.6 Internet access in schools	42	79.02	
2nd sub-pillar: Content	77	20.61	
1.2.1 GitHub commits	66	6.92	
1.2.2 Internet domain registrations	75	2.49	
1.2.3 Mobile apps development	98	55.05	
1.2.4 AI scientific publications	30	17.98	●
3rd sub-pillar: Future Technologies	68	31.86	
1.3.1 Adoption of emerging technologies	104	29.39	
1.3.2 Investment in emerging technologies	81	35.50	
1.3.3 Robot density	NA	NA	
1.3.4 Computer software spending	36	30.70	●
B. People pillar	**79**	**39.89**	
1st sub-pillar: Individuals	67	47.08	
2.1.1 Mobile broadband internet traffic within the country	58	10.75	●
2.1.2 ICT skills in the education system	27	70.39	●
2.1.3 Use of virtual social networks	80	54.45	
2.1.4 Tertiary enrollment	79	23.45	
2.1.5 Adult literacy rate	75	76.38	
2.1.6 AI talent concentration	NA	NA	
2nd sub-pillar: Businesses	93	35.58	
2.2.1 Firms with website	57	54.30	
2.2.2 GERD financed by business enterprise	68	23.44	
2.2.3 Knowledge intensive employment	85	21.34	
2.2.4 Annual investment in telecommunication services	83	75.76	
2.2.5 GERD performed by business enterprise	59	3.08	
3rd sub-pillar: Governments	71	37.01	
2.3.1 Government online services	85	56.13	
2.3.2 Publication and use of open data	49	33.82	
2.3.3 Government promotion of investment in emerging tech	51	44.80	
2.3.4 R&D expenditure by governments and higher education	49	13.28	●

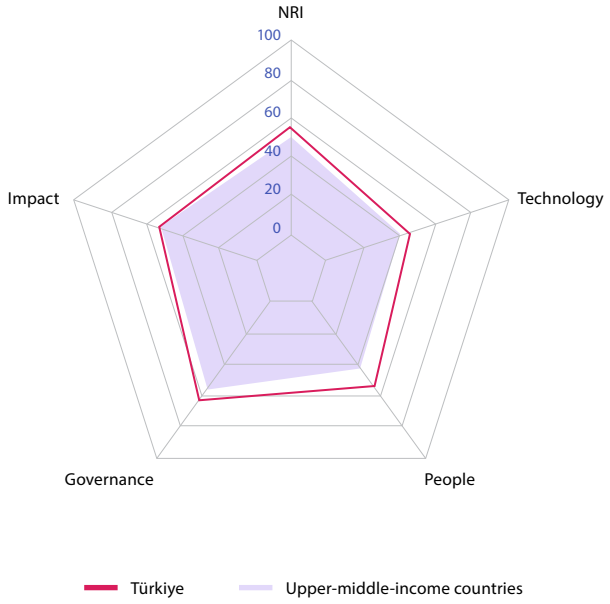
Indicator	Rank	Score	
C. Governance pillar	**87**	**48.72**	
1st sub-pillar: Trust	73	40.31	
3.1.1 Secure Internet servers	83	46.00	
3.1.2 Cybersecurity	53	85.99	●
3.1.3 Online access to financial account	106	10.37	
3.1.4 Internet shopping	71	18.86	
2nd sub-pillar: Regulation	97	57.06	
3.2.1 Regulatory quality	91	40.82	
3.2.2 ICT regulatory environment	91	70.35	
3.2.3 Regulation of emerging technologies	63	44.42	
3.2.4 E-commerce legislation	87	66.67	○
3.2.5 Privacy protection by law content	69	63.04	
3rd sub-pillar: Inclusion	94	48.79	
3.3.1 E-Participation	67	53.49	
3.3.2 Socioeconomic gap in use of digital payments	81	65.35	
3.3.3 Availability of local online content	83	51.44	
3.3.4 Gender gap in Internet use	95	45.59	
3.3.5 Rural gap in use of digital payments	112	28.07	○
D. Impact pillar	**106**	**42.11**	
1st sub-pillar: Economy	92	21.07	
4.1.1 High-tech and medium-high-tech manufacturing	52	29.28	
4.1.2 High-tech exports	63	12.76	
4.1.3 PCT patent applications	74	1.89	
4.1.4 Domestic market size	77	48.44	
4.1.5 Prevalence of gig economy	107	22.09	
4.1.6 ICT services exports	70	11.98	
2nd sub-pillar: Quality of Life	107	50.96	
4.2.1 Happiness	108	35.50	
4.2.2 Freedom to make life choices	127	16.58	○
4.2.3 Income inequality	37	75.88	●
4.2.4 Healthy life expectancy at birth	54	75.87	●
3rd sub-pillar: SDG Contribution	96	54.29	
4.3.1 SDG 3: Good Health and Well-Being	70	68.12	
4.3.2 SDG 4: Quality Education	71	15.23	○
4.3.3 SDG 5: Women's economic opportunity	118	49.56	○
4.3.4 SDG 7: Affordable and Clean Energy	66	72.18	
4.3.5 SDG 11: Sustainable Cities and Communities	67	66.34	

NOTE: ● Indicates a strength and ○ a weakness.

Türkiye

	Rank (Out of 134)	Score
Network Readiness Index	**47**	**53.22**

Pillar/sub-pillar	Rank	Score
A. Technology pillar	**48**	**45.29**
1st sub-pillar: Access	29	74.78
2nd sub-pillar: Content	48	28.99
3rd sub-pillar: Future Technologies	65	32.10
B. People pillar	**38**	**52.66**
1st sub-pillar: Individuals	19	57.93
2nd sub-pillar: Businesses	45	52.86
3rd sub-pillar: Governments	44	47.18
C. Governance pillar	**51**	**64.31**
1st sub-pillar: Trust	45	61.44
2nd sub-pillar: Regulation	63	66.42
3rd sub-pillar: Inclusion	56	65.07
D. Impact pillar	**80**	**50.63**
1st sub-pillar: Economy	59	31.12
2nd sub-pillar: Quality of Life	117	45.86
3rd sub-pillar: SDG Contribution	36	74.91



The Network Readiness Index in detail

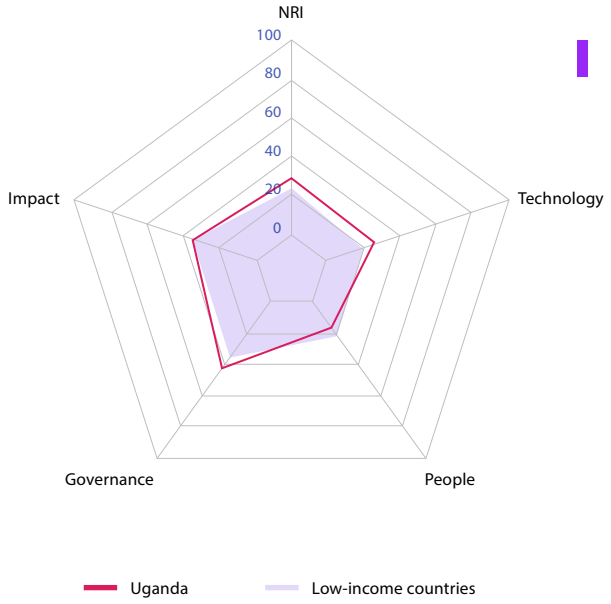
Indicator	Rank	Score	
A. Technology pillar	**48**	**45.29**	
1st sub-pillar: Access	29	74.78	
1.1.1 Mobile tariffs	6	95.77	●
1.1.2 Handset prices	70	44.42	
1.1.3 FTTH/building Internet subscriptions	19	48.55	
1.1.4 Population covered by at least a 3G mobile network	44	99.92	
1.1.5 International Internet bandwidth	13	85.27	●
1.1.6 Internet access in schools	NA	NA	
2nd sub-pillar: Content	48	28.99	
1.2.1 GitHub commits	54	9.75	
1.2.2 Internet domain registrations	50	6.82	
1.2.3 Mobile apps development	22	75.84	
1.2.4 AI scientific publications	20	23.53	●
3rd sub-pillar: Future Technologies	65	32.10	
1.3.1 Adoption of emerging technologies	58	49.37	
1.3.2 Investment in emerging technologies	105	27.50	○
1.3.3 Robot density	35	6.07	
1.3.4 Computer software spending	23	45.46	
B. People pillar	**38**	**52.66**	
1st sub-pillar: Individuals	19	57.93	
2.1.1 Mobile broadband internet traffic within the country	11	45.12	●
2.1.2 ICT skills in the education system	90	28.26	○
2.1.3 Use of virtual social networks	53	68.82	
2.1.4 Tertiary enrollment	2	77.21	
2.1.5 Adult literacy rate	40	95.55	
2.1.6 AI talent concentration	10	32.62	
2nd sub-pillar: Businesses	45	52.86	
2.2.1 Firms with website	66	46.07	
2.2.2 GERD financed by business enterprise	12	77.22	●
2.2.3 Knowledge intensive employment	56	34.54	
2.2.4 Annual investment in telecommunication services	20	86.03	
2.2.5 GERD performed by business enterprise	32	20.45	
3rd sub-pillar: Governments	44	47.18	
2.3.1 Government online services	24	84.53	
2.3.2 Publication and use of open data	49	33.82	
2.3.3 Government promotion of investment in emerging tech	39	50.19	
2.3.4 R&D expenditure by governments and higher education	35	20.19	

Indicator	Rank	Score	
C. Governance pillar	**51**	**64.31**	
1st sub-pillar: Trust	45	61.44	
3.1.1 Secure Internet servers	46	70.39	
3.1.2 Cybersecurity	16	97.45	●
3.1.3 Online access to financial account	42	43.39	
3.1.4 Internet shopping	58	34.54	
2nd sub-pillar: Regulation	63	66.42	
3.2.1 Regulatory quality	76	47.75	
3.2.2 ICT regulatory environment	21	93.53	
3.2.3 Regulation of emerging technologies	66	43.64	
3.2.4 E-commerce legislation	1	100.00	●
3.2.5 Privacy protection by law content	104	47.18	
3rd sub-pillar: Inclusion	56	65.07	
3.3.1 E-Participation	18	77.91	●
3.3.2 Socioeconomic gap in use of digital payments	85	61.83	
3.3.3 Availability of local online content	47	69.95	
3.3.4 Gender gap in Internet use	90	55.90	○
3.3.5 Rural gap in use of digital payments	73	59.78	
D. Impact pillar	**80**	**50.63**	
1st sub-pillar: Economy	59	31.12	
4.1.1 High-tech and medium-high-tech manufacturing	36	36.76	
4.1.2 High-tech exports	85	5.71	
4.1.3 PCT patent applications	31	18.38	
4.1.4 Domestic market size	11	78.62	●
4.1.5 Prevalence of gig economy	66	39.83	
4.1.6 ICT services exports	89	7.43	
2nd sub-pillar: Quality of Life	117	45.86	
4.2.1 Happiness	105	37.46	○
4.2.2 Freedom to make life choices	129	11.98	○
4.2.3 Income inequality	87	53.02	
4.2.4 Healthy life expectancy at birth	43	80.97	
3rd sub-pillar: SDG Contribution	36	74.91	
4.3.1 SDG 3: Good Health and Well-Being	34	82.57	
4.3.2 SDG 4: Quality Education	40	52.41	
4.3.3 SDG 5: Women's economic opportunity	71	75.22	
4.3.4 SDG 7: Affordable and Clean Energy	19	81.29	●
4.3.5 SDG 11: Sustainable Cities and Communities	32	83.07	

NOTE: ● Indicates a strength and ○ a weakness.

Uganda

	Rank (Out of 134)	Score
Network Readiness Index	**117**	**31.33**
Pillar/sub-pillar	**Rank**	**Score**
A. Technology pillar	**110**	**27.11**
1st sub-pillar: Access	104	47.41
2nd sub-pillar: Content	113	11.71
3rd sub-pillar: Future Technologies	104	22.20
B. People pillar	**131**	**15.56**
1st sub-pillar: Individuals	121	20.12
2nd sub-pillar: Businesses	134	4.61
3rd sub-pillar: Governments	110	21.96
C. Governance pillar	**99**	**46.10**
1st sub-pillar: Trust	85	34.46
2nd sub-pillar: Regulation	92	59.73
3rd sub-pillar: Inclusion	106	44.11
D. Impact pillar	**119**	**36.55**
1st sub-pillar: Economy	106	17.39
2nd sub-pillar: Quality of Life	115	47.13
3rd sub-pillar: SDG Contribution	120	45.14



The Network Readiness Index in detail

Indicator	Rank	Score	
A. Technology pillar	**110**	**27.11**	
1st sub-pillar: Access	104	47.41	
1.1.1 Mobile tariffs	112	29.42	
1.1.2 Handset prices	107	29.98	
1.1.3 FTTH/building Internet subscriptions	115	6.44	
1.1.4 Population covered by at least a 3G mobile network	114	94.47	
1.1.5 International Internet bandwidth	34	76.76	●
1.1.6 Internet access in schools	NA	NA	
2nd sub-pillar: Content	113	11.71	
1.2.1 GitHub commits	110	1.24	
1.2.2 Internet domain registrations	122	0.15	
1.2.3 Mobile apps development	113	38.77	
1.2.4 AI scientific publications	62	6.67	●
3rd sub-pillar: Future Technologies	104	22.20	
1.3.1 Adoption of emerging technologies	102	29.80	
1.3.2 Investment in emerging technologies	78	36.00	●
1.3.3 Robot density	NA	NA	
1.3.4 Computer software spending	124	0.81	○
B. People pillar	**131**	**15.56**	
1st sub-pillar: Individuals	121	20.12	
2.1.1 Mobile broadband internet traffic within the country	82	6.00	
2.1.2 ICT skills in the education system	NA	NA	
2.1.3 Use of virtual social networks	132	1.56	○
2.1.4 Tertiary enrollment	126	1.58	○
2.1.5 Adult literacy rate	83	71.33	
2.1.6 AI talent concentration	NA	NA	
2nd sub-pillar: Businesses	134	4.61	
2.2.1 Firms with website	107	11.21	○
2.2.2 GERD financed by business enterprise	84	4.21	
2.2.3 Knowledge intensive employment	120	2.87	
2.2.4 Annual investment in telecommunication services	NA	NA	
2.2.5 GERD performed by business enterprise	85	0.14	
3rd sub-pillar: Governments	110	21.96	
2.3.1 Government online services	96	46.61	
2.3.2 Publication and use of open data	86	11.76	
2.3.3 Government promotion of investment in emerging tech	97	27.09	
2.3.4 R&D expenditure by governments and higher education	98	2.39	

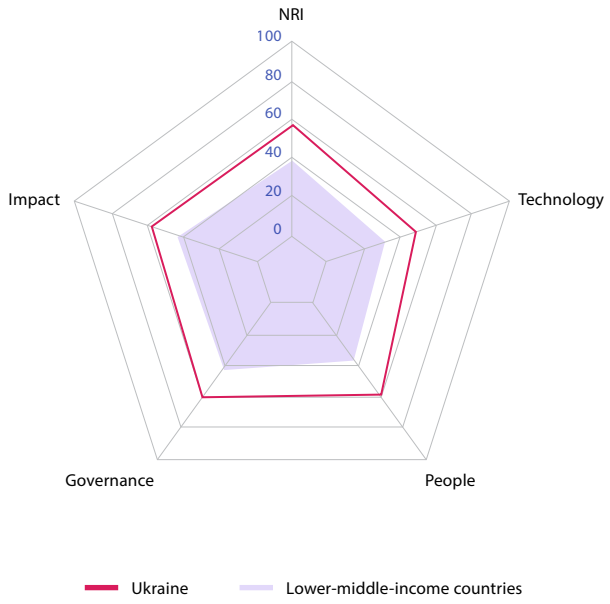
Indicator	Rank	Score	
C. Governance pillar	**99**	**46.10**	
1st sub-pillar: Trust	85	34.46	
3.1.1 Secure Internet servers	118	28.41	
3.1.2 Cybersecurity	79	69.45	●
3.1.3 Online access to financial account	63	30.31	●
3.1.4 Internet shopping	91	9.67	
2nd sub-pillar: Regulation	92	59.73	
3.2.1 Regulatory quality	96	38.83	
3.2.2 ICT regulatory environment	58	84.71	●
3.2.3 Regulation of emerging technologies	100	23.64	
3.2.4 E-commerce legislation	1	100.00	●
3.2.5 Privacy protection by law content	93	51.49	
3rd sub-pillar: Inclusion	106	44.11	
3.3.1 E-Participation	87	39.54	
3.3.2 Socioeconomic gap in use of digital payments	105	51.47	
3.3.3 Availability of local online content	123	23.56	
3.3.4 Gender gap in Internet use	NA	NA	
3.3.5 Rural gap in use of digital payments	71	61.87	●
D. Impact pillar	**119**	**36.55**	
1st sub-pillar: Economy	106	17.39	
4.1.1 High-tech and medium-high-tech manufacturing	NA	NA	
4.1.2 High-tech exports	96	3.57	
4.1.3 PCT patent applications	91	0.63	
4.1.4 Domestic market size	80	47.07	●
4.1.5 Prevalence of gig economy	102	25.29	
4.1.6 ICT services exports	76	10.38	●
2nd sub-pillar: Quality of Life	115	47.13	
4.2.1 Happiness	110	34.82	
4.2.2 Freedom to make life choices	105	55.93	
4.2.3 Income inequality	92	51.01	
4.2.4 Healthy life expectancy at birth	108	46.78	
3rd sub-pillar: SDG Contribution	120	45.14	
4.3.1 SDG 3: Good Health and Well-Being	110	36.40	
4.3.2 SDG 4: Quality Education	NA	NA	
4.3.3 SDG 5: Women's economic opportunity	76	73.45	●
4.3.4 SDG 7: Affordable and Clean Energy	130	27.02	○
4.3.5 SDG 11: Sustainable Cities and Communities	106	43.67	

NOTE: ● Indicates a strength and ○ a weakness.

Ukraine

	Rank (Out of 134)	Score
Network Readiness Index	**43**	**55.16**

Pillar/sub-pillar	Rank	Score
A. Technology pillar	**43**	**47.84**
1st sub-pillar: Access	43	71.67
2nd sub-pillar: Content	42	32.02
3rd sub-pillar: Future Technologies	44	39.82
B. People pillar	**25**	**57.07**
1st sub-pillar: Individuals	2	74.99
2nd sub-pillar: Businesses	53	48.79
3rd sub-pillar: Governments	43	47.43
C. Governance pillar	**58**	**60.00**
1st sub-pillar: Trust	54	54.61
2nd sub-pillar: Regulation	78	62.25
3rd sub-pillar: Inclusion	60	63.15
D. Impact pillar	**54**	**55.72**
1st sub-pillar: Economy	35	38.30
2nd sub-pillar: Quality of Life	59	69.83
3rd sub-pillar: SDG Contribution	86	59.03



The Network Readiness Index in detail

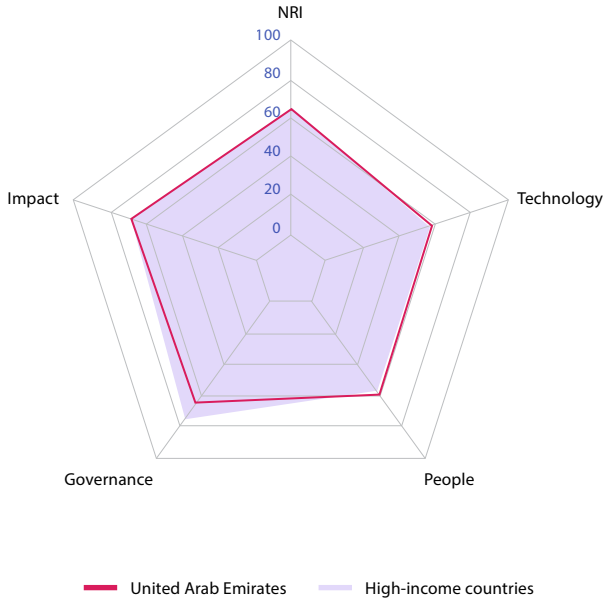
Indicator	Rank	Score	
A. Technology pillar	**43**	**47.84**	
1st sub-pillar: Access	43	71.67	
1.1.1 Mobile tariffs	69	60.25	
1.1.2 Handset prices	92	36.65	
1.1.3 FTTH/building Internet subscriptions	11	59.96	●
1.1.4 Population covered by at least a 3G mobile network	104	97.08	○
1.1.5 International Internet bandwidth	40	76.08	
1.1.6 Internet access in schools	1	100.00	●
2nd sub-pillar: Content	42	32.02	
1.2.1 GitHub commits	41	22.45	
1.2.2 Internet domain registrations	54	6.05	
1.2.3 Mobile apps development	14	77.64	●
1.2.4 AI scientific publications	26	21.94	●
3rd sub-pillar: Future Technologies	44	39.82	
1.3.1 Adoption of emerging technologies	49	53.00	
1.3.2 Investment in emerging technologies	64	40.50	
1.3.3 Robot density	55	0.11	○
1.3.4 Computer software spending	4	65.69	●
B. People pillar	**25**	**57.07**	
1st sub-pillar: Individuals	2	74.99	
2.1.1 Mobile broadband internet traffic within the country	NA	NA	
2.1.2 ICT skills in the education system	16	76.30	●
2.1.3 Use of virtual social networks	46	69.70	
2.1.4 Tertiary enrollment	21	53.96	
2.1.5 Adult literacy rate	1	100.00	●
2.1.6 AI talent concentration	NA	NA	
2nd sub-pillar: Businesses	53	48.79	
2.2.1 Firms with website	43	62.85	
2.2.2 GERD financed by business enterprise	57	37.74	
2.2.3 Knowledge intensive employment	35	57.24	
2.2.4 Annual investment in telecommunication services	56	79.10	
2.2.5 GERD performed by business enterprise	48	7.04	
3rd sub-pillar: Governments	43	47.43	
2.3.1 Government online services	34	79.53	
2.3.2 Publication and use of open data	23	57.35	●
2.3.3 Government promotion of investment in emerging tech	45	47.72	
2.3.4 R&D expenditure by governments and higher education	78	5.12	

Indicator	Rank	Score	
C. Governance pillar	**58**	**60.00**	
1st sub-pillar: Trust	54	54.61	
3.1.1 Secure Internet servers	43	72.61	
3.1.2 Cybersecurity	85	65.33	
3.1.3 Online access to financial account	57	32.53	
3.1.4 Internet shopping	45	47.97	
2nd sub-pillar: Regulation	78	62.25	
3.2.1 Regulatory quality	85	43.32	
3.2.2 ICT regulatory environment	85	75.29	
3.2.3 Regulation of emerging technologies	80	34.55	
3.2.4 E-commerce legislation	1	100.00	●
3.2.5 Privacy protection by law content	83	58.09	
3rd sub-pillar: Inclusion	60	63.15	
3.3.1 E-Participation	57	59.31	
3.3.2 Socioeconomic gap in use of digital payments	42	87.08	
3.3.3 Availability of local online content	75	54.33	
3.3.4 Gender gap in Internet use	82	61.08	
3.3.5 Rural gap in use of digital payments	83	53.97	
D. Impact pillar	**54**	**55.72**	
1st sub-pillar: Economy	35	38.30	
4.1.1 High-tech and medium-high-tech manufacturing	64	22.13	
4.1.2 High-tech exports	80	7.93	
4.1.3 PCT patent applications	44	8.53	
4.1.4 Domestic market size	43	61.79	
4.1.5 Prevalence of gig economy	36	57.85	
4.1.6 ICT services exports	6	71.57	●
2nd sub-pillar: Quality of Life	59	69.83	
4.2.1 Happiness	98	42.50	○
4.2.2 Freedom to make life choices	63	75.64	
4.2.3 Income inequality	3	93.97	●
4.2.4 Healthy life expectancy at birth	83	67.21	
3rd sub-pillar: SDG Contribution	86	59.03	
4.3.1 SDG 3: Good Health and Well-Being	55	73.18	
4.3.2 SDG 4: Quality Education	39	52.50	
4.3.3 SDG 5: Women's economic opportunity	60	78.76	
4.3.4 SDG 7: Affordable and Clean Energy	118	45.74	○
4.3.5 SDG 11: Sustainable Cities and Communities	104	44.97	○

NOTE: ● Indicates a strength and ○ a weakness.

United Arab Emirates

	Rank (Out of 134)	Score
Network Readiness Index	**30**	**62.43**
Pillar/sub-pillar	**Rank**	**Score**
A. Technology pillar	**22**	**56.61**
1st sub-pillar: Access	3	84.41
2nd sub-pillar: Content	57	25.29
3rd sub-pillar: Future Technologies	14	60.14
B. People pillar	**18**	**62.20**
1st sub-pillar: Individuals	7	67.82
2nd sub-pillar: Businesses	26	62.49
3rd sub-pillar: Governments	25	56.30
C. Governance pillar	**47**	**66.63**
1st sub-pillar: Trust	46	61.08
2nd sub-pillar: Regulation	74	62.99
3rd sub-pillar: Inclusion	31	75.82
D. Impact pillar	**31**	**64.26**
1st sub-pillar: Economy	37	36.39
2nd sub-pillar: Quality of Life	13	85.05
3rd sub-pillar: SDG Contribution	48	71.34



The Network Readiness Index in detail

Indicator	Rank	Score	
A. Technology pillar	**22**	**56.61**	
1st sub-pillar: Access	3	84.41	
1.1.1 Mobile tariffs	7	91.70	●
1.1.2 Handset prices	5	91.79	●
1.1.3 FTTH/building Internet subscriptions	39	38.60	
1.1.4 Population covered by at least a 3G mobile network	1	100.00	●
1.1.5 International Internet bandwidth	15	84.34	
1.1.6 Internet access in schools	1	100.00	●
2nd sub-pillar: Content	57	25.29	
1.2.1 GitHub commits	53	11.02	
1.2.2 Internet domain registrations	42	10.55	
1.2.3 Mobile apps development	15	76.85	
1.2.4 AI scientific publications	79	2.76	
3rd sub-pillar: Future Technologies	14	60.14	
1.3.1 Adoption of emerging technologies	17	78.00	
1.3.2 Investment in emerging technologies	10	79.50	
1.3.3 Robot density	NA	NA	
1.3.4 Computer software spending	60	22.93	
B. People pillar	**18**	**62.20**	
1st sub-pillar: Individuals	7	67.82	
2.1.1 Mobile broadband internet traffic within the country	36	21.21	
2.1.2 ICT skills in the education system	6	84.93	●
2.1.3 Use of virtual social networks	1	100.00	●
2.1.4 Tertiary enrollment	60	35.49	
2.1.5 Adult literacy rate	29	97.44	
2.1.6 AI talent concentration	NA	NA	
2nd sub-pillar: Businesses	26	62.49	
2.2.1 Firms with website	NA	NA	
2.2.2 GERD financed by business enterprise	5	91.89	●
2.2.3 Knowledge intensive employment	41	52.74	
2.2.4 Annual investment in telecommunication services	28	85.04	
2.2.5 GERD performed by business enterprise	33	20.28	
3rd sub-pillar: Governments	25	56.30	
2.3.1 Government online services	12	89.10	
2.3.2 Publication and use of open data	65	25.00	○
2.3.3 Government promotion of investment in emerging tech	4	84.34	●
2.3.4 R&D expenditure by governments and higher education	26	26.77	

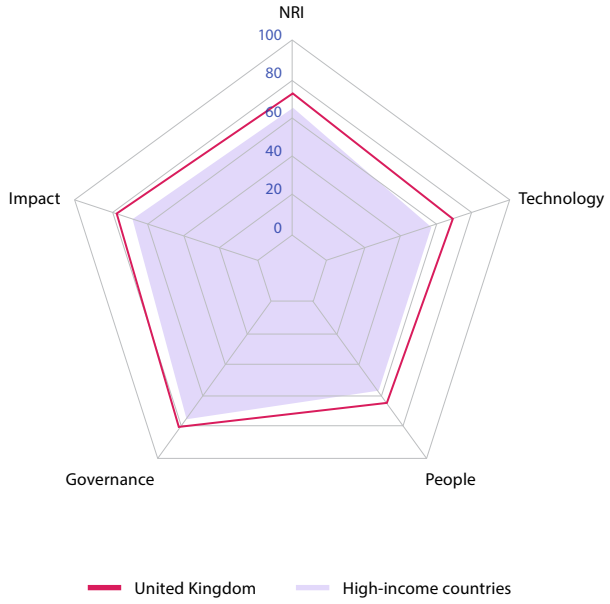
Indicator	Rank	Score	
C. Governance pillar	**47**	**66.63**	
1st sub-pillar: Trust	46	61.08	
3.1.1 Secure Internet servers	60	58.34	
3.1.2 Cybersecurity	8	98.03	●
3.1.3 Online access to financial account	23	59.16	
3.1.4 Internet shopping	59	28.78	
2nd sub-pillar: Regulation	74	62.99	
3.2.1 Regulatory quality	30	72.50	
3.2.2 ICT regulatory environment	74	80.00	
3.2.3 Regulation of emerging technologies	9	82.08	●
3.2.4 E-commerce legislation	87	66.67	○
3.2.5 Privacy protection by law content	131	13.70	○
3rd sub-pillar: Inclusion	31	75.82	
3.3.1 E-Participation	18	77.91	
3.3.2 Socioeconomic gap in use of digital payments	32	91.47	
3.3.3 Availability of local online content	21	85.82	
3.3.4 Gender gap in Internet use	26	71.55	
3.3.5 Rural gap in use of digital payments	89	52.36	○
D. Impact pillar	**31**	**64.26**	
1st sub-pillar: Economy	37	36.39	
4.1.1 High-tech and medium-high-tech manufacturing	41	35.76	
4.1.2 High-tech exports	56	16.00	
4.1.3 PCT patent applications	54	5.27	
4.1.4 Domestic market size	33	64.96	
4.1.5 Prevalence of gig economy	11	79.94	
4.1.6 ICT services exports	59	16.43	
2nd sub-pillar: Quality of Life	13	85.05	
4.2.1 Happiness	20	81.56	
4.2.2 Freedom to make life choices	10	92.83	●
4.2.3 Income inequality	5	92.96	●
4.2.4 Healthy life expectancy at birth	65	72.86	
3rd sub-pillar: SDG Contribution	48	71.34	
4.3.1 SDG 3: Good Health and Well-Being	39	81.16	
4.3.2 SDG 4: Quality Education	46	40.56	○
4.3.3 SDG 5: Women's economic opportunity	71	75.22	
4.3.4 SDG 7: Affordable and Clean Energy	80	68.28	
4.3.5 SDG 11: Sustainable Cities and Communities	19	91.50	

NOTE: ● Indicates a strength and ○ a weakness.

United Kingdom

	Rank (Out of 134)	Score
Network Readiness Index	**10**	**72.75**

Pillar/sub-pillar	Rank	Score
A. Technology pillar	**8**	**67.25**
1st sub-pillar: Access	15	78.11
2nd sub-pillar: Content	6	61.41
3rd sub-pillar: Future Technologies	11	62.24
B. People pillar	**10**	**66.63**
1st sub-pillar: Individuals	48	51.45
2nd sub-pillar: Businesses	13	71.84
3rd sub-pillar: Governments	5	76.61
C. Governance pillar	**16**	**81.63**
1st sub-pillar: Trust	18	78.34
2nd sub-pillar: Regulation	26	80.19
3rd sub-pillar: Inclusion	4	86.37
D. Impact pillar	**9**	**75.50**
1st sub-pillar: Economy	11	57.62
2nd sub-pillar: Quality of Life	21	81.17
3rd sub-pillar: SDG Contribution	2	87.70



The Network Readiness Index in detail

Indicator	Rank	Score	
A. Technology pillar	**8**	**67.25**	
1st sub-pillar: Access	15	78.11	
1.1.1 Mobile tariffs	22	82.60	
1.1.2 Handset prices	11	81.60	
1.1.3 FTTH/building Internet subscriptions	45	36.22	○
1.1.4 Population covered by at least a 3G mobile network	28	99.97	
1.1.5 International Internet bandwidth	7	90.14	●
1.1.6 Internet access in schools	NA	NA	
2nd sub-pillar: Content	6	61.41	
1.2.1 GitHub commits	20	54.39	
1.2.2 Internet domain registrations	9	72.26	
1.2.3 Mobile apps development	24	75.51	
1.2.4 AI scientific publications	7	43.46	●
3rd sub-pillar: Future Technologies	11	62.24	
1.3.1 Adoption of emerging technologies	12	84.23	
1.3.2 Investment in emerging technologies	8	82.25	
1.3.3 Robot density	24	13.33	○
1.3.4 Computer software spending	2	69.12	●
B. People pillar	**10**	**66.63**	
1st sub-pillar: Individuals	48	51.45	
2.1.1 Mobile broadband internet traffic within the country	NA	NA	
2.1.2 ICT skills in the education system	36	64.56	
2.1.3 Use of virtual social networks	16	79.86	
2.1.4 Tertiary enrollment	37	45.06	
2.1.5 Adult literacy rate	NA	NA	
2.1.6 AI talent concentration	26	16.31	○
2nd sub-pillar: Businesses	13	71.84	
2.2.1 Firms with website	10	85.36	
2.2.2 GERD financed by business enterprise	17	71.11	
2.2.3 Knowledge intensive employment	11	77.88	
2.2.4 Annual investment in telecommunication services	NA	NA	
2.2.5 GERD performed by business enterprise	10	52.98	
3rd sub-pillar: Governments	5	76.61	
2.3.1 Government online services	17	87.39	
2.3.2 Publication and use of open data	1	100.00	●
2.3.3 Government promotion of investment in emerging tech	22	66.45	
2.3.4 R&D expenditure by governments and higher education	11	52.61	

Indicator	Rank	Score	
C. Governance pillar	**16**	**81.63**	
1st sub-pillar: Trust	18	78.34	
3.1.1 Secure Internet servers	20	83.82	
3.1.2 Cybersecurity	2	99.53	●
3.1.3 Online access to financial account	27	55.84	
3.1.4 Internet shopping	19	74.18	
2nd sub-pillar: Regulation	26	80.19	
3.2.1 Regulatory quality	17	82.71	
3.2.2 ICT regulatory environment	7	95.88	●
3.2.3 Regulation of emerging technologies	29	66.75	
3.2.4 E-commerce legislation	1	100.00	●
3.2.5 Privacy protection by law content	85	55.60	○
3rd sub-pillar: Inclusion	4	86.37	
3.3.1 E-Participation	6	95.34	●
3.3.2 Socioeconomic gap in use of digital payments	5	99.42	●
3.3.3 Availability of local online content	12	90.87	
3.3.4 Gender gap in Internet use	38	70.16	
3.3.5 Rural gap in use of digital payments	19	76.06	
D. Impact pillar	**9**	**75.50**	
1st sub-pillar: Economy	11	57.62	
4.1.1 High-tech and medium-high-tech manufacturing	22	53.52	
4.1.2 High-tech exports	15	43.03	
4.1.3 PCT patent applications	20	40.22	
4.1.4 Domestic market size	9	79.87	
4.1.5 Prevalence of gig economy	4	89.24	●
4.1.6 ICT services exports	19	39.84	
2nd sub-pillar: Quality of Life	21	81.17	
4.2.1 Happiness	22	81.27	
4.2.2 Freedom to make life choices	45	80.30	
4.2.3 Income inequality	34	76.38	
4.2.4 Healthy life expectancy at birth	28	86.74	
3rd sub-pillar: SDG Contribution	2	87.70	
4.3.1 SDG 3: Good Health and Well-Being	2	97.31	●
4.3.2 SDG 4: Quality Education	12	69.14	
4.3.3 SDG 5: Women's economic opportunity	15	96.46	
4.3.4 SDG 7: Affordable and Clean Energy	14	82.80	
4.3.5 SDG 11: Sustainable Cities and Communities	16	92.78	

NOTE: ● Indicates a strength and ○ a weakness.

United States

	Rank (Out of 134)	Score
Network Readiness Index	**1**	**76.91**

Pillar/sub-pillar	Rank	Score
A. Technology pillar	**1**	**79.64**
1st sub-pillar: Access	7	80.95
2nd sub-pillar: Content	2	73.30
3rd sub-pillar: Future Technologies	1	84.67
B. People pillar	**4**	**72.53**
1st sub-pillar: Individuals	21	57.68
2nd sub-pillar: Businesses	3	81.06
3rd sub-pillar: Governments	3	78.85
C. Governance pillar	**7**	**87.02**
1st sub-pillar: Trust	4	91.30
2nd sub-pillar: Regulation	16	85.54
3rd sub-pillar: Inclusion	10	84.21
D. Impact pillar	**23**	**68.44**
1st sub-pillar: Economy	10	58.69
2nd sub-pillar: Quality of Life	66	68.16
3rd sub-pillar: SDG Contribution	29	78.47

The Network Readiness Index in detail

Indicator	Rank	Score	
A. Technology pillar	**1**	**79.64**	
1st sub-pillar: Access	7	80.95	
1.1.1 Mobile tariffs	35	76.87	
1.1.2 Handset prices	18	78.50	
1.1.3 FTTH/building Internet subscriptions	14	58.47	
1.1.4 Population covered by at least a 3G mobile network	28	99.97	
1.1.5 International Internet bandwidth	6	90.92	
1.1.6 Internet access in schools	NA	NA	
2nd sub-pillar: Content	2	73.30	
1.2.1 GitHub commits	7	78.60	
1.2.2 Internet domain registrations	8	73.48	
1.2.3 Mobile apps development	23	75.52	
1.2.4 AI scientific publications	3	65.61	●
3rd sub-pillar: Future Technologies	1	84.67	
1.3.1 Adoption of emerging technologies	2	99.75	●
1.3.2 Investment in emerging technologies	1	100.00	●
1.3.3 Robot density	9	38.92	
1.3.4 Computer software spending	1	100.00	●
B. People pillar	**4**	**72.53**	
1st sub-pillar: Individuals	21	57.68	
2.1.1 Mobile broadband internet traffic within the country	NA	NA	
2.1.2 ICT skills in the education system	13	81.85	
2.1.3 Use of virtual social networks	57	68.23	
2.1.4 Tertiary enrollment	14	57.27	
2.1.5 Adult literacy rate	NA	NA	
2.1.6 AI talent concentration	17	23.39	
2nd sub-pillar: Businesses	3	81.06	
2.2.1 Firms with website	28	73.19	
2.2.2 GERD financed by business enterprise	6	84.00	
2.2.3 Knowledge intensive employment	9	79.35	
2.2.4 Annual investment in telecommunication services	1	100.00	●
2.2.5 GERD performed by business enterprise	3	68.77	●
3rd sub-pillar: Governments	3	78.85	
2.3.1 Government online services	9	92.31	
2.3.2 Publication and use of open data	9	82.35	
2.3.3 Government promotion of investment in emerging tech	8	78.58	
2.3.4 R&D expenditure by governments and higher education	3	62.14	●

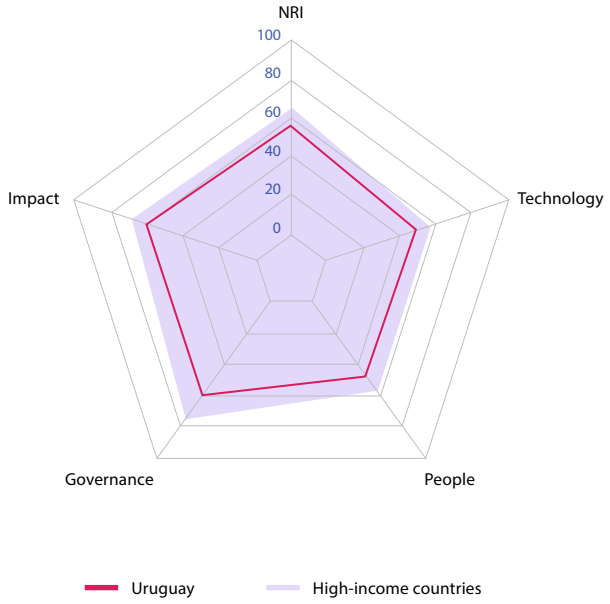
Indicator	Rank	Score	
C. Governance pillar	**7**	**87.02**	
1st sub-pillar: Trust	4	91.30	
3.1.1 Secure Internet servers	2	94.60	●
3.1.2 Cybersecurity	1	100.00	●
3.1.3 Online access to financial account	7	84.40	
3.1.4 Internet shopping	9	86.19	
2nd sub-pillar: Regulation	16	85.54	
3.2.1 Regulatory quality	18	82.40	
3.2.2 ICT regulatory environment	31	90.00	
3.2.3 Regulation of emerging technologies	6	88.31	
3.2.4 E-commerce legislation	1	100.00	●
3.2.5 Privacy protection by law content	61	66.98	
3rd sub-pillar: Inclusion	10	84.21	
3.3.1 E-Participation	10	90.70	
3.3.2 Socioeconomic gap in use of digital payments	36	89.92	
3.3.3 Availability of local online content	7	93.51	
3.3.4 Gender gap in Internet use	21	73.04	
3.3.5 Rural gap in use of digital payments	34	73.90	
D. Impact pillar	**23**	**68.44**	
1st sub-pillar: Economy	10	58.69	
4.1.1 High-tech and medium-high-tech manufacturing	24	52.82	
4.1.2 High-tech exports	24	35.84	
4.1.3 PCT patent applications	13	53.23	
4.1.4 Domestic market size	2	98.22	●
4.1.5 Prevalence of gig economy	2	95.35	●
4.1.6 ICT services exports	57	16.68	
2nd sub-pillar: Quality of Life	66	68.16	
4.2.1 Happiness	23	80.73	
4.2.2 Freedom to make life choices	96	60.10	○
4.2.3 Income inequality	77	58.54	○
4.2.4 Healthy life expectancy at birth	64	73.28	○
3rd sub-pillar: SDG Contribution	29	78.47	
4.3.1 SDG 3: Good Health and Well-Being	25	88.96	
4.3.2 SDG 4: Quality Education	24	65.82	
4.3.3 SDG 5: Women's economic opportunity	36	87.61	
4.3.4 SDG 7: Affordable and Clean Energy	89	66.33	○
4.3.5 SDG 11: Sustainable Cities and Communities	31	83.60	

NOTE: ● Indicates a strength and ○ a weakness.

Uruguay

	Rank (Out of 134)	Score
Network Readiness Index	**45**	**54.50**

Pillar/sub-pillar	Rank	Score
A. Technology pillar	**44**	**47.80**
1st sub-pillar: Access	40	72.06
2nd sub-pillar: Content	32	38.83
3rd sub-pillar: Future Technologies	64	32.51
B. People pillar	**50**	**47.80**
1st sub-pillar: Individuals	25	56.51
2nd sub-pillar: Businesses	86	37.89
3rd sub-pillar: Governments	36	48.99
C. Governance pillar	**55**	**62.12**
1st sub-pillar: Trust	58	49.78
2nd sub-pillar: Regulation	36	76.57
3rd sub-pillar: Inclusion	71	60.03
D. Impact pillar	**38**	**60.29**
1st sub-pillar: Economy	49	34.28
2nd sub-pillar: Quality of Life	44	74.46
3rd sub-pillar: SDG Contribution	45	72.12



The Network Readiness Index in detail

Indicator	Rank	Score	
A. Technology pillar	**44**	**47.80**	
1st sub-pillar: Access	40	72.06	
1.1.1 Mobile tariffs	41	74.22	
1.1.2 Handset prices	49	58.42	
1.1.3 FTTH/building Internet subscriptions	48	35.71	
1.1.4 Population covered by at least a 3G mobile network	92	98.45	
1.1.5 International Internet bandwidth	97	65.69	
1.1.6 Internet access in schools	27	99.88	
2nd sub-pillar: Content	32	38.83	
1.2.1 GitHub commits	11	72.35	●
1.2.2 Internet domain registrations	44	10.44	
1.2.3 Mobile apps development	47	71.39	
1.2.4 AI scientific publications	100	1.16	○
3rd sub-pillar: Future Technologies	64	32.51	
1.3.1 Adoption of emerging technologies	54	51.47	
1.3.2 Investment in emerging technologies	106	27.00	○
1.3.3 Robot density	NA	NA	
1.3.4 Computer software spending	71	19.07	
B. People pillar	**50**	**47.80**	
1st sub-pillar: Individuals	25	56.51	
2.1.1 Mobile broadband internet traffic within the country	74	7.35	
2.1.2 ICT skills in the education system	51	55.57	
2.1.3 Use of virtual social networks	25	77.32	●
2.1.4 Tertiary enrollment	45	43.98	
2.1.5 Adult literacy rate	24	98.32	●
2.1.6 AI talent concentration	NA	NA	
2nd sub-pillar: Businesses	86	37.89	
2.2.1 Firms with website	37	68.85	
2.2.2 GERD financed by business enterprise	81	5.20	○
2.2.3 Knowledge intensive employment	53	35.82	
2.2.4 Annual investment in telecommunication services	77	76.34	
2.2.5 GERD performed by business enterprise	58	3.24	
3rd sub-pillar: Governments	36	48.99	
2.3.1 Government online services	52	73.93	
2.3.2 Publication and use of open data	14	70.59	●
2.3.3 Government promotion of investment in emerging tech	52	43.54	
2.3.4 R&D expenditure by governments and higher education	64	7.88	

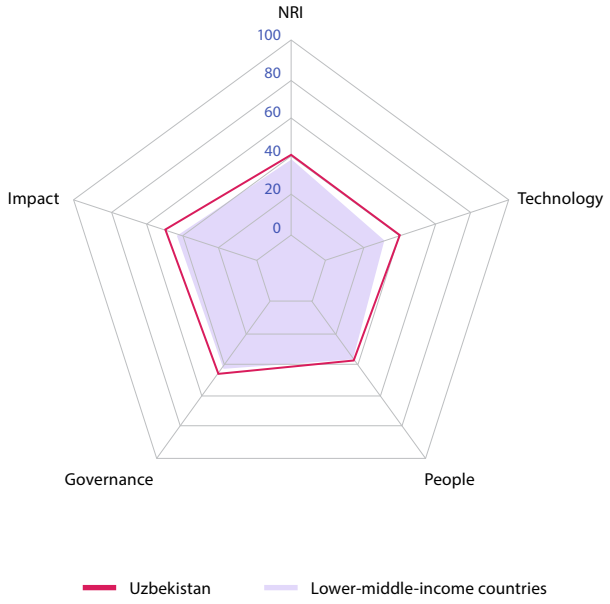
Indicator	Rank	Score	
C. Governance pillar	**55**	**62.12**	
1st sub-pillar: Trust	58	49.78	
3.1.1 Secure Internet servers	56	60.44	
3.1.2 Cybersecurity	72	74.71	
3.1.3 Online access to financial account	67	27.88	
3.1.4 Internet shopping	54	36.09	
2nd sub-pillar: Regulation	36	76.57	
3.2.1 Regulatory quality	41	65.92	
3.2.2 ICT regulatory environment	92	70.00	
3.2.3 Regulation of emerging technologies	30	65.45	
3.2.4 E-commerce legislation	1	100.00	●
3.2.5 Privacy protection by law content	28	81.46	●
3rd sub-pillar: Inclusion	71	60.03	
3.3.1 E-Participation	61	58.14	
3.3.2 Socioeconomic gap in use of digital payments	75	69.00	
3.3.3 Availability of local online content	62	61.78	
3.3.4 Gender gap in Internet use	10	75.45	●
3.3.5 Rural gap in use of digital payments	106	35.76	○
D. Impact pillar	**38**	**60.29**	
1st sub-pillar: Economy	49	34.28	
4.1.1 High-tech and medium-high-tech manufacturing	76	17.10	
4.1.2 High-tech exports	48	17.45	
4.1.3 PCT patent applications	NA	NA	
4.1.4 Domestic market size	89	43.96	
4.1.5 Prevalence of gig economy	97	27.62	○
4.1.6 ICT services exports	7	65.28	●
2nd sub-pillar: Quality of Life	44	74.46	
4.2.1 Happiness	24	80.32	●
4.2.2 Freedom to make life choices	35	83.78	
4.2.3 Income inequality	82	55.78	
4.2.4 Healthy life expectancy at birth	46	77.94	
3rd sub-pillar: SDG Contribution	45	72.12	
4.3.1 SDG 3: Good Health and Well-Being	32	83.62	●
4.3.2 SDG 4: Quality Education	51	36.51	
4.3.3 SDG 5: Women's economic opportunity	44	84.07	
4.3.4 SDG 7: Affordable and Clean Energy	33	78.54	●
4.3.5 SDG 11: Sustainable Cities and Communities	40	77.85	

NOTE: ● Indicates a strength and ○ a weakness.

Uzbekistan

	Rank (Out of 134)	Score
Network Readiness Index	**82**	**43.94**

Pillar/sub-pillar	Rank	Score
A. Technology pillar	**67**	**40.16**
1st sub-pillar: Access	44	71.57
2nd sub-pillar: Content	88	18.26
3rd sub-pillar: Future Technologies	73	30.65
B. People pillar	**88**	**36.95**
1st sub-pillar: Individuals	102	36.00
2nd sub-pillar: Businesses	85	37.90
3rd sub-pillar: Governments	72	36.95
C. Governance pillar	**98**	**46.56**
1st sub-pillar: Trust	77	36.48
2nd sub-pillar: Regulation	127	35.37
3rd sub-pillar: Inclusion	54	67.85
D. Impact pillar	**76**	**52.10**
1st sub-pillar: Economy	99	18.62
2nd sub-pillar: Quality of Life	34	77.96
3rd sub-pillar: SDG Contribution	84	59.71



The Network Readiness Index in detail

Indicator	Rank	Score	
A. Technology pillar	**67**	**40.16**	
1st sub-pillar: Access	44	71.57	
1.1.1 Mobile tariffs	63	62.27	
1.1.2 Handset prices	96	33.89	
1.1.3 FTTH/building Internet subscriptions	10	61.17	●
1.1.4 Population covered by at least a 3G mobile network	87	98.66	
1.1.5 International Internet bandwidth	32	77.28	●
1.1.6 Internet access in schools	35	96.15	
2nd sub-pillar: Content	88	18.26	
1.2.1 GitHub commits	95	2.65	
1.2.2 Internet domain registrations	101	0.82	
1.2.3 Mobile apps development	70	64.51	
1.2.4 AI scientific publications	70	5.09	
3rd sub-pillar: Future Technologies	73	30.65	
1.3.1 Adoption of emerging technologies	68	46.04	
1.3.2 Investment in emerging technologies	NA	NA	
1.3.3 Robot density	NA	NA	
1.3.4 Computer software spending	80	15.27	
B. People pillar	**88**	**36.95**	
1st sub-pillar: Individuals	102	36.00	
2.1.1 Mobile broadband internet traffic within the country	39	19.19	●
2.1.2 ICT skills in the education system	NA	NA	
2.1.3 Use of virtual social networks	113	12.32	
2.1.4 Tertiary enrollment	98	12.50	
2.1.5 Adult literacy rate	2	100.00	●
2.1.6 AI talent concentration	NA	NA	
2nd sub-pillar: Businesses	85	37.90	
2.2.1 Firms with website	96	19.29	
2.2.2 GERD financed by business enterprise	39	52.48	●
2.2.3 Knowledge intensive employment	NA	NA	
2.2.4 Annual investment in telecommunication services	60	78.48	
2.2.5 GERD performed by business enterprise	68	1.32	
3rd sub-pillar: Governments	72	36.95	
2.3.1 Government online services	57	71.71	
2.3.2 Publication and use of open data	NA	NA	
2.3.3 Government promotion of investment in emerging tech	NA	NA	
2.3.4 R&D expenditure by governments and higher education	100	2.20	

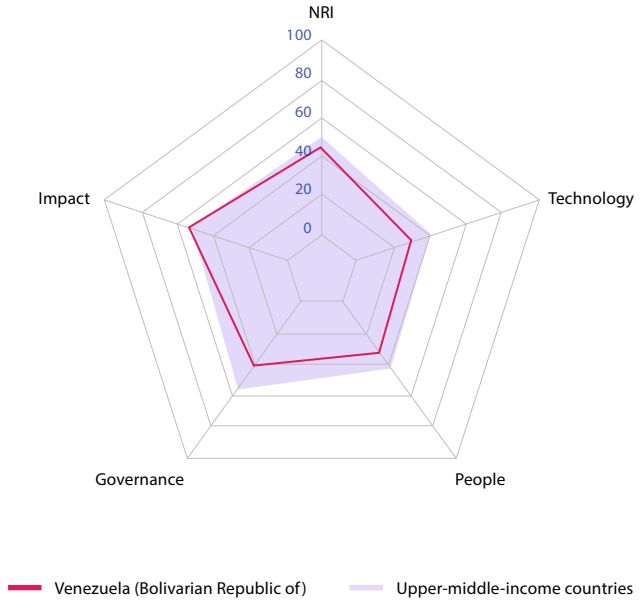
Indicator	Rank	Score	
C. Governance pillar	**98**	**46.56**	
1st sub-pillar: Trust	77	36.48	
3.1.1 Secure Internet servers	71	49.07	
3.1.2 Cybersecurity	77	70.60	
3.1.3 Online access to financial account	78	20.16	
3.1.4 Internet shopping	106	6.09	
2nd sub-pillar: Regulation	127	35.37	
3.2.1 Regulatory quality	102	36.47	
3.2.2 ICT regulatory environment	133	3.29	○
3.2.3 Regulation of emerging technologies	NA	NA	
3.2.4 E-commerce legislation	87	66.67	○
3.2.5 Privacy protection by law content	118	35.04	○
3rd sub-pillar: Inclusion	54	67.85	
3.3.1 E-Participation	55	60.46	
3.3.2 Socioeconomic gap in use of digital payments	46	84.97	●
3.3.3 Availability of local online content	NA	NA	
3.3.4 Gender gap in Internet use	92	55.16	
3.3.5 Rural gap in use of digital payments	46	70.79	●
D. Impact pillar	**76**	**52.10**	
1st sub-pillar: Economy	99	18.62	
4.1.1 High-tech and medium-high-tech manufacturing	50	29.88	
4.1.2 High-tech exports	126	0.31	○
4.1.3 PCT patent applications	97	0.12	
4.1.4 Domestic market size	56	56.26	
4.1.5 Prevalence of gig economy	NA	NA	
4.1.6 ICT services exports	92	6.52	
2nd sub-pillar: Quality of Life	34	77.96	
4.2.1 Happiness	51	68.14	●
4.2.2 Freedom to make life choices	2	97.27	●
4.2.3 Income inequality	NA	NA	
4.2.4 Healthy life expectancy at birth	78	68.46	
3rd sub-pillar: SDG Contribution	84	59.71	
4.3.1 SDG 3: Good Health and Well-Being	64	69.75	
4.3.2 SDG 4: Quality Education	NA	NA	
4.3.3 SDG 5: Women's economic opportunity	110	58.41	
4.3.4 SDG 7: Affordable and Clean Energy	128	36.99	○
4.3.5 SDG 11: Sustainable Cities and Communities	51	73.71	●

NOTE: ● Indicates a strength and ○ a weakness.

Venezuela (Bolivarian Republic of)

	Rank (Out of 134)	Score
Network Readiness Index	**93**	**39.98**

Pillar/sub-pillar	Rank	Score
A. Technology pillar	**96**	**31.51**
1st sub-pillar: Access	85	56.51
2nd sub-pillar: Content	99	16.24
3rd sub-pillar: Future Technologies	106	21.79
B. People pillar	**100**	**32.14**
1st sub-pillar: Individuals	59	48.80
2nd sub-pillar: Businesses	90	35.81
3rd sub-pillar: Governments	129	11.81
C. Governance pillar	**104**	**42.11**
1st sub-pillar: Trust	89	34.03
2nd sub-pillar: Regulation	124	37.01
3rd sub-pillar: Inclusion	82	55.28
D. Impact pillar	**64**	**54.17**
1st sub-pillar: Economy	87	22.05
2nd sub-pillar: Quality of Life	73	66.81
3rd sub-pillar: SDG Contribution	39	73.65



The Network Readiness Index in detail

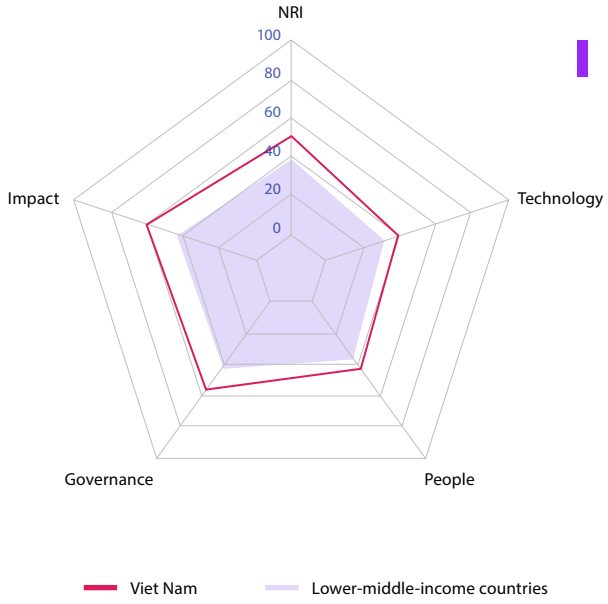
Indicator	Rank	Score	
A. Technology pillar	**96**	**31.51**	
1st sub-pillar: Access	85	56.51	
1.1.1 Mobile tariffs	89	49.08	
1.1.2 Handset prices	82	40.01	
1.1.3 FTTH/building Internet subscriptions	79	24.42	
1.1.4 Population covered by at least a 3G mobile network	121	93.18	
1.1.5 International Internet bandwidth	42	75.85	●
1.1.6 Internet access in schools	NA	NA	
2nd sub-pillar: Content	99	16.24	
1.2.1 GitHub commits	89	3.18	
1.2.2 Internet domain registrations	92	1.39	
1.2.3 Mobile apps development	99	54.61	
1.2.4 AI scientific publications	66	5.77	
3rd sub-pillar: Future Technologies	106	21.79	
1.3.1 Adoption of emerging technologies	98	32.25	
1.3.2 Investment in emerging technologies	131	10.75	○
1.3.3 Robot density	NA	NA	
1.3.4 Computer software spending	62	22.38	●
B. People pillar	**100**	**32.14**	
1st sub-pillar: Individuals	59	48.80	
2.1.1 Mobile broadband internet traffic within the country	83	5.70	
2.1.2 ICT skills in the education system	70	45.59	
2.1.3 Use of virtual social networks	88	47.31	
2.1.4 Tertiary enrollment	NA	NA	
2.1.5 Adult literacy rate	35	96.59	●
2.1.6 AI talent concentration	NA	NA	
2nd sub-pillar: Businesses	90	35.81	
2.2.1 Firms with website	NA	NA	
2.2.2 GERD financed by business enterprise	NA	NA	
2.2.3 Knowledge intensive employment	74	27.69	
2.2.4 Annual investment in telecommunication services	122	43.93	
2.2.5 GERD performed by business enterprise	NA	NA	
3rd sub-pillar: Governments	129	11.81	
2.3.1 Government online services	126	23.25	
2.3.2 Publication and use of open data	86	11.76	
2.3.3 Government promotion of investment in emerging tech	126	0.00	○
2.3.4 R&D expenditure by governments and higher education	52	12.22	●

Indicator	Rank	Score	
C. Governance pillar	**104**	**42.11**	
1st sub-pillar: Trust	89	34.03	
3.1.1 Secure Internet servers	92	42.03	
3.1.2 Cybersecurity	111	25.78	
3.1.3 Online access to financial account	37	46.32	●
3.1.4 Internet shopping	65	21.98	
2nd sub-pillar: Regulation	124	37.01	
3.2.1 Regulatory quality	134	0.00	○
3.2.2 ICT regulatory environment	83	76.24	
3.2.3 Regulation of emerging technologies	120	0.00	○
3.2.4 E-commerce legislation	87	66.67	
3.2.5 Privacy protection by law content	113	42.14	
3rd sub-pillar: Inclusion	82	55.28	
3.3.1 E-Participation	131	10.47	○
3.3.2 Socioeconomic gap in use of digital payments	56	81.21	●
3.3.3 Availability of local online content	111	31.73	
3.3.4 Gender gap in Internet use	5	82.48	●
3.3.5 Rural gap in use of digital payments	47	70.54	●
D. Impact pillar	**64**	**54.17**	
1st sub-pillar: Economy	87	22.05	
4.1.1 High-tech and medium-high-tech manufacturing	NA	NA	
4.1.2 High-tech exports	NA	NA	
4.1.3 PCT patent applications	NA	NA	
4.1.4 Domestic market size	70	50.76	
4.1.5 Prevalence of gig economy	116	13.66	
4.1.6 ICT services exports	118	1.71	
2nd sub-pillar: Quality of Life	73	66.81	
4.2.1 Happiness	59	66.89	●
4.2.2 Freedom to make life choices	85	65.88	
4.2.3 Income inequality	NA	NA	
4.2.4 Healthy life expectancy at birth	82	67.65	
3rd sub-pillar: SDG Contribution	39	73.65	
4.3.1 SDG 3: Good Health and Well-Being	72	67.75	
4.3.2 SDG 4: Quality Education	NA	NA	
4.3.3 SDG 5: Women's economic opportunity	60	78.76	
4.3.4 SDG 7: Affordable and Clean Energy	1	100.00	●
4.3.5 SDG 11: Sustainable Cities and Communities	97	48.09	

NOTE: ● Indicates a strength and ○ a weakness.

Viet Nam

	Rank (Out of 134)	Score
Network Readiness Index	**56**	**51.19**
Pillar/sub-pillar	**Rank**	**Score**
A. Technology pillar	**55**	**43.47**
1st sub-pillar: Access	31	74.19
2nd sub-pillar: Content	51	27.93
3rd sub-pillar: Future Technologies	85	28.28
B. People pillar	**56**	**46.18**
1st sub-pillar: Individuals	16	59.27
2nd sub-pillar: Businesses	67	44.95
3rd sub-pillar: Governments	81	34.33
C. Governance pillar	**74**	**53.42**
1st sub-pillar: Trust	57	52.01
2nd sub-pillar: Regulation	94	57.52
3rd sub-pillar: Inclusion	92	50.74
D. Impact pillar	**36**	**61.67**
1st sub-pillar: Economy	27	41.75
2nd sub-pillar: Quality of Life	36	77.29
3rd sub-pillar: SDG Contribution	60	65.98



The Network Readiness Index in detail

Indicator	Rank	Score	
A. Technology pillar	**55**	**43.47**	
1st sub-pillar: Access	31	74.19	
1.1.1 Mobile tariffs	52	69.30	
1.1.2 Handset prices	99	32.85	
1.1.3 FTTH/building Internet subscriptions	4	72.53	●
1.1.4 Population covered by at least a 3G mobile network	38	99.95	
1.1.5 International Internet bandwidth	10	86.70	●
1.1.6 Internet access in schools	40	83.80	
2nd sub-pillar: Content	51	27.93	
1.2.1 GitHub commits	58	8.53	
1.2.2 Internet domain registrations	74	2.56	
1.2.3 Mobile apps development	7	82.88	●
1.2.4 AI scientific publications	31	17.77	
3rd sub-pillar: Future Technologies	85	28.28	
1.3.1 Adoption of emerging technologies	56	50.09	
1.3.2 Investment in emerging technologies	69	38.50	
1.3.3 Robot density	42	2.56	
1.3.4 Computer software spending	64	21.97	
B. People pillar	**56**	**46.18**	
1st sub-pillar: Individuals	16	59.27	
2.1.1 Mobile broadband internet traffic within the country	12	44.81	●
2.1.2 ICT skills in the education system	29	68.53	
2.1.3 Use of virtual social networks	63	66.76	
2.1.4 Tertiary enrollment	82	22.06	
2.1.5 Adult literacy rate	44	94.20	
2.1.6 AI talent concentration	NA	NA	
2nd sub-pillar: Businesses	67	44.95	
2.2.1 Firms with website	68	45.17	
2.2.2 GERD financed by business enterprise	9	79.32	●
2.2.3 Knowledge intensive employment	112	8.23	○
2.2.4 Annual investment in telecommunication services	39	82.19	
2.2.5 GERD performed by business enterprise	46	9.84	
3rd sub-pillar: Governments	81	34.33	
2.3.1 Government online services	75	61.14	
2.3.2 Publication and use of open data	79	14.71	
2.3.3 Government promotion of investment in emerging tech	31	54.14	
2.3.4 R&D expenditure by governments and higher education	66	7.33	

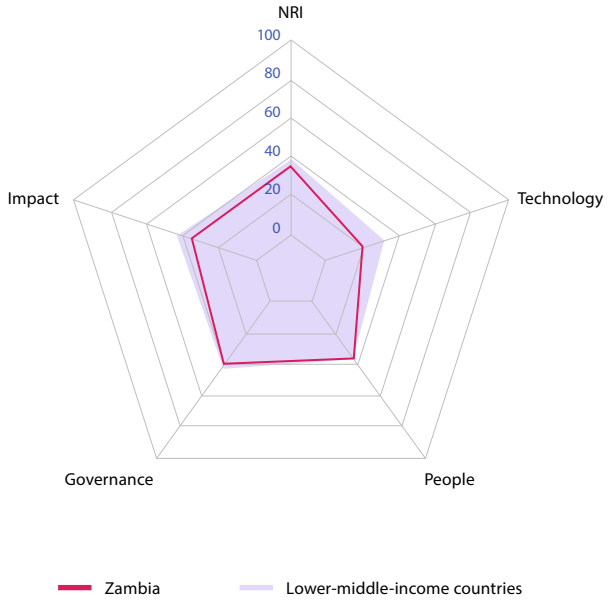
Indicator	Rank	Score	
C. Governance pillar	**74**	**53.42**	
1st sub-pillar: Trust	57	52.01	
3.1.1 Secure Internet servers	53	64.22	
3.1.2 Cybersecurity	32	94.49	
3.1.3 Online access to financial account	65	28.29	
3.1.4 Internet shopping	67	21.05	
2nd sub-pillar: Regulation	94	57.52	
3.2.1 Regulatory quality	92	40.61	
3.2.2 ICT regulatory environment	102	66.82	
3.2.3 Regulation of emerging technologies	49	53.25	
3.2.4 E-commerce legislation	1	100.00	●
3.2.5 Privacy protection by law content	122	26.91	○
3rd sub-pillar: Inclusion	92	50.74	
3.3.1 E-Participation	71	52.33	
3.3.2 Socioeconomic gap in use of digital payments	120	38.65	○
3.3.3 Availability of local online content	64	61.06	
3.3.4 Gender gap in Internet use	85	59.41	
3.3.5 Rural gap in use of digital payments	100	42.27	○
D. Impact pillar	**36**	**61.67**	
1st sub-pillar: Economy	27	41.75	
4.1.1 High-tech and medium-high-tech manufacturing	38	36.54	
4.1.2 High-tech exports	5	75.48	●
4.1.3 PCT patent applications	86	0.86	
4.1.4 Domestic market size	25	69.51	●
4.1.5 Prevalence of gig economy	22	65.99	●
4.1.6 ICT services exports	115	2.11	○
2nd sub-pillar: Quality of Life	36	77.29	
4.2.1 Happiness	39	72.80	
4.2.2 Freedom to make life choices	1	100.00	●
4.2.3 Income inequality	59	65.83	
4.2.4 Healthy life expectancy at birth	74	70.53	
3rd sub-pillar: SDG Contribution	60	65.98	
4.3.1 SDG 3: Good Health and Well-Being	74	67.61	
4.3.2 SDG 4: Quality Education	16	68.54	●
4.3.3 SDG 5: Women's economic opportunity	48	83.19	
4.3.4 SDG 7: Affordable and Clean Energy	92	65.17	
4.3.5 SDG 11: Sustainable Cities and Communities	102	45.39	

NOTE: ● Indicates a strength and ○ a weakness.

Zambia

	Rank (Out of 134)	Score
Network Readiness Index	**116**	**32.11**

Pillar/sub-pillar	Rank	Score
A. Technology pillar	**124**	**20.20**
1st sub-pillar: Access	119	40.23
2nd sub-pillar: Content	127	0.86
3rd sub-pillar: Future Technologies	112	19.51
B. People pillar	**99**	**33.12**
1st sub-pillar: Individuals	108	31.41
2nd sub-pillar: Businesses	55	48.29
3rd sub-pillar: Governments	114	19.67
C. Governance pillar	**105**	**41.54**
1st sub-pillar: Trust	83	35.00
2nd sub-pillar: Regulation	99	56.68
3rd sub-pillar: Inclusion	121	32.94
D. Impact pillar	**125**	**33.56**
1st sub-pillar: Economy	124	12.62
2nd sub-pillar: Quality of Life	128	34.67
3rd sub-pillar: SDG Contribution	100	53.40



The Network Readiness Index in detail

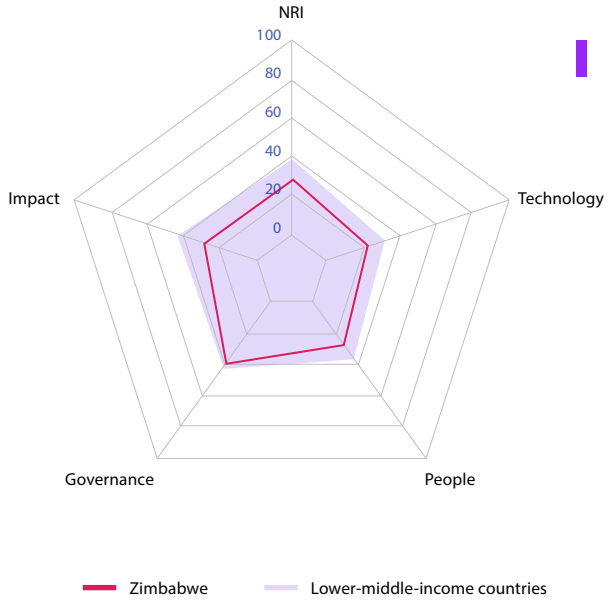
Indicator	Rank	Score	
A. Technology pillar	**124**	**20.20**	
1st sub-pillar: Access	119	40.23	
1.1.1 Mobile tariffs	110	32.15	
1.1.2 Handset prices	98	33.02	
1.1.3 FTTH/building Internet subscriptions	107	10.00	
1.1.4 Population covered by at least a 3G mobile network	91	98.48	●
1.1.5 International Internet bandwidth	112	61.92	
1.1.6 Internet access in schools	77	5.81	
2nd sub-pillar: Content	127	0.86	
1.2.1 GitHub commits	119	0.65	
1.2.2 Internet domain registrations	125	0.12	
1.2.3 Mobile apps development	NA	NA	
1.2.4 AI scientific publications	90	1.80	
3rd sub-pillar: Future Technologies	112	19.51	
1.3.1 Adoption of emerging technologies	114	25.44	
1.3.2 Investment in emerging technologies	93	31.25	
1.3.3 Robot density	NA	NA	
1.3.4 Computer software spending	117	1.83	
B. People pillar	**99**	**33.12**	
1st sub-pillar: Individuals	108	31.41	
2.1.1 Mobile broadband internet traffic within the country	NA	NA	
2.1.2 ICT skills in the education system	NA	NA	
2.1.3 Use of virtual social networks	117	10.36	
2.1.4 Tertiary enrollment	128	0.94	○
2.1.5 Adult literacy rate	70	82.93	●
2.1.6 AI talent concentration	NA	NA	
2nd sub-pillar: Businesses	55	48.29	
2.2.1 Firms with website	52	57.19	●
2.2.2 GERD financed by business enterprise	NA	NA	
2.2.3 Knowledge intensive employment	104	12.83	
2.2.4 Annual investment in telecommunication services	89	74.86	
2.2.5 GERD performed by business enterprise	NA	NA	
3rd sub-pillar: Governments	114	19.67	
2.3.1 Government online services	108	38.26	
2.3.2 Publication and use of open data	100	2.94	○
2.3.3 Government promotion of investment in emerging tech	108	17.80	
2.3.4 R&D expenditure by governments and higher education	NA	NA	

Indicator	Rank	Score	
C. Governance pillar	**105**	**41.54**	
1st sub-pillar: Trust	83	35.00	
3.1.1 Secure Internet servers	116	29.25	
3.1.2 Cybersecurity	80	68.33	●
3.1.3 Online access to financial account	45	40.46	●
3.1.4 Internet shopping	122	1.97	
2nd sub-pillar: Regulation	99	56.68	
3.2.1 Regulatory quality	100	37.11	
3.2.2 ICT regulatory environment	96	69.06	
3.2.3 Regulation of emerging technologies	112	7.79	
3.2.4 E-commerce legislation	1	100.00	●
3.2.5 Privacy protection by law content	56	69.44	●
3rd sub-pillar: Inclusion	121	32.94	
3.3.1 E-Participation	90	36.05	
3.3.2 Socioeconomic gap in use of digital payments	122	36.39	
3.3.3 Availability of local online content	126	21.39	
3.3.4 Gender gap in Internet use	94	47.05	
3.3.5 Rural gap in use of digital payments	116	23.83	
D. Impact pillar	**125**	**33.56**	
1st sub-pillar: Economy	124	12.62	
4.1.1 High-tech and medium-high-tech manufacturing	89	10.77	
4.1.2 High-tech exports	106	2.22	
4.1.3 PCT patent applications	99	0.00	○
4.1.4 Domestic market size	94	41.54	
4.1.5 Prevalence of gig economy	112	18.90	
4.1.6 ICT services exports	113	2.32	
2nd sub-pillar: Quality of Life	128	34.67	
4.2.1 Happiness	129	13.57	○
4.2.2 Freedom to make life choices	59	76.23	●
4.2.3 Income inequality	114	14.82	○
4.2.4 Healthy life expectancy at birth	124	34.04	
3rd sub-pillar: SDG Contribution	100	53.40	
4.3.1 SDG 3: Good Health and Well-Being	105	43.17	
4.3.2 SDG 4: Quality Education	NA	NA	
4.3.3 SDG 5: Women's economic opportunity	76	73.45	●
4.3.4 SDG 7: Affordable and Clean Energy	127	38.01	
4.3.5 SDG 11: Sustainable Cities and Communities	78	58.98	●

NOTE: ● Indicates a strength and ○ a weakness.

Zimbabwe

	Rank (Out of 134)	Score
Network Readiness Index	**119**	**30.05**
Pillar/sub-pillar	**Rank**	**Score**
A. Technology pillar	**118**	**24.34**
1st sub-pillar: Access	120	40.21
2nd sub-pillar: Content	107	13.60
3rd sub-pillar: Future Technologies	114	19.20
B. People pillar	**110**	**28.27**
1st sub-pillar: Individuals	110	30.12
2nd sub-pillar: Businesses	82	39.92
3rd sub-pillar: Governments	124	14.77
C. Governance pillar	**109**	**38.88**
1st sub-pillar: Trust	102	28.93
2nd sub-pillar: Regulation	121	39.45
3rd sub-pillar: Inclusion	96	48.26
D. Impact pillar	**131**	**28.71**
1st sub-pillar: Economy	129	10.71
2nd sub-pillar: Quality of Life	130	31.30
3rd sub-pillar: SDG Contribution	122	44.12



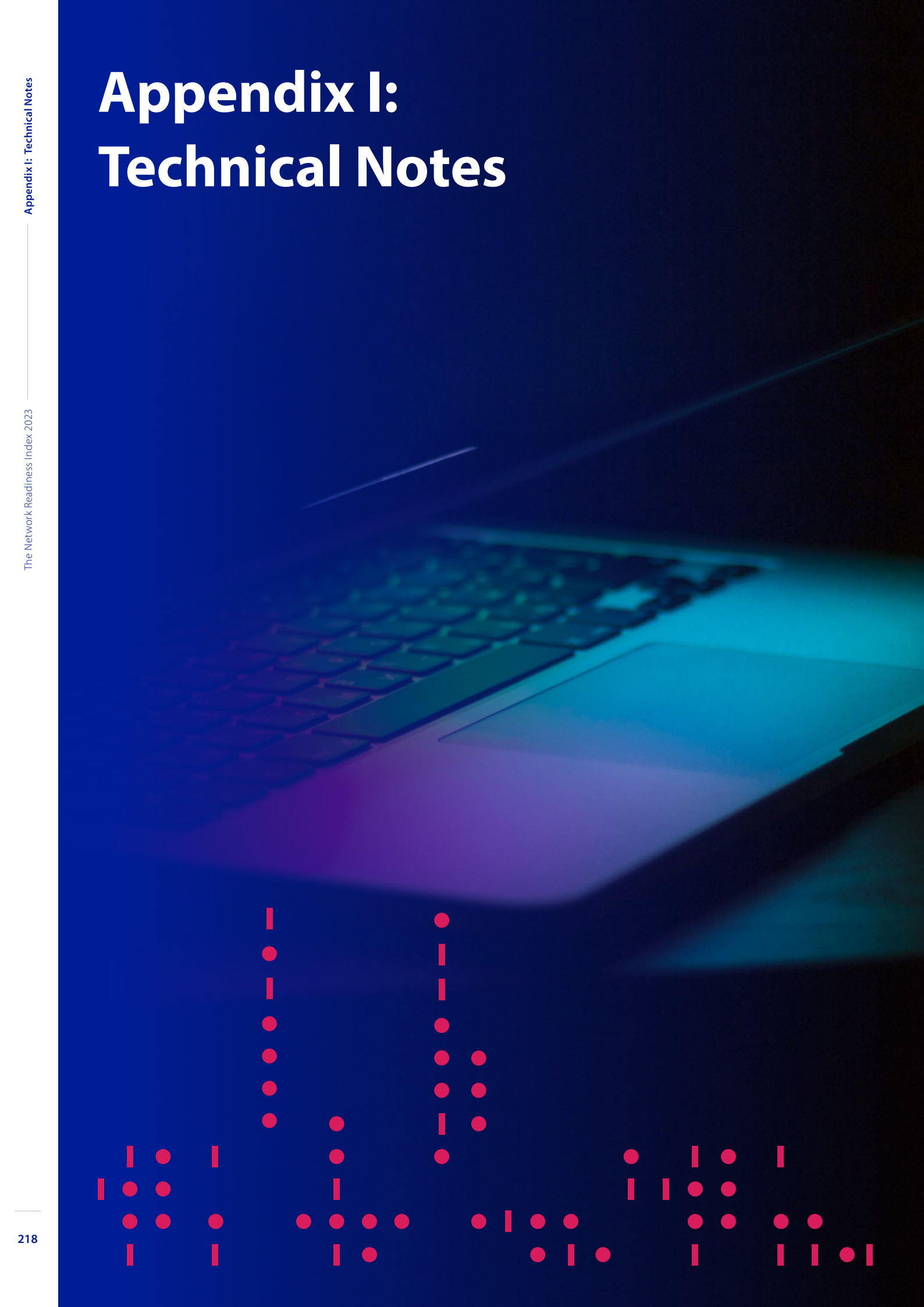
The Network Readiness Index in detail

Indicator	Rank	Score	
A. Technology pillar	**118**	**24.34**	
1st sub-pillar: Access	120	40.21	
1.1.1 Mobile tariffs	133	4.93	○
1.1.2 Handset prices	119	21.17	
1.1.3 FTTH/building Internet subscriptions	52	32.45	●
1.1.4 Population covered by at least a 3G mobile network	119	94.19	
1.1.5 International Internet bandwidth	96	65.96	
1.1.6 Internet access in schools	67	22.55	
2nd sub-pillar: Content	107	13.60	
1.2.1 GitHub commits	114	0.89	
1.2.2 Internet domain registrations	97	1.02	
1.2.3 Mobile apps development	107	46.47	
1.2.4 AI scientific publications	65	6.01	●
3rd sub-pillar: Future Technologies	114	19.20	
1.3.1 Adoption of emerging technologies	111	26.03	
1.3.2 Investment in emerging technologies	128	12.25	○
1.3.3 Robot density	NA	NA	
1.3.4 Computer software spending	70	19.32	●
B. People pillar	**110**	**28.27**	
1st sub-pillar: Individuals	110	30.12	
2.1.1 Mobile broadband internet traffic within the country	101	1.95	
2.1.2 ICT skills in the education system	59	52.32	●
2.1.3 Use of virtual social networks	123	6.26	
2.1.4 Tertiary enrollment	116	4.15	
2.1.5 Adult literacy rate	66	85.94	●
2.1.6 AI talent concentration	NA	NA	
2nd sub-pillar: Businesses	82	39.92	
2.2.1 Firms with website	87	33.73	
2.2.2 GERD financed by business enterprise	NA	NA	
2.2.3 Knowledge intensive employment	108	10.87	
2.2.4 Annual investment in telecommunication services	85	75.17	
2.2.5 GERD performed by business enterprise	NA	NA	
3rd sub-pillar: Governments	124	14.77	
2.3.1 Government online services	115	31.97	
2.3.2 Publication and use of open data	103	1.47	○
2.3.3 Government promotion of investment in emerging tech	115	10.87	
2.3.4 R&D expenditure by governments and higher education	NA	NA	

Indicator	Rank	Score	
C. Governance pillar	**109**	**38.88**	
1st sub-pillar: Trust	102	28.93	
3.1.1 Secure Internet servers	109	33.94	
3.1.2 Cybersecurity	102	35.37	
3.1.3 Online access to financial account	38	44.27	●
3.1.4 Internet shopping	121	2.11	
2nd sub-pillar: Regulation	121	39.45	
3.2.1 Regulatory quality	131	18.60	○
3.2.2 ICT regulatory environment	106	65.88	
3.2.3 Regulation of emerging technologies	NA	NA	
3.2.4 E-commerce legislation	121	33.33	
3.2.5 Privacy protection by law content	116	39.98	
3rd sub-pillar: Inclusion	96	48.26	
3.3.1 E-Participation	122	20.94	
3.3.2 Socioeconomic gap in use of digital payments	87	60.15	
3.3.3 Availability of local online content	116	27.64	
3.3.4 Gender gap in Internet use	9	76.12	●
3.3.5 Rural gap in use of digital payments	78	56.47	●
D. Impact pillar	**131**	**28.71**	
1st sub-pillar: Economy	129	10.71	
4.1.1 High-tech and medium-high-tech manufacturing	69	20.35	
4.1.2 High-tech exports	90	4.08	
4.1.3 PCT patent applications	73	2.02	●
4.1.4 Domestic market size	118	34.91	
4.1.5 Prevalence of gig economy	126	0.00	○
4.1.6 ICT services exports	106	2.89	
2nd sub-pillar: Quality of Life	130	31.30	
4.2.1 Happiness	126	17.55	
4.2.2 Freedom to make life choices	117	46.17	
4.2.3 Income inequality	106	31.91	
4.2.4 Healthy life expectancy at birth	129	29.56	○
3rd sub-pillar: SDG Contribution	122	44.12	
4.3.1 SDG 3: Good Health and Well-Being	104	43.46	
4.3.2 SDG 4: Quality Education	NA	NA	
4.3.3 SDG 5: Women's economic opportunity	55	81.42	●
4.3.4 SDG 7: Affordable and Clean Energy	131	20.38	○
4.3.5 SDG 11: Sustainable Cities and Communities	122	31.24	

NOTE: ● Indicates a strength and ○ a weakness.

Appendix I: Technical Notes



Structure of the Network Readiness Index

Since network readiness is a multi-dimensional concept, the Network Readiness Index (NRI) is a composite index constructed with three levels. The primary level consists of four pillars that make up the fundamental dimensions of network readiness. Each of the fundamental pillars divides into additional sub-pillars that constitute the second level. Table A-I.1 shows both levels.

The third level consists of individual indicators distributed across the different sub-pillars and pillars of the primary and secondary levels. All indicators used within the NRI belong to a pillar and a sub-pillar.

For record-keeping, a three-digit code identifies each indicator. The first digit refers to the primary pillar, the second digit concerns the secondary sub-pillar, and the third denotes the indicator itself. For instance, the digital code 1.2.3 refers to an individual indicator (Mobile apps development) located within the first primary pillar (Technology) and the secondary sub-pillar (Content).

The third level of the NR1 2023 consists of 58 indicators. 35 indicators are hard/quantitative data, 12 are index/composite indicator data, and 11 are survey/qualitative data.

Table A-I.2 outlines the complete structure of the NRI with its respective pillars, sub-pillars, and indicators.

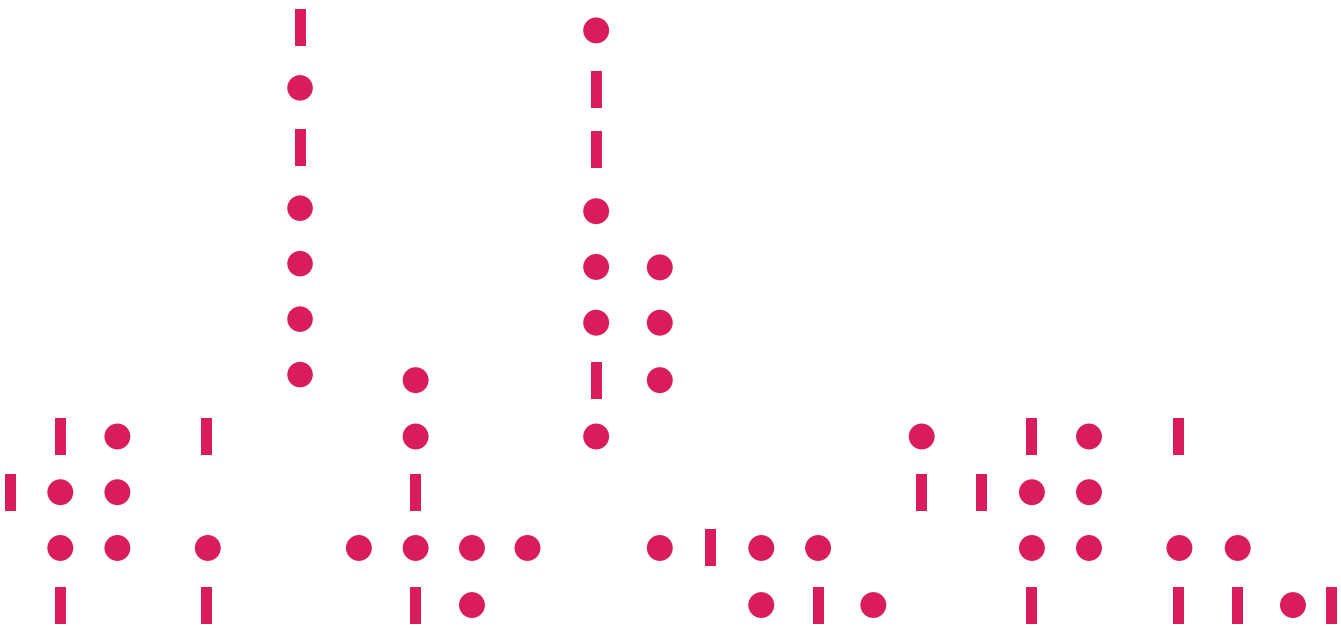
Table A-I.1 Network Readiness Index 2023 two top levels and composition

Primary Level	Technology	People	Governance	Impact
Secondary Level	Access Content Future technologies	Individuals Businesses Governments	Trust Regulation Inclusion	Economy Quality of life Sustainable development goal (SDG) contributions

Table A-I.2 Network Readiness Index 2023 pillars, sub-pillars, and indicators

A. Technology pillar	B. People pillar
1.1 Access	2.1 Individuals
1.1.1 Mobile tariffs	2.1.1 Mobile broadband internet traffic within the country
1.1.2 Handset prices	2.1.2 ICT skills in the education system
1.1.3 FTTh/Building internet subscriptions	2.1.3 Use of virtual social networks
1.1.4 Population covered by at least a 3G mobile network	2.1.4 Tertiary enrollment
1.1.5 International Internet bandwidth	2.1.5 Adult literacy rate
1.1.6 Internet access in schools	2.1.6 AI talent concentration
1.2 Content	2.2 Businesses
1.2.1 GitHub commits	2.2.1 Firms with a website
1.2.2 Internet domain registrations	2.2.2 GERD financed by business enterprise
1.2.3 Mobile applications development	2.2.3 Professionals
1.2.4 AI in scientific publications	2.2.4 Annual investment in telecommunication services
1.3 Future Technologies	2.2.5 GERD performed by business enterprise
1.3.1 Adoption of emerging technologies	2.3 Governments
1.3.2 Investment in emerging technologies	2.3.1 Government online services
1.3.3 Robot density	2.3.2 Publication and use of open data
1.3.4 Computer software spending	2.3.3 Government promotion of investment in emerging technologies
	2.3.4 R&D expenditure by governments and higher education

C. Governance pillar	D. Impact pillar
3.1 Trust	4.1 Economy
3.1.1 Secure internet servers	4.1.1 High-tech and medium-high-tech manufacturing
3.1.2 Cybersecurity	4.1.2 High-tech exports
3.1.3 Online access to a financial account	4.1.3 PCT patent applications
3.1.4 Internet shopping	4.1.4 Domestic market size
3.2 Regulation	4.1.5 Prevalence of gig economy
3.2.1 Regulatory quality	4.1.6 ICT services exports
3.2.2 ICT regulatory environment	4.2 Quality of Life
3.2.3 Regulation of emerging technologies	4.2.1 Happiness
3.2.4 E-commerce legislation	4.2.2 Freedom to make life choices
3.2.5 Privacy protection by law content	4.2.3 Income inequality
3.3 Inclusion	4.2.4 Healthy life expectancy at birth
3.3.1 E-participation	4.3 SDG Contribution
3.3.2 Socioeconomic gap in use of digital payments	4.3.1 SDG 3: Good Health and Well-Being
3.3.3 Availability of local online content	4.3.2 SDG 4: Quality Education
3.3.4 Gender gap in Internet use	4.3.3 SDG 5: Women's economic opportunity
3.3.5 Rural gap in use of digital payments	4.3.4 SDG 7: Affordable and Clean Energy
	4.3.5 SDG 11: Sustainable cities and communities



Adjustments to the Network Readiness Index model in 2023

Table A-I.3 provides a summary of adjustments to the NRI 2023 framework. A total of 6 indicators shows adjustments this year. The methodology of four indicators was revised, indicator names changed in the source for two indicators, and the definition was amended for one indicator, adding a more accurate description to the scaling factor.

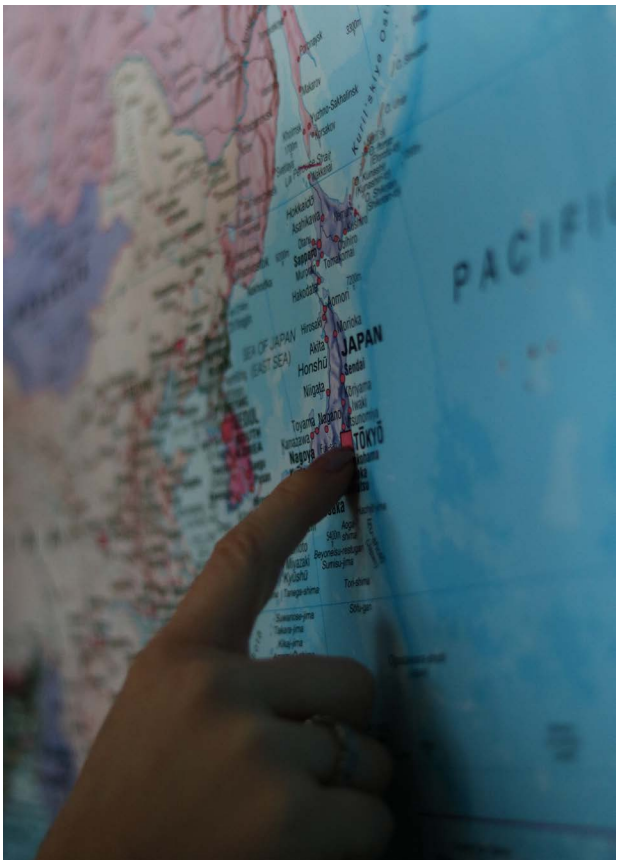


Photo by: luke-jones-RrvEjANGRIM-unsplash

Computation of the NRI

The computation of the NRI utilizes successive aggregations of scores from both the indicator level (i.e., the most disaggregated level) and the overall NRI score. The unweighted arithmetic mean aggregates (i) the individual indicators within each sub-pillar, (ii) the sub-pillars within each pillar, and (iii) the pillars comprising the overall index.

Computation is based on data for all indicators, including confidential data related to indicator 1.2.2 (Internet domain registrations) that ZookNIC kindly provided on the condition of confidentiality. Keeping with this request only scores are provided for this indicator this year.

Table A-I.3 Adjustments to the Network Readiness Index 2023

Variable code	NRI 2022	Adjustment	New code	NRI 2023
1.1.1	Mobile tariffs	Name change at source	1.1.1	Mobile data affordability
1.1.2	Handset prices	Name change at source	1.1.2	Handset affordability
1.2.3	Mobile apps development	Changed methodology	1.1.3	
1.2.4	AI scientific publications	Changed methodology	1.2.4	
2.1.2	ICT skills in the education system	Changed methodology	2.1.2	
4.1.2	High-tech exports	Changed methodology	4.1.2	

Country and data coverage

The inclusion of countries and indicators relies on the double threshold approach. Only countries that could provide data for at least 70% of all indicators earned inclusion to the NRI. In addition, countries needed to pass a sub-pillar level data availability of at least 40% for coverage. With the exception of 1.3.3 Robot density and the new indicator 2.1.6 AI talent concentration introduced this year, indicators with data available for at least 50% of all countries gained inclusion to the NRI

This year, initiatives were undertaken to augment the coverage percentage to 64.9% for 1.1.6 and to 35.1% for 2.1.6, acting as a forward-leaning response to the recommendations posited by the JRC in preceding audits of the NRI. The drive behind these enhancements is twofold: to integrate both indicators more comprehensively, and to preserve them due to their contextual and theoretical significance within the NRI framework. The latter is pivotal as it aligns perfectly with the inherent objectives and principles of the NRI framework, adding layers of depth and relevance to the evolving model. This augmentation is not merely numerical but is instrumental in refining the essence and effectiveness of the framework in capturing the nuanced dimensions of networked readiness. The incorporation of these indicators substantiates the framework's adaptability and resilience, fortifying its position as a robust tool for nuanced analysis in an ever-evolving landscape. Missing values received a "N/A" label and did not count within the computation of scores.

Treatment of series with outliers

Outliers in an indicator can affect ranking results with bias. It is prudent to detect and remove all outliers before the normalization of scores. An applied rule-of-thumb where an absolute value of skewness greater than 2 or a kurtosis greater than 3.5 indicates the presence of outliers.[i]

The treatment of outliers occurs mainly in two ways. First, indicators with no more than four outliers are winsorized, whereby the value affecting the distribution assigns to the next highest/lowest value method. The winsorization process continues until the reported skewness and/or kurtosis fall within the ranges specified above.

Second, indicators with at least five outliers are transformed by natural logarithms according to the following formula:

$$\ln\left[(max \times factor - 1) \times \frac{(value - min)}{(max - min)} + 1\right]$$

For the NRI 2023, outliers were detected in eighteen indicators. Nine indicators[ii] had fewer than five outliers and nine indicators[iii] had five outliers or more.

Normalisation

To make the indicators comparable for data aggregation, they must go through a process of normalization. The NRI applies the Min-max normalization method to ensure all values fall into the [0, 100] range/. For indicators where higher values indicate higher outcomes the following normalization formula is applied:

$$100 \times \frac{(value - min)}{(max - min)}$$

For indicators where higher values imply worse outcomes the following reverse normalization formula is applied:[iv]

$$100 \times \frac{(max - value)}{(max - min)}$$

Caveats on the year-to-year comparison of rankings

The NRI compares the performance of national digital readiness across countries/economies and presents the changes in country/economy rankings over time.

It is important to note that scores and rankings are not directly comparable between one year and another. Each ranking reflects the relative position of a particular economy based on the conceptual framework, the data coverage and the sample of countries/economies of that specific NRI edition, and also reflects changes in the underlying indicators at source and in data availability.

A number of factors influence the year-on-year rankings of an economy:

- the actual performance of the economy in question;
- adjustments made to the NRI framework (changes in indicator composition and measurement revisions);
- data updates, the treatment of outliers and missing values; and
- the inclusion or exclusion of economies in the sample.

Additionally, the following characteristics complicate the time-series analysis based on simple NRI rankings or scores:

Missing values: The NRI produces relative index scores, which means that a missing value for one economy affects the index score of other economies. Because the number of missing values decreases every year, this problem reduces over time.

Reference year: The data underlying the NRI do not refer to a single year but to several years, depending on the latest available year for any given variable. In addition, the reference years for different variables are not the same for each economy, due to measures to limit the number of missing data points.

Normalization factor: Most NRI variables are normalized using GDP, population, or other factor with the intention of enabling cross-economy comparability. However, this implies that year-on-year changes in individual indicators may be driven either by the variable (numerator) or by its normalization factor (denominator).

Consistent data collection: Measuring the change in year-on-year performance relies on the consistent collection of data over time. Changes in the definition of variables or in the data collection process could create movements in the rankings that are unrelated to performance.

A detailed economy study based on the NRI database and the economy profile over time, along with analytical ground work that includes that of actors and decision-makers in the realm of digital transformation, yields the best results in terms of monitoring a country/economy's network readiness as well as for identifying possible improvement channels.

References

Groeneveld, R. A. & Meeden, G. (1984). Measuring skewness and kurtosis. *Journal of the Royal Statistical Society, Series D (The Statistician)*, 33, 391–399.

OECD & EC JRC (2008). *Handbook on constructing composite indicators: Methodology and user guide.* Paris: OECD, available at http://www.oecd.org/std/42495745.pdf

[i] Adopted from Groeneveld & Meeden (1984)

[ii] 1.2.1 GitHub commits, 1.2.2 Internet domain registrations, 1.3.3 Robot density, 2.1.6 AI talent concentration, 2.2.5 GERD performed by business enterprise, 3.2.4 E-commerce legislation, 3.3.4 Gender gap in Internet use, 4.1.2 High-tech exports, 4.1.6 ICT services exports.

[iii] 1.1.3 FTTH/building Internet subscriptions, 1.1.4 Population covered by at least a 3G mobile network, 1.1.5 International Internet bandwidth, 1.2.4 AI scientific publications, 2.1.1 Mobile broadband internet traffic within the country, 2.2.4 Annual investment in telecommunication services, 3.1.1 Secure Internet servers, 4.1.3 PCT patent applications, 4.1.4 Domestic market size.

[iv] For the NRI 2023 reverse normalisation was needed for three indicators: 4.2.3 Income inequality, 4.3.4 SDG 7: Affordable and clean energy and 4.3.5 SDG 11: Sustainable Cities and Communities.

Appendix II: Sources and Definitions

1.1 Access

1.1.1 Mobile tariffs

Mobile tariffs sub-index | 2022

The Mobile Tariffs indicator refers to the Mobile tariffs sub-index included in the Affordability pillar of the *Mobile Connectivity Index* published by the GSM Association. The sub-index relates to the cost of three separate basket profiles that are distinguished in part by usage allowance (100 MB, 500 MB, and 1 GB per month, respectively). Tariffs are given as a percentage of monthly GDP per capita. The primary source for the data is Tarifica (https://tarifica.com/).

Source: GSM Association, The GSMA Mobile Connectivity Index 2023 (http://www.mobileconnectivityindex.com). Data year: 2022.

1.1.2 Handset prices

Cost of cheapest Internet-enabled device (% of monthly GDP per capita) | 2022

As one of the indicators included in the Affordability pillar of the Mobile Connectivity Index published by the GSM Association, the Handset prices indicator relates to the cheapest smartphone or feature phone that allows user access to the Internet. The primary source for the data is Tarifica (https://tarifica.com/).

Source: GSM Association, The GSMA Mobile Connectivity Index 2023 (http://www.mobileconnectivityindex.com). Data year: 2022.

1.1.3 FTTH/building Internet subscriptions

Fibre-to-the-home/building Internet subscriptions (% of GDP) | 2021

Fibre-to-the-home/building Internet subscriptions refers to the number of Internet subscriptions using fibre-to-the-home or fibre-to-the-building; at downstream speeds equal to; or greater than; 256 kbit/s. This should include subscriptions where fibre goes directly to the subscriber's premises or fibre-to-the-building subscriptions that terminate no more than 2 metres from an external wall of the building. Fibre-to-the-cabinet and fibre-to-the-node are excluded.

Source: International Telecommunication Union (ITU), ITU World Telecommunication/ICT Indicators database 2023 (http://www.itu.int/en/ITU-D/Statistics/Pages/publications/wtid.aspx). Data year: 2021.

1.1.4 Population covered by at least a 3G mobile network

Percentage of the population covered by at least a 3G mobile network | 2022

The following indicator refers to the percentage of inhabitants within range of at least a 3G mobile-cellular signal, irrespective of whether or not they are subscribers. Values are calculated by dividing the number of inhabitants covered by at least a 3G mobile-cellular signal by the total population and multiplied by 100.

Source: International Telecommunication Union (ITU), ITU World Telecommunication/ICT Indicators database 2023 (http://www.itu.int/en/ITU-D/Statistics/Pages/publications/wtid.aspx). Data years: 2016-2022.

1.1.5 International Internet bandwidth

International Internet bandwidth (Mbit/s) | 2022

International Internet bandwidth refers to the total used capacity of international Internet bandwidth in megabits per second (Mbit/s). Calculations only include the total usage capacity of all Internet exchanges (locations that exchange Internet traffic) that offer international bandwidth. If capacity is asymmetric and there is more incoming (downlink) than outgoing (uplink) capacity, then the incoming (downlink) capacity is provided.

Note: Significant revisions to data from African economies observed this year in ITU's database.

Source: International Telecommunication Union (ITU), ITU World Telecommunication/ICT Indicators database 2023 (http://www.itu.int/en/ITU-D/Statistics/Pages/publications/wtid.aspx). Data years: 2013-2022.

1.1.6 Internet access in schools

Proportion of primary schools with access to Internet for pedagogical purposes (%) | 2022

The Internet access in schools indicator refers to the share of primary schools with access to the Internet via fixed narrowband, fixed broadband, or mobile networks. Internet for pedagogical purposes refers to web access and communications services through various devices that enhance the teaching and learning of pupils.

Source: UNESCO Institute for Statistics, UIS.Stat (http://data.uis.unesco.org/). Data years: 2012-2022.

1.2 Content

1.2.1 GitHub commits

GitHub commits (per million population, 15–69 years old) | 2022

GitHub is the world's largest host of source code, and a commit is the term used for a saved change on this platform. One or more commits can be saved (or pushed) to projects (or repositories). Thus, "GitHub commit pushes received and sent" refers to the sum of the number of batched changes received and sent by projects on GitHub that are publicly available within a specific economy. Automated activity resulting in non-productive commits is excluded.

Source: GitHub (https://github.com/); and United Nations, Department of Economic and

Social Affairs, Population Division, World Population Prospects 2022 (https://population.un.org/wpp/). Data year: 2022.

1.2.2 Internet domain registrations

Generic Top-Level Domains (gTLDs) and Country Code Top-Level Domains (ccTLDs) per person | 2022

The Internet domain registrations indicator measures the production of Internet content. It refers to two types of top-level domains: generic top-level domains and country-code top-level domains. The gTLDs cover domain names that use .com, .net, .org, .biz, .info, and .mobi. Similar to Ojanperä, Graham and Zook (2019), a small number of countries are excluded because the high volume reported from their ccTLDs is due to the specific meaning of the domain rather than any content produced in the country itself (e.g. the use of Tuvalu.tv domain by the entertainment industry).

Source: Data on Internet domain registrations kindly provided by ZookNIC. World Development Indicators provide data on population. World Bank, World Development Indicators (http://data.worldbank.org/data-catalog/world-development-indicators). Data year: 2022.

1.2.3 Mobile apps development

Global downloads of mobile apps (per billion PPP$ GDP, two-year average) | 2022

Global downloads of mobile apps, by origin of the headquarters of the developer/firm, scaled by PPP$ GDP (billions). Global downloads are compiled by data.ia, public data sources and the company's proprietary forecast model based on data from Google Play Store and iOS App Store in each country. Since data for China are not available for Google Play Store and only for iOS App Store, data from China are treated as missing and classified as "n/a.".

Source: data.ia (formerly App Annie) (www.data.ai/en/); and International Monetary Fund, World Economic Outlook Database, October 2022 (www.imf.org/en/Publications/WEO/weo-database/2022/October). Data years: 2020–2022.

1.2.4 AI Publications

Total number of AI scientific publications, fractional counts (as % of GDP) | 2022

The AI scientific publications indicator measures the total number of AI publications in Elsevier per economy. Any paper with a field of study categorized as "artificial intelligence" and "machine learning" according to the Microsoft Academic Graph (MAG) taxonomy is measured. Results from other fields of study, such as "natural language processing", "speech recognition", and "computer vision" are included if they also belong to the "artificial intelligence" or the "machine learning" fields of study. As such, the results are likely to be conservative. Tagging occurs through a concept detection operation. The Microsoft Academic Graph (MAG) is a heterogeneous graph containing scientific publication records and citation relationships between each publication from authors, institutions, journals, conferences, and fields of study (Sinha et al., 2015; Wang et al., 2019). Reporting occurs as a percentage of an economy's GDP.

Source: OECD.AI Policy Observatory (https://oecd.ai). Data year: 2010-2022.

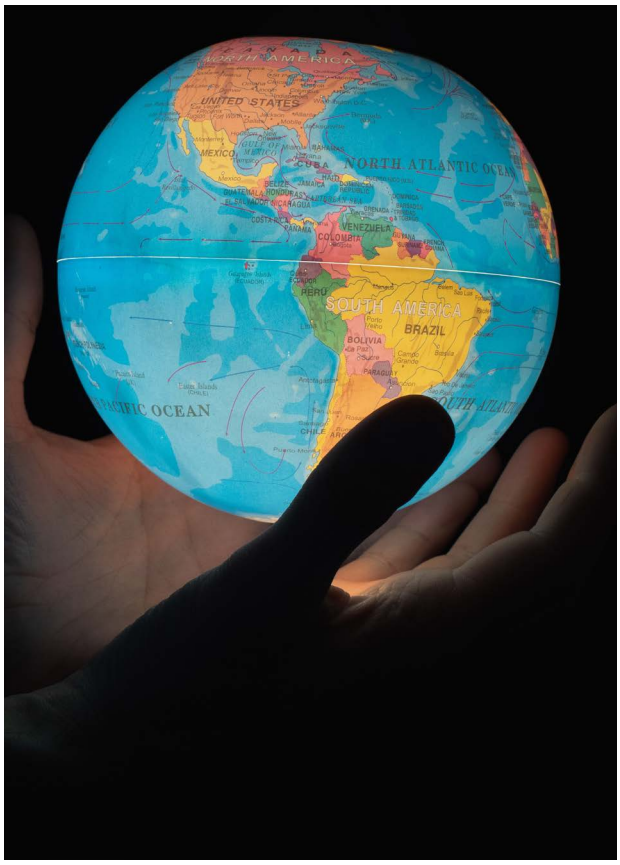


Photo by Greg Rosenke on Unsplash

1.3 Future technologies

1.3.1 Adoption of emerging technologies

Average answer to survey questions concerning the extent to which companies adopt five types of emerging technology | 2023

The annual World Economic Forum's Executive Opinion Survey (EOS) gathers information from business leaders on topics with scarce or non-existent data. It is part of the effort to supplement *The Global Competitiveness Report* in assessing issues that drive national competitiveness.

The Adoption of emerging technologies indicator refers to the average answer of a similarly-worded question posited by the EOS regarding five different emerging technologies (Artificial intelligence, Robotics, App- and web-enabled markets, Big data analytics, and Cloud computing):

"In your country, to what extent are companies adopting Artificial intelligence?" (1: not at all; 7: to a great extent - on par with the most technologically advanced economies).

Note: Special calculation has been used for Uzbekistan, utilizing preliminary data from the WEF's EOS. It is important to highlight that the WEF has exclusively provided 2023 data for Uzbekistan.

Source: World Economic Forum, Executive Opinion Survey 2023 (http://reports.weforum.org). Data year: 2019-2023.

1.3.2 Investment in emerging technologies

Average answer to a survey question concerning the extent that companies invest in emerging technologies | 2017–2018

The annual World Economic Forum's Executive Opinion Survey (EOS) gathers information from business leaders on topics with scarce or non-existent data. It is part of the effort to supplement *The Global Competitiveness Report* in assessing issues that drive national competitiveness.

The Investment in emerging technologies indicator refers to the average answer of a similarly-worded question posited by the EOS regarding five different emerging technologies (Artificial intelligence, Robotics, App- and web-enabled markets, Big data analytics, and Cloud computing):

"In your country, to what extent do companies invest in emerging technologies (e.g., Internet of Things, advanced analytics and artificial intelligence, augmented virtual reality and wearables, advanced robotics, 3D printing)?" [1 = not at all; 7 = to a great extent].

Source: World Economic Forum, Executive Opinion Survey 2017–2018 (http://reports.weforum.org). Data years: 2017-2018.

1.3.3 Robot density

Number of robots in operation per 10,000 employees in the manufacturing industry | 2022

Robot density refers to the estimated number of multipurpose industrial robots per 10,000 persons employed in the manufacturing industry (ISIC rev.4: C). The International Federation of Robotics (IFR) collects country-level data on the operational stock of industrial robots and for certain countries computes robot densities. The annual *World Robotics* report publishes computed robot densities.

Source: Data on robot density and operational stock of industrial robots for 2022 kindly provided by the International Federation of Robotics, IFR (https://ifr.org). Data on employment in manufacturing in the countries for which IFR has not computed robot densities are sourced from the International Labour Organization, ILOSTAT (https://ilostat.ilo.org/). Data year: 2022.

1.3.4 Computer software spending

Total computer software spending (% of GDP) | 2022

Computer software spending refers to the total value of purchased or leased packaged software, including operating systems, database systems, programming tools, utilities, and applications. The indicator excludes expenditures for internal software development and outsourced custom software development. The data combines actual figures and estimates. Reporting occurs as a percentage of an economy's GDP.

Source: S&P Global, Market Intelligence (www.marketplace.spglobal.com/en/datasets). Data year: 2022.

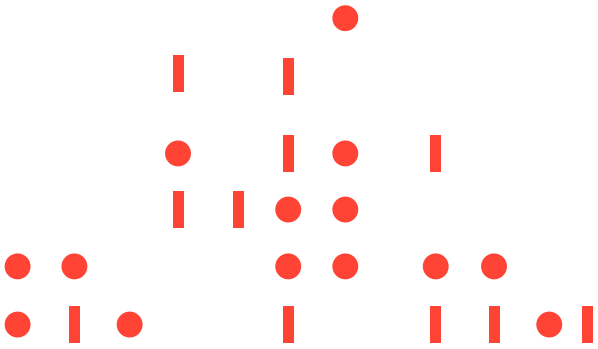


Photo by Good Faces on Unsplash

2nd pillar: People

2.1 Individuals

2.1.1 Mobile broadband internet traffic within the country

Mobile-broadband internet traffic (within the country); in exabytes | 2022

Mobile-broadband Internet traffic (within the country) refers to broadband traffic volumes originated within the country from 3G networks or other more advanced mobile-networks; including 3G upgrades; evolutions or equivalent standards in terms of data transmission speeds. Traffic should be collected and aggregated at the country level for all 3G or more advanced mobile networks within the country. Download and upload traffic should be added up and reported together. Traffic should be measured at the end-user access point. Wholesale and walled-garden traffic should be excluded. The traffic should be reported in exabytes.

To improve data coverage, the NRI 2023 values for Mali and Tajikistan were sourced from 2020, owing to their absence in this year's ITU database.

Source: International Telecommunication Union (ITU), ITU World Telecommunication/ICT Indicators database 2023 (http://www.itu.int/en/ITU-D/Statistics/Pages/publications/wtid.aspx). Data years: 2015-2022.

2.1.2 ICT skills in the education system

Average answer to the question: In your country, to what extent is the workforce proficient in the following skills? Technology skills [1 = Not at all; 7 = To a great extent] | 2023

The annual World Economic Forum's Executive Opinion Survey (EOS) gathers information from business leaders on topics with scarce or non-existent data. It is part of the effort to supplement The Global Competitiveness Report in assessing issues that drive national competitiveness.

The ICT skills indicator refers to the average answer of a similarly-worded question posited by the EOS regarding the digital skills of a country:

"In your country, to what extent is the workforce proficient in the following skills?" "Technology skills" [1 = not at all; 7 = to a great extent].

Source: World Economic Forum, Executive Opinion Survey 2023 (http://reports.weforum.org). Data years: 2023.

2.1.3 Use of virtual social networks

Number of active social media users (% of population) | 2023

The Use of virtual social networks indicator refers to the penetration of active social media users expressed as a percentage of the total population. Original data comes from a variety of sources, including company statements and reports in reputable media.

Source: We Are Social and Hootsuite (2023) Global Digital Report 2023 (https://wearesocial.com/digital-2023). Data year: 2023.

2.1.4 Tertiary enrollment

Gross enrollment ratio, tertiary education (%) | 2022

Tertiary enrollment refers to the ratio of total education enrollment, regardless of age, by the population of the age group that officially corresponds to the expected level of tertiary education. Tertiary education often requires the successful completion of education at the secondary level as a minimum condition of admission. The International Standard Classification of Education (ISCED) defines the standards of the tertiary level.

To enhance data coverage, the NRI 2023 values for Gambia (2012), Paraguay (2010) and Zambia (2012) were included, by extending the cutoff year back to 2010.

Source: UNESCO Institute for Statistics, UIS.Stat (http://data.uis.unesco.org/). Data years: 2010-2022. Paraguay uses data from 2010.

2.1.5 Adult literacy rate

Adult literacy rate (%) | 2021

The Adult literacy rate indicator defines the percentage of the population aged 15 years and over who can read, write, and understand short, simple statements about their everyday life.

Source: UNESCO Institute for Statistics, UIS.Stat (http://data.uis.unesco.org/). Data years: 2010-2021. Bahrain and India use data from 2011. Tajikistan uses data from 2010.

2.1.6 AI talent concentration

AI talent concentration | 2022

A LinkedIn member is considered AI talent if they have explicitly added AI skills to their profile and/or they are occupied in an AI job. The counts of AI talent are used to calculate talent concentration metrics. For example, AI talent concentration at the country level is calculated using the counts of AI talent vis-a-vis the counts of LinkedIn members in that country. As such, AI talent concentration metrics may be influenced by a country's LinkedIn coverage and should be used with caution. For example, as of 2021 1 in every 10 LinkedIn members in India is classified as AI talent, which is a result of LinkedIn's biased coverage in that country.

Since it also encompasses LinkedIn members with AI job titles – as opposed to only LinkedIn members with AI skills on their profiles – AI talent is considered to be a more comprehensive measure than AI skills.

To enhance data coverage, the NRI 2023 values for China (2021) and Colombia (2021) were reintroduced due to the absence of these values in this year's OECD.AI platform.

Source: OECD.AI Policy Observatory (https://oecd.ai). Data year: 2022.

2.2 Businesses

2.2.1 Firms with website

Firms with website (% of total) | 2022

The data for the Firms with website indicator consists of enterprise surveys conducted by the Organisation for Economic Co-operation and Development (OECD) and the World Bank. Data supplied by the OECD informs OECD countries, accession countries, or key partners, while all other country data sources the World Bank.

Source: OECD, ICT Access and Use by Businesses, OECD Telecommunications and Internet Statistics database (https://doi.org/10.1787/9d2cb97b-en); World Bank, Enterprise Surveys (www.enterprisesurveys.org). Data years: 2012-2022. Burkina Faso, Cabo Verde, and Mauritius use data from 2009.

2.2.2 GERD financed by business enterprise

GERD: Financed by business enterprise (% of total GERD) | 2022

The following indicator refers to the Gross expenditure on R&D (GERD) financed by a business enterprise as a percentage of total gross R&D expenditure. GERD or Intramural R&D expenditure consists of all spent funds on R&D performed within a statistical unit or sector of the economy during a specific period, regardless of the funding source.

Source: "UNESCO Institute for Statistics, UIS online database; Eurostat, Eurostat database, 2022; OECD, Main Science and Technology Indicators MSTI database, and Ibero-American and Inter-American Network of Science and Technology Indicators (RICYT), 2022 (2011-22). (http://data.uis.unesco.org; https://ec.europa.eu/eurostat/data/database; https://stats.oecd.org/Index.aspx?DataSet-Code=MSTI_PUB; www.ricyt.org/en/). Data years: 2011-2022. Tajikistan uses data for 2011.

2.2.3 Knowledge intensive employment

Employment in knowledge-intensive services (% of workforce, 15+ years old) | 2022

Sum of people in categories 1 to 3 as a percentage of total people employed, according to the International Standard Classification of Occupations (ISCO). Categories included in ISCO-08 are: 1 Managers; 2 Professionals; 3 Technicians and Associate Professionals. Where ISCO-08 data were not available, ISCO-88 data were used. Categories included in ISCO-88 are: 1 Legislators, senior officials and managers; 2 Professionals; 3 Technicians and associate professionals.

Source: International Labour Organization (ILO), ILOSTAT Database of Labour Statistics (https://ilostat.ilo.org). Data years: 2013–2022.

2.2.4 Annual investment in telecommunication services

Annual investment in telecommunication services (US$) | 2021

The Annual investment in telecommunication services indicator refers to the investments made within the financial year by entities that provide telecommunication networks and/or services (including fixed mobile and Internet services and the transmission of TV signals). Investments are considered any spent funds on the acquisition and upgrading of assets (usually referred to as CAPEX) less disinvestment owing to disposals. Fixed assets include tangible assets such as buildings and networks and intangible assets such as computer software and intellectual property.

The indicator corresponds to the gross fixed capital formation concept defined in the System of National Accounts 2008. The indicator also includes expenditures on initial installations and additions to existing installations where the usage is expected over an extended period of time. It excludes expenditures on fees for operating licenses and the use of radio spectrum. All values are notated in US$.

Due to the volatility of historical data for India in the ITU database, the value presented for this economy is from 2020.

Source: International Telecommunication Union (ITU), ITU World Telecommunication/ICT Indicators database 2023 (http://www.itu.int/en/ITU-D/Statistics/Pages/publications/wtid.aspx). Data years: 2013-2021.

2.2.5 GERD performed by business enterprise

GERD performed by business enterprise (% of GDP) | 2022

The indicator measures the gross expenditure on R&D performed by a business enterprise as a percentage of GDP. For the definition of GERD, see indicator 2.2.2.

Source: "UNESCO Institute for Statistics, UIS online database; Eurostat, Eurostat database, 2022; OECD, Main Science and Technology Indicators MSTI database, 2022 (2013–22). (http://data.uis.unesco.org; https://ec.europa.eu/eurostat/data/database; https://stats.oecd.org/Index.aspx?DataSet-Code=MSTI_PUB). Data years: 2013-2022.

2.3 Governments

2.3.1 Government online services

Government Online Service Index | 2022

The *Government Online Service Index* (OIS) is a primary component of the *E-Government Development Index* (EGDI) that the United Nations Department of Economic and Social Affairs publishes. The OIS assesses the quality of a government's delivery of online services on a 0-to-1 (best) scale. Researchers create the assessment to evaluate "each country's national website in the native language, including the national portal, e-services portal, and e-participation portal, as well as the websites of the related ministries of education, labor, social services, health, finance, and environment, as applicable."

Source: United Nations Department of Economic and Social Affairs (UNDESA), UN E-Government Knowledgebase (https://publicadministration.un.org/egovkb/en-us/). Data year: 2022.

2.3.2 Publication and use of open data

Open Data Barometer | 2018

The Open Data Barometer indicator refers to the fourth edition of the *Open Data Barometer* index that provides a measure of how governments publish and use open data based on readiness (35%), implementation (35%), and impact (30%).[iii]

[iii] Parenthesis note the weight of each dimension.

Source: World Wide Web Foundation (2018), Open Data Barometer 4th Edition – Global Report (https://opendatabarometer.org/4thedition/). Data years: 2016-2018

2.3.3 Government promotion of investment in emerging technologies

Average answer to survey questions concerning the extent to which government foster investment in five types of emerging technology | 2019

The annual World Economic Forum's Executive Opinion Survey (EOS) gathers information from business leaders on topics with scarce or non-existent data. It is part of the effort to supplement *The Global Competitiveness Report* in assessing issues that drive national competitiveness.

The following indicator refers to the simple mean of the average answer of a similarly-worded question posited by the EOS regarding a government's ability to foster investment in five emerging technology sectors (Artificial intelligence, Robotics, App- and web-enabled markets, Big data analytics, and Cloud computing):

"In your country, to what extent does the government foster investment (public and private) in artificial intelligence and machine learning?" (1: not at all; 7: to a great extent)

Source: World Economic Forum, "Executive Opinion Survey 2018–2019." (http://reports.weforum.org). Data years: 2016-2019.

2.3.4 R&D expenditure by governments and higher education

Gross domestic expenditure on R&D performed by government and higher education institutions (% of GDP) | 2022

The following indicator refers to the combined expenditure by governments and higher education institutions on research and development (R&D) as a percentage of GDP. The government sector comprises all central, regional, and municipal government units. It excludes all public enterprises (public enterprises fall under the business enterprise category). Higher education institutions include an organization whose primary focus is on providing formal tertiary education (i.e. levels 5–8 of the International Standard Classification of Education, ISCED). The definition of R&D expenditure involves all current expenditure plus gross fixed capital expenditure for R&D performed by government and higher education institutions, no matter the source of funds.

Source: UNESCO Institute for Statistic, UIS.Stat (http://data.uis.unesco.org/). Data years: 2013-2022.

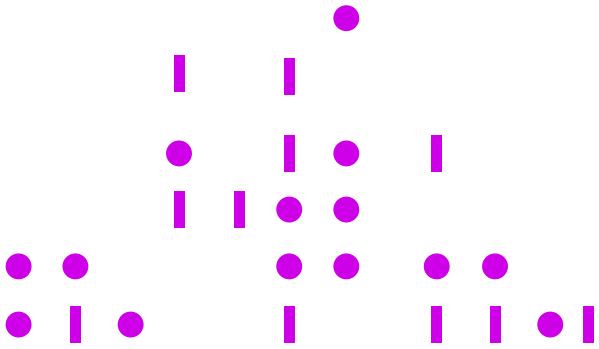


Photo by Standsome Worklifestyle on Unsplash

3rd pillar: Governance

3.1 Trust

3.1.1 Secure Internet servers

Secure Internet servers (per million population) | 2020

Secure Internet servers are servers that use encryption technology in Internet transactions.

Source: World Bank, World Development Indicators (http://data.worldbank.org/data-catalog/world-development-indicators). Data years: 2019-2020.

3.1.2 Cybersecurity

Global Cybersecurity Index | 2020

The *Global Cybersecurity Index* (GCI) measures the level of cybersecurity commitments made by individual countries. It is a composite index consisting of 25 indicators distributed across five main pillars: (1) Legal Measures, (2) Technical Measures, (3) Organizational Measures, (4) Capacity Building Measures, and (5) Cooperation Measures. Scores are standardized to a scale of 0–1.

Source: ITU (2021), Global Cybersecurity Index (GCI) 2020 (https://www.itu.int/epublications/publication/global-cybersecurity-index-2020/en/). Data year: 2020.

3.1.3 Online access to financial account

People who used a mobile phone or the internet to access a financial institution account in the past year (% with a financial institution account, age 15+) | 2017

The Online access to financial account indicator refers to the percentage of people who have a financial institution account that report using a mobile phone or the Internet to access their financial institution account within the past 12 months.

Source: World Bank, Global Findex Database (https://globalfindex.worldbank.org/). Data year: 2017.

3.1.4 Internet shopping

People who used the Internet to buy something online in the past year (%) | 2022

The Internet shipping indicator refers to the percentage of respondents aged 15 years and older who have used the Internet in the past year to purchase goods and services online. The data sources a triennial survey carried out in more than 140 economies.

Source: World Bank, Global Findex Database (https://globalfindex.worldbank.org/). Data years: 2017-2022.

3.2 Regulation

3.2.1 Regulatory quality

Regulatory quality indicator | 2021

The regulatory quality indicator captures the perception of a government's ability to formulate and implement sound policies and regulations that permit and promote private sector development. Scores are standardized to a scale from -2.5 (worst) to 2.5 (best).

Source: World Bank, Worldwide Governance Indicators 2022 Update (www.govindicators.org). Data years: 2013-2021.

3.2.2 ICT regulatory environment

ICT Regulatory Tracker | 2022

The ICT regulatory environment indicator is based on the *ICT Regulatory Tracker* composite index that provides a measure of the existence and features of ICT legal and regulatory frameworks. The index covers 50 indicators distributed across four pillars: (1) Regulatory Authority, (2) Regulatory Mandate, (3) Regulatory Regime, and (4) Competition Framework. Scores are standardized to a scale of 0–2.

Source: International Telecommunication Union (ITU), ICT Regulatory Tracker 2023 (https://www.itu.int/net4/itu-d/irt/). Data year: 2022.

3.2.3 Regulation of emerging technologies

Average answer to survey questions concerning the extent to which the legal framework is adapting to five types of emerging technology | 2020

The annual World Economic Forum's Executive Opinion Survey (EOS) gathers information from business leaders on topics with scarce or non-existent data. It is part of the effort to supplement *The Global Competitiveness Report* in assessing issues that drive national competitiveness.

The Legal framework's adaptability to emerging technologies indicator refers to the simple mean of the average answer of a similarly-worded question posited by the EOS regarding five different emerging technologies (Artificial intelligence, Robotics, App- and web-enabled markets, Big data analytics, and Cloud computing):

"In your country, how adequately is the legal framework adapting to artificial intelligence, robotics, app- and web-enabled markets, big data analytics, and cloud computing? (1: not at all; 7: to a great extent - the legal framework is up-to-date)

Source: World Economic Forum, Executive Opinion Survey 2018-2019 and special calculation (http://reports.weforum.org). Data years: 2017-2018, 2020.

3.2.4 E-commerce legislation

Global Cyberlaw Tracker | 2021

The E-commerce legislation indicator refers to a country's adoption of e-commerce legislation. The *Global Cyberlaw Tracker* provides information on whether a country has adopted legislation or has a draft law pending adoption within four areas: electronic transactions, consumer protection, privacy and data protection, and cybercrime. Scores range from 0 (no legislation) to 4 (adopted legislation in all four areas).

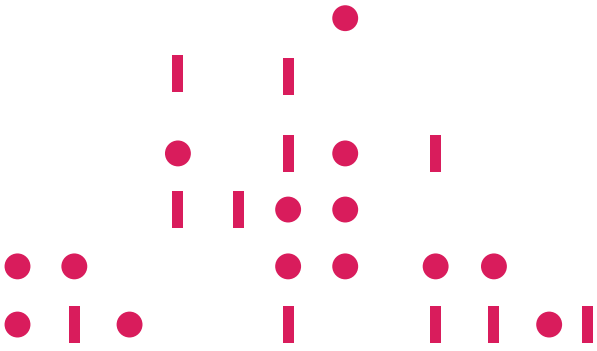
Source: United Nations Conference on Trade and Development (UNCTAD), Global Cyberlaw Tracker (https://unctad.org/en/Pages/DTL/STI_and_ICTs/ICT4D-Legislation/eCom-Global-Legislation.aspx). Data year: 2021.

3.2.5 Privacy protection by law content

Average answer to the question: What does the legal framework to protect Internet users' privacy and their data stipulate? | 2021

The Privacy protection by law content indicator refers to responses on privacy protection given by multiple country experts on a 0-4 scale. With disagreement and measurement error taken into account, aggregated responses compute a probability distribution over country-year scores on a standardized interval scale. Point estimates are the median values of each distribution for every country-year. The scale of a measurement model variable is similar to a normal ("Z") score (e.g. typically between -5 and 5, with 0 approximately representing the mean for all country-years in the sample), though it does not necessarily follow a normal distribution. Data only includes estimates based on at least four ratings.

Source: Mechkova, Valeriya, Daniel Pemstein, Brigitte Seim, and Steven Wilson, (2020) Digital Society Project Dataset v2 (http://digitalsocietyproject.org). Data years: 2018-2021.



3.3 Inclusion

3.3.1 E-Participation

E-Participation Index | 2022

The *E-Participation Index* assesses on a 0-to-1 (best) scale the quality, relevance, and usefulness of government websites. Usefulness refers to a website's ability to provide online information and participatory tools and services to citizens. Countries are benchmarked in three areas within the *E-Participation Index*: e-information, e-consultation, and e-decision-making. As such, the index indicates both the capacity and the willingness of the state to promote citizen participation in deliberative decision-making in public policy. It also indicates the reach of the state's own socially inclusive governance program.

Source: United Nations Department of Economic and Social Affairs (UNDESA), UN E-Government Knowledgebase (https://publicadministration.un.org/egovkb/en-us/). Data year: 2022.

3.3.2 Socioeconomic gap in use of digital payments

Difference between rich and poor income groups that made or received digital payments in the past year (% age 15+) | 2022

The following indicator refers to the share of the poorest 40% and the richest 60% income groups in a country that made or received digital payment within the past 12 months. Made digital payments include the use of "mobile money, a debit or credit card, or a mobile phone to make a payment from an account, or report using the internet to pay bills or to buy something online." Received digital payments include receiving money "directly from or into a financial institution account or through a mobile money account." Final scores express the ratio of the share related to the poorest 40% over the share related to the richest 60%.

Source: World Bank, Global Findex Database (https://globalfindex.worldbank.org/). Data years: 2014-2022.

3.3.3 Availability of local online content

Average answer to the question: In your country, to what extent are Internet content and services tailored to the local population (e.g. in the local language, meeting local demand)? (1 = Not at all; 7 = To a great extent] | 2018–19

The annual World Economic Forum's Executive Opinion Survey (EOS) gathers information from business leaders on topics with scarce or non-existent data. It is part of the effort to supplement *The Global Competitiveness Report* in assessing issues that drive national competitiveness.

Source: World Economic Forum, Executive Opinion Survey 2017–2020 (http://reports.weforum.org). Data years: 2017-2020.

3.3.4 Gender gap in Internet use

Difference between female and male population in using the Internet | 2022

The Gender gap in Internet use indicator refers to the share of women and men in a country that use the Internet. Scores are calculated as the ratio of the share related to the female population over the share related to the male population.

To bolster data coverage, the NRI 2023 values for several countries—including Angola (2014), Australia (2017), Burundi (2017), Botswana (2014), Chile (2017), Cameroon (2017), Egypt (2020), Mozambique (2017), New Zealand (2012), Tanzania (2016), and the United States (2015)—were reintroduced, given their omission from this year's ITU database.

Source: International Telecommunication Union (ITU), ITU World Telecommunication/ICT Indicators database 2023 (http://www.itu.int/en/ITU-D/Statistics/Pages/publications/wtid.aspx). Data years: 2011-2022.

3.3.5 Rural gap in use of digital payments

Difference between the rural population and the total population that made or received digital payments in the past year (% age 15+) | 2021

The following indicator refers to the share of the rural population against a country's total population that made or received digital payments within the past 12 months. Made digital payments include the use of "mobile money, a debit or credit card, or a mobile phone to make a payment from an account, or report using the internet to pay bills or to buy something online." Received digital payments include receiving money "directly from or into a financial institution account or through a mobile money account." Final scores express as a ratio the share related to the rural population over the share related to the total population.

Source: World Bank, Global Findex Database (https://globalfindex.worldbank.org/). Data year: 2017-2021.

Photo by Possessed Photography on Unsplash

4.1 Economy

4.1.1 High-tech and medium-high-tech manufacturing

High-tech and medium-high-tech manufacturing (% of total manufacturing output) | 2021

High-technology and medium-high-technology output as a percentage of total manufacturing output, on the basis of the OECD classification of Technology Intensity Definition (https://www.oecd.org/sti/ind/48350231.pdf), itself based on International Standard Industrial Classification (ISIC) Revision 4 and Revision 3, and using data from the INDSTAT 2 and INDSTAT 4 databases of the United Nations Industrial Development Organization (UNIDO).

Source: United Nations Industrial Development Organization (UNIDO), Industrial Statistics Database INDSTAT 2 2023 and INDSTAT 4 2023 (https://stat.unido.org). Data years: 2013–2021.

4.1.2 High-tech exports

High technology exports (% of total trade) | 2021

High-technology exports as a percentage of total trade. Data for Hong Kong, China are corrected for re-exports using data from the Trade Data Monitor.

Source: United Nations Comtrade Database (http://comtrade.un.org); World Trade Organization and United Nations Conference on Trade and Development (www.wto.org/english/thewto_e/coher_e/wto_unctad_e.htm); and Trade Data Monitor (www.tradedatamonitor.com). Data years: 2015–2021.

4.1.3 PCT patent applications

Number of Patent Cooperation Treaty (PCT) applications (per billion PPP$ GDP) | 2022

A PCT application refers to an international patent application filed through the WIPO-administered Patent Cooperation Treaty. The PCT system makes it possible to seek patent protection for an invention simultaneously in a number of countries by filing a single international patent application. The origin of PCT applications is defined by the residence of the first-named applicant. Data are available only for those economies which are PCT Contracting States (157 to date). Data are scaled by PPP$ GDP (billions).

Source: World Intellectual Property Organization, Intellectual Property Statistics (https://www.wipo.int/ipstats); and International Monetary Fund, World Economic Outlook Database, October 2022 (https://www.imf.org/en/Publications/WEO/weo-database/2022/October). Data year: 2021-2022.

4.1.4 Domestic market size

Domestic Market Size | 2022

The domestic market size is measured by GDP based on the PPP valuation of country GDP, in current international dollars (billions).

Source: International Monetary Fund, World Economic Outlook Database, October 2022 (https://www.imf.org/en/Publications/WEO/weo-database/2021/October). Data year: 2020-2022.

4.1.5 Prevalence of gig economy

Average answer to the question: In your country, to what extent is the online gig economy prevalent? [1 = Not at all; 7 = To a great extent] | 2020

The annual World Economic Forum's Executive Opinion Survey (EOS) gathers information from business leaders on topics with scarce or non-existent data. It is part of the effort to supplement The Global Competitiveness Report in assessing issues that drive national competitiveness. The gig economy refers to a labor market specific to digital platforms and work arrangements focused on short-term contracts and task-based work.

Source: World Economic Forum, Executive Opinion Survey 2017–2020 (http://reports.weforum.org). Data years: 2017-2020.

4.1.6 ICT services exports

Telecommunications, computers, and information services exports (% of total trade) | 2021

Telecommunications, computer and information services exports as a percentage of total trade according to the Extended Balance of Payments Services Classification EBOPS 2010, coded SI: Telecommunications, computer, and information services. Values are based on the classification of the sixth (2009) edition of the International Monetary Fund's Balance of Payments and International Investment Position Manual and Balance of Payments database.

Source: World Trade Organization and United Nations Conference on Trade and Development, Trade in Commercial Services database (https://stats.wto.org). Data years: 2014–2021.

Photo by Lukas Zischke on Unsplash

4.2 Quality of Life

4.2.1 Happiness

Happiness score (life ladder) | 2022

Happiness refers to the national average response to the following survey question included in the Gallup World Poll: "Please imagine a ladder, with steps numbered from 0 at the bottom to 10 at the top. The top of the ladder represents the best possible life for you and the bottom of the ladder represents the worst possible life for you. On which step of the ladder would you say you personally feel you stand at this time?" The indicator is also known as the Cantril life ladder, life ladder, or subjective well-being.

Source: The Gallup World Poll (https://www.gallup.com/analytics/232838/world-poll.aspx), sourced from Helliwell, John F., Richard Layard, Jeffrey Sachs, and Jan-Emmanuel De Neve, eds. 2020. World Happiness Report 2020, New York: Sustainable Development Solutions Network (https://worldhappiness.report/). Data years: 2011-2022.

4.2.2 Freedom to make life choices

Freedom to make life choices score | 2022

Freedom to make life choices refers to the national average response to the following survey question included in the Gallup World Poll: "Are you satisfied or dissatisfied with your freedom to choose what you do with your life?"

Source: The Gallup World Poll (2005–2019) (https://www.gallup.com/analytics/232838/world-poll.aspx), sourced from Helliwell, John F., Richard Layard, Jeffrey Sachs, and Jan-Emmanuel De Neve, eds. 2020. World Happiness Report 2020, New York: Sustainable Development Solutions Network (https://worldhappiness.report/). Data years: 2011-2022.

4.2.3 Income inequality

Gini index | 2022

The Gini index is a measure of income inequality within an individual economy. At a technical level, it is based on a Lorenz curve that "plots the cumulative percentages of total income received against the cumulative number of recipients." The Gini index also refers to the area between the Lorenz curve and the (hypothetical) line of perfect equality. The scale of the Gini index ranges from 0 (perfect equality) to 100 (perfect inequality).

Source: World Bank, World Development Indicators (http://data.worldbank.org/data-catalog/world-development-indicators). Data years: 2012-2022.

4.2.4 Healthy life expectancy at birth

Healthy life expectancy at birth (years) | 2019

The Healthy life expectancy at birth indicator expresses the "average number of years that a person can expect to live in 'full health' by taking into account years lived in less than full health due to disease and/or injury." The number of years lost due to ill health in a country is estimated by the disability rate per capita (adjusted for independent comorbidity) broken down by age and sex.

Source: World Health Organization, Global Health Observatory (GHO) Database (https://www.who.int/gho). Data year: 2019.

Photo by Nathana Rebouças on Unsplash

Photo by Prado on Unsplash

4.3 SDG Contribution

4.3.1 SDG 3: Good Health and Well-Being

Universal health coverage | 2021

The following indicator refers to the Universal health coverage (UHC) service coverage index and is one of the official indicators related to SDG 3: Ensure healthy lives and promote well-being for all at all ages (indicator 3.8.1). The UHC service coverage index encompasses essential health services that include reproductive, maternal, newborn and child health, infectious diseases, service capacity and access, and non-communicable diseases among the general and the most disadvantaged population. Scores report on a scale of 0–100 and compute the geometric mean of 14 tracer indicators related to health service coverage. The tracer indicators on service coverage compile into four components: (1)Reproductive, maternal, newborn and child health, (2) Infectious diseases, (3) Noncommunicable diseases (4) Service capacity and access.

Source: World Health Organization. Tracking universal health coverage: 2021 Global Monitoring Report, Geneva, WHO 2021. Sourced from United Nations, Open SDG Data Hub (http://www.sdg.org). Data year: 2021.

4.3.2 SDG 4: Quality Education

PISA average scores in reading, mathematics, and science | 2018

PISA is the OECD's (Organisation for Economic Co-operation and Development) Programme for International Student Assessment. PISA measures 15-year-olds' ability to use their reading, mathematics and science knowledge skills. Results from PISA indicate the quality and equity of learning outcomes attained around the world. The 2018 PISA survey is the seventh round of the triennial assessment. The indicator is built using the average of the reading, mathematics and science scores for each country. PISA scores are set in relation to the variation in results observed across all test participants in a country. There is, theoretically, no minimum or maximum score in

PISA; rather, the results are scaled to fit approximately normal distributions, with means around 500 score points and standard deviations around 100 score points. The 2018 scores for China correspond to the provinces/municipalities of Beijing, Shanghai, Jiangsu and Zhejiang only. The 2018 scores for Azerbaijan correspond only to the capital Baku. The 2018 average scores for Spain are based only on the scores for mathematics and science, as the reading scores were not published by the OECD due to implausible student response behavior.

Source: OECD Programme for International Student Assessment (PISA) (https://www.oecd.org/pisa/). Data years: 2015–2018.

4.3.3 SDG 5: Women's economic opportunity

Women Business and the Law Index Score (scale 1-100) | 2023

Women, Business and the Law tracks progress toward legal equality between men and women in 190 economies. Data are collected with standardized questionnaires to ensure comparability across economies. Questionnaires are administered to over 2,000 respondents with expertise in family, labor, and criminal law, including lawyers, judges, academics, and members of civil society organizations working on gender issues. Respondents provide responses to the questionnaires and references to relevant laws and regulations. The Women, Business and the Law team collects the texts of these codified sources of national law - constitutions, codes, laws, statutes, rules, regulations, and procedures - and checks questionnaire responses for accuracy. Thirty-five data points are scored across eight indicators of four or five binary questions, with each indicator representing a different phase of a woman's career. Indicator-level scores are obtained by calculating the unweighted average of the questions within that indicator and scaling the result to 100. Overall scores are then calculated by taking the average of each indicator, with 100 representing the highest possible score.

Source: World Bank: Women, Business and the Law (https://wbl.worldbank.org/). Data year: 2023.

4.3.4 SDG 7: Affordable and Clean Energy

Energy intensity | 2021

The Affordable and Clean Energy indicator refers to the energy intensity level of primary energy (defined in megajoules per constant 2011 purchasing power parity GDP) and is an official indicator related to SDG 7: Ensure access to affordable, reliable, sustainable, and modern energy for all (indicator 7.3.1).

Source: Energy Balances, UN Statistics Division (2021) and IEA (2021), World Energy Balances. Sourced from United Nations, Open SDG Data Hub (http://www.sdg.org). Data year: 2021.

4.3.5 SDG 11: Sustainable Cities and Communities

Urban safety and sustainability | 2021

Two indicators capture the safety and sustainability of cities: urban pollution and household. Urban pollution officially relates to SDG 11: Make cities and human settlements inclusive, safe, resilient, and sustainable (indicator 11.6.2) and is measured by the annual mean concentration of fine particulate matter in urban areas less than 2.5 microns in diameter. Mortality rate attributed to household and ambient air pollution is indicator 3.9.1 in the SDG and it further measures mortality attributable to the joint effects of household and ambient air pollution can be expressed as : Number of deaths Death rate Death rates are calculated by dividing the number of deaths by the total population (or indicated if a different population group is used, e.g. children under 5 years). Evidence from epidemiological studies have shown that exposure to air pollution is linked, among others, to the important diseases taken into account in this estimate: Acute respiratory infections (estimated for all ages); Cerebrovascular diseases in adults (estimated above 25 years); Ischaemic heart diseases in adults (estimated above 25 years); Chronic obstructive pulmonary disease in adults (estimated above 25 years); and Lung cancer in adults (estimated above 25 years).

Source: World Health Organization, Global Health Observatory (GHO) Database (https://www.who.int/data/gho/data/indicators/). Data year: 2021.

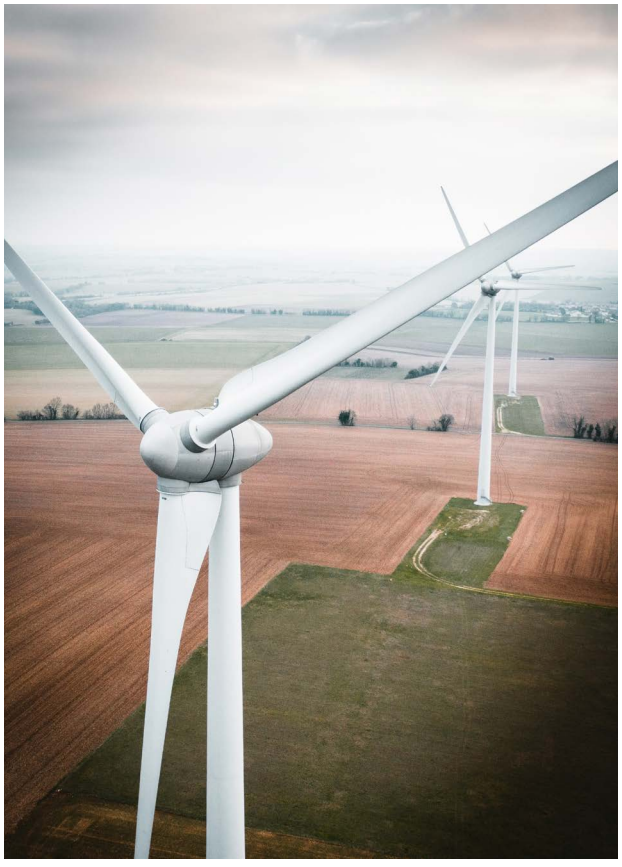


Photo by Gonz DDL on Unsplash

Appendix III: JRC Statistical Audit of the 2023 Network Readiness Index

Ravanos, P.
Kovacic, M.
Caperna, G.

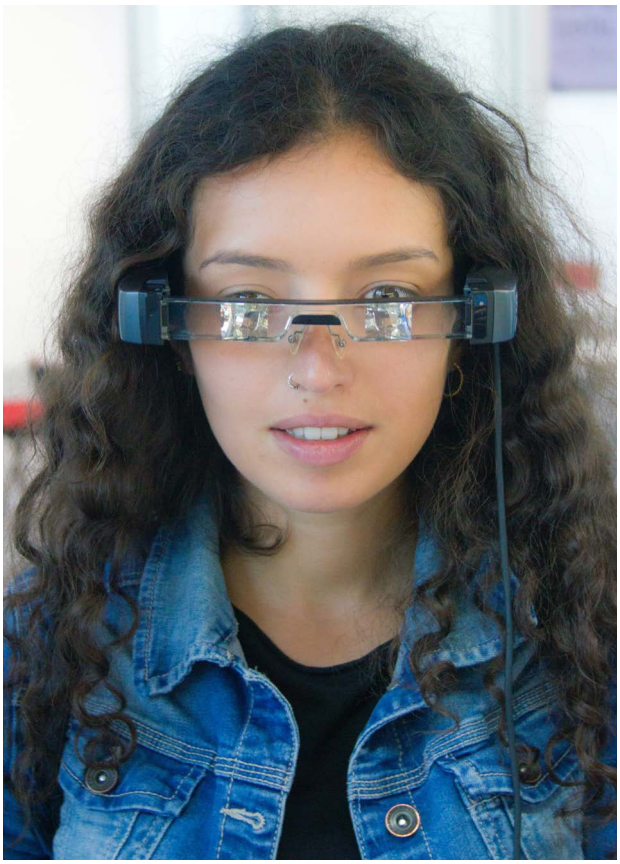


Photo by Quang Tri NGUYEN on Unsplash

1. Introduction

The Network Readiness Index (NRI) was first published in 2002 by the World Economic Forum as part of the Global Information Technology Report. Over the last two decades, the NRI has provided a holistic view of how economies can deploy technology to enhance development and global competitiveness.

The NRI 2023's overall structure is the same as that of the NRI 2022. The index consists of four pillars (Technology, People, Governance, and Impact) that make up the fundamental dimensions of network readiness. Each of the fundamental pillars is divided into additional sub-pillars, which are further subdivided into a total of 58 indicators. The current version of the index has been subject to a few adjustments. In particular, the methodology of four indicators was revised, while two indicators changed name at source. Each pillar has the same weight in the computation of the index. All pillars are composed of three sub-pillars that are weighted equally. The number of indicators making up each sub-pillar vary from four to six. Although they are equally weighted in their respective sub-pillars, the different number of indicators within sub-pillars results into a different contribution of each individual indicator in the overall index. The inclusion of countries and indicators relied on a double threshold approach (70% coverage at the pillar level, and 40% coverage at the sub-pillar level), resulting in a total of 134 countries. Compared to the 2022 edition of the Index, three new countries were included while no country was excluded.

The European Commission's Competence Centre on Composite Indicators and Scoreboards (COIN) at the Joint Research Centre (JRC) has been invited for the third time to audit the index. As in the previous two editions, the present JRC-COIN audit focuses on the statistical soundness of the multi-level structure of the index as well as on the impact of key modelling assumptions on the results. The independent statistical assessment of the NRI 2022 provided by the JRC-COIN guarantees the transparency and reliability of the index for both policymakers and other stakeholders, thus facilitating more accurate priority setting and policy formulation in the respective field.

The JRC assessment of the NRI 2023 presented here focuses on two main issues: the statistical coherence of the structure, and the impact of key modelling assumptions. The statistical analysis is based on the adequacy of aggregating indicators into pillars, and pillars into the overall index.

As in the past NRI reports, the JRC-COIN analysis complements the reported country rankings for the NRI index 2022 with simulated intervals, in order to better reflect the robustness of these ranks to the modelling choices made by the NRI developers. Finally, the JRC-COIN analysis includes an assessment of the added value of the NRI 2022 and a measure of distance to the best-practice frontier of network readiness by using data envelopment analysis.

2. Conceptual framework

The definition of a clear and transparent conceptual framework is one of the most important steps in the construction of a composite indicator. The NRI 2023 is a multidimensional index comprising four pillars: *Technology*; *People*; *Government*; and *Impact*. Each pillar is further partitioned into three sub-pillars, each containing a different number of indicators (for a total of 58).

The structure of the NRI 2023 is summarized in **Table 1**. The selection of indicators was based on their conceptual relevance, literature reviews, expert opinions, and country coverage. Compared to NRI 2022, the methodology of four indicators was revised and two indicators changed name. The last column of **Table 1** provides a summary of adjustments to the NRI 2023 framework.

Even though the aim of this statistical audit is not to address the conceptual relevance of the indicators underpinning the framework, it is worth noting that the developers have used a parsimonious approach by selecting a rather balanced number of indicators across pillars and sub-pillars.

Table 1. Conceptual Framework of the NRI 2023

Pillar	Sub-pillar	Indicator	Note
1. Technology	1.1 Access	1.1.1 Mobile tariffs	name change
		1.1.2 Handset prices	name change
		1.1.3 FTTH/building Internet subscriptions	methodology revision
		1.1.4 Population covered by at least a 3G mobile network	
		1.1.5 International Internet bandwidth	
		1.1.6 Internet access in schools	
	1.2 Content	1.2.1 GitHub commits	
		1.2.2 Internet domain registrations	
		1.2.3 Mobile apps development	
		1.2.4 AI scientific publications	methodology revision
	1.3 Future Technologies	1.3.1 Adoption of emerging technologies	
		1.3.2 Investment in emerging technologies	
		1.3.3 Robot density	
		1.3.4 Computer software spending	
2. People	2.1 Individuals	2.1.1 Active mobile broadband subscriptions	
		2.1.2 ICT skills in the education system	methodology revision
		2.1.3 Use of virtual social networks	
		2.1.4 Tertiary enrollment	
		2.1.5 Adult literacy rate	
		2.1.6 AI talent concentration	
	2.2 Businesses	2.2.1 Firms with website	
		2.2.2 GERD financed by business enterprise	
		2.2.3 Professionals	
		2.2.4 Annual investment in telecommunication services	
		2.2.5 GERD performed by business enterprise	
	2.3 Governments	2.3.1 Government online services	
		2.3.2 Publication and use of open data	
		2.3.3 Government promotion of investment in emerging technologies	
		2.3.4 R&D expenditure by governments and higher education	

Pillar	Sub-pillar	Indicator	Note
3. Governance	3.1 Trust	3.1.1 Secure Internet servers	
		3.1.2 Cybersecurity	
		3.1.3 Online access to financial account	
		3.1.4 Internet shopping	
	3.2 Regulation	3.2.1 Regulatory quality	
		3.2.2 ICT regulatory environment	
		3.2.3 Regulation of emerging technologies	
		3.2.4 E-commerce legislation	
		3.2.5 Privacy protection by law content	
	3.3 Inclusion	3.3.1 E-Participation	
		3.3.2 Socioeconomic gap in use of digital payments	
		3.3.3 Availability of local online content	
		3.3.4 Gender gap in Internet use	
		3.3.5 Rural gap in use of digital payments	
4. Impact	4.1 Economy	4.1.1 High-tech and medium-high-tech manufacturing	
		4.1.2 High-tech exports	methodology revision
		4.1.3 PCT patent applications	
		4.1.4 Domestic market size	
		4.1.5 Prevalence of gig economy	
		4.1.6 ICT services exports	
	4.2 Quality of Life	4.2.1 Happiness	
		4.2.2 Freedom to make life choices	
		4.2.3 Income inequality	
		4.2.4 Healthy life expectancy at birth	
	4.3 SDG Contribution	4.3.1 SDG 3: Good Health and Well-Being	
		4.3.2 SDG 4: Quality Education	
		4.3.3 SDG 5: Women's economic opportunity	
		4.3.4 SDG 7: Affordable and Clean Energy	
		4.3.5 SDG 11: Sustainable Cities and Communities	

Source: Developers of the index and the European Commission's Joint Research Centre, 2023.

3. Data quality and availability

a. Treatment of missing data

Regarding data coverage, the general practice is to establish a threshold above which an indicator is excluded from the framework. For the NRI 2023 development, the inclusion of countries and indicators is based on the "double threshold" approach. In terms of country coverage, this means that only countries with data available for at least 70% of all indicators are included in the NRI 2023. In addition, countries need to pass a sub-pillar level data availability of at least 40%. In terms of indicator coverage, only indicators with availability of at least 50% of countries are included in the NRI 2023, with two exceptions, namely the indicator "Robot density" (i.1.3.3) with available data for 42% of the countries, and "AI talent concentration" (i2.1.6) characterized by a very high incidence of missing values (69%).

Despite the absence of an absolute golden standard, in the statistical assessment conducted for the previous version of the NRI in 2022, the JRC-COIN suggested including only indicators with a maximum of one-third of missing values (33%). However, when an indicator represents a very specific and central concept, a looser threshold of 40% missing countries could also be integrated into the structure. In this respect, indicators i2.1.6 and i1.3.3 generate some concerns since the incidence of missing values is very high and well above the suggested exceptional lower limit of 40%. In light of this evidence (and some additional concerns that will be raised in the rest of this statistical audit), the JRC – COIN suggests considering the replacement or the exclusion of these indicators from future editions of the index -if data coverage cannot be improved- since their role in the composite may be unpredictable.

Moreover, the following indicators should be taken under observation as well, with the aim of improving their coverage or excluding/modifying them in future editions of the index (% of missing values in parenthesis):

- i1.1.6 International Internet bandwidth (35.1%);
- i2.1.6. Internet access in schools (64.9%)
- i4.3.2. SDG4 Quality education (43.3%).

The audit also examined the presence of outliers that could potentially bias the effect of the indicators on the aggregates. JRC-COIN recommends an approach for outlier identification based on the values of skewness and kurtosis,[27] *i.e.,* when the variables simultaneously have an absolute skewness higher than 2.0 and a kurtosis higher than 3.5.

The developers, following the approach suggested by JRC-COIN, detected outliers in 18 indicators, nine of which had fewer than five outliers and nine had five or more outliers. Prior to normalisation, these were treated according to the following rule: indicators with no more than four outliers were winsorised; those with five or more outliers were transformed by natural logarithms using the following mathematical formula:

$$\widetilde{x_i} = ln\ ln\left[\left((x_i - 1)\frac{x_i - x_i}{x_i - x_i}\right) + 1\right]$$

where refers to the raw value of indicator x for country I and to the treated value of that indicator for the same country.

The approach followed by developers to treat the outliers is in line with the best practices suggested by JRC-COIN. The examination of the outlier treatment process by the JRC-COIN gives rise to two suggestions to the NRI developers: *First*, there are three indicators (i1.1.4 "Population covered by at least a 3G mobile network", i1.2.4 "AI scientific publications", and i2.2.4 "Annual investment in telecommunication services") for which the normalized data still have an absolute skewness higher than 2.0 and a kurtosis higher than 3.5 (**Table 2**). Two of these indicators (i1.2.4 and i2.2.4) show negative skewness, which suggests that the minimum value of the indicators is far away from the rest of the distribution, while indicator i1.2.4 shows a positive skewness. The emergence of normalized indicators still containing possible outliers –as evident from the aforementioned rule of thumb- was highlighted in the two previous audits of the NRI by the JRC-COIN in 2021 and 2022 (Caperna and Kovacic, 2022), in which it was suggested to consider such indicators as good candidates for further refinement of the index. This suggestion was based on a sensitivity analysis conducted by the JRC-COIN, which showed that the impact of excluding these indicators in the ranking of the NRI is rather small. Following this suggestion, we still believe it is reasonable to take this advice into account for next Network Readiness Index updates.

Second, the indicator i3.2.4 "E-commerce legislation" was correctly identified as one of those having outliers and was treated with winsorisation. However, this indicator is ordinal and takes integer values from zero to four. In particular, there are two countries with values equal to zero for this indicator, which were considered as outliers. In ordinal variables however, the risk of actual outliers is rather low, since there are predetermined values assigned to each country within a certain range. As such, a suggestion would be to consider not treating this indicator in future versions of the Network Readiness Index.

b. Normalisation

The indicators are rescaled to a 0-100 scale using the well-established formula of MIN-MAX, with higher values denoting better performances. This is a common and usually desired practice in the construction of composite indicators. The normalisation is done using all of the countries for which data are available in order to reflect more closely the global situation for each indicator. The reverse normalization formula is applied to indicators where higher values imply worse outcomes. As in the previous edition of the index, reverse normalisation was needed for three indicators: i4.2.3 ("Income inequality"), i4.3.4 ("SDG 7: Affordable and clean energy") and i4.3.5 ("SDG 11: Sustainable Cities and Communities").

Table 2 Summary statistics of indicators comprised in the NRI 2023

Indicator	N	Missing	Mean	Min	Max	Std	Skew	Kurt
i1.1.1	134	0	57.4	0	100	25.2	-0.431	-0.683
i1.1.2	134	0	49.3	0	100	23.3	0.104	-0.676
i1.1.3	125	6.7	31	0	100	18.9	0.72	0.633
i1.1.4	134	0	96.2	0	100	11.1	-6.08	45.6
i1.1.5	134	0	70.7	0	100	12.2	-1.41	7.91
i1.1.6	87	35.1	62	0	100	38.8	-0.393	-1.52
i1.2.1	134	0	20.4	0	100	27.1	1.52	1.29
i1.2.2	134	0	16.1	0	100	25.3	1.93	2.92
i1.2.3	122	9	63.6	0	100	16.4	-1.52	3.36
i1.2.4	132	1.5	11.6	0	100	16.2	2.63	9.13
i1.3.1	127	5.2	49.9	0	100	22.6	0.271	-0.411
i1.3.2	132	1.5	44.2	0	100	21	0.597	-0.233
i1.3.3	56	58.2	19.1	0	100	22.6	1.9	4.19
i1.3.4	128	4.5	24.2	0	100	20.6	1.01	0.597
i2.1.1	121	9.7	17.7	0	100	19.4	1.72	3.45
i2.1.2	106	20.9	53.5	0	100	21.5	-0.156	-0.545
i2.1.3	134	0	53	0	100	27.6	-0.644	-0.94
i2.1.4	131	2.2	31	0	100	21.1	0.302	-0.481
i2.1.5	106	20.9	82.5	0	100	21.8	-1.76	2.91
i2.1.6	47	64.9	25.9	0	100	26	1.98	3.53
i2.2.1	112	16.4	53.1	0	100	25.2	-0.134	-0.992
i2.2.2	100	25.4	41.1	0	100	28.9	0.0585	-1.13
i2.2.3	128	4.5	37	0	100	25.6	0.464	-0.9
i2.2.4	124	7.5	78	0	100	11.3	-3.15	19.1
i2.2.5	92	31.3	17.9	0	100	22.5	1.67	2.65
i2.3.1	133	0.7	61.7	0	100	23	-0.444	-0.705
i2.3.2	105	21.6	37.2	0	100	26.1	0.728	-0.281
i2.3.3	126	6	41.6	0	100	22.2	0.466	-0.175
i2.3.4	115	14.2	17.8	0	100	19.6	1.73	3.15
i3.1.1	134	0	55.7	0	100	23.6	-0.0307	-1.04
i3.1.2	133	0.7	66.8	0	100	31.1	-0.712	-0.937
i3.1.3	126	6	35	0	100	24.9	0.809	-0.23
i3.1.4	129	3.7	34.9	0	100	29.9	0.574	-1.07
i3.2.1	134	0	53.5	0	100	21	0.216	-0.727
i3.2.2	134	0	77.4	0	100	18.1	-1.82	4.69
i3.2.3	120	10.4	47.4	0	100	24.8	0.00589	-0.803
i3.2.4	133	0.7	83.7	0	100	25.8	-1.68	2.38

Indicator	N	Missing	Mean	Min	Max	Std	Skew	Kurt
i3.2.5	134	0	61.9	0	100	21.4	-0.577	-0.168
i3.3.1	133	0.7	53.2	0	100	24.2	0.000764	-0.968
i3.3.2	131	2.2	70.9	0	100	22.7	-0.627	-0.315
i3.3.3	133	0.7	58.8	0	100	23.9	-0.241	-0.856
i3.3.4	109	18.7	61.9	0	100	19.7	-1.98	3.62
i3.3.5	126	6	58.4	0	100	20.4	-0.849	0.157
i4.1.1	108	19.4	31.9	0	100	22.2	0.654	-0.239
i4.1.2	131	2.2	19.1	0	100	21.8	1.88	3.85
i4.1.3	119	11.2	15.9	0	100	24.6	1.86	2.72
i4.1.4	134	0	52.8	0	100	17.7	0.0263	0.195
i4.1.5	126	6	44.5	0	100	22.2	0.273	-0.461
i4.1.6	134	0	20.6	0	100	22.7	1.88	3.74
i4.2.1	130	3	60	0	100	21.8	-0.47	-0.507
i4.2.2	130	3	70.2	0	100	19.5	-1.11	1.37
i4.2.3	116	13.4	64.2	0	100	20.4	-0.709	0.32
i4.2.4	133	0.7	68.2	0	100	20.4	-0.787	0.0443
i4.3.1	133	0.7	64.7	0	100	24	-0.641	-0.514
i4.3.2	76	43.3	49.2	0	100	21.8	-0.183	-0.768
i4.3.3	134	0	73.7	0	100	21.7	-1.24	1.62
i4.3.4	134	0	67.4	0	100	16.7	-1.46	2.83
i4.3.5	133	0.7	63.5	0	100	22.6	-0.281	-0.725

Note: The cells with the percentage of missing values exceeding 33%, as well as those with the values of skewness and kurtosis simultaneously exceeding the threshold are written in light red.

4. Statistical coherence

The assessment of statistical coherence consists of a multi-level analysis of the correlations of indicators, and a comparison of NRI 2023 rankings with their constituent goals.[28]

a. Correlation analysis

The statistical coherence of an index should be considered a necessary but not sufficient condition for a sound index. Given that the statistical analysis is mostly based on correlations, the correspondence of every index to a real-world phenomenon needs to be critically addressed by developers and experts, because "correlations do not necessarily represent the real influence of the individual indicators on the phenomenon being measured" (OECD and JRC, 2008).[29] This influence relies on the interplay between both conceptual and statistical soundness. The degree of coherence between the conceptual framework and the statistical structure of the data is an important factor for the reliability of an index.

Correlation analysis is used to assess the extent to which the observed data supports the conceptual framework. Within each level of the index, there should ideally be positive significant correlations. The JRC-COIN recommends a correlation threshold of 0.3 above which the correlation is considered high enough to say that two elements share a significant amount of their variability. The framework should avoid redundancy, which can be identified by very high correlations (>=0.92). This is due to the fact that if two indicators are collinear, and it may result in double counting (and thus over-weighting) of the same phenomenon.

In what follows, we report the correlations between indicators in the same pillar, between indicators and their aggregates (sub-pillar, pillars, and NRI 2023), and finally between sub-pillars, pillars and the NRI 2023 index.

Correlation analysis between indicators and aggregates

Figure 1 shows the correlation coefficients between indicators within the same pillar. Boxes within each pillar identify indicators grouped into respective sub-pillars. The correlations within the "Technology pillar" (i1), as well as in the respective sub-pillars, are mostly positive and above the threshold level (0.30), with the exception of the "Content" (i1.1) sub-pillar, where the correlation of i.1.1.3 ("FTTH/building Internet subscriptions") is above the suggested threshold only with the indicators i1.1.1 ("Mobile tariffs") and 1.1.5 ("International Internet bandwidth"). This evidence may suggest that the i1.1.3 indicator does not fully cooperate with the others, which could reduce the impact of the aggregate to which it belongs in the following aggregation steps. Indeed, as emerges from **Figure 2**, the correlation between i.1.1.3 and its corresponding pillar and NRI 2023 is relatively low (0.38 and 0.34 respectively).

As for the "People pillar" (i2), the correlation structure for two indicators within the "Individuals" sub-pillar (i2.1) is weak and often not significantly different from zero (empty cells). Moreover, the indicator i2.1.6 ("AI talent concentration") negatively correlates with i2.1.5 ("Adult literacy rate") and does not significantly differ from zero for the other indicators, with the exception of i.2.1.1 ("Mobile broadband internet traffic within the country"), where it is positive and statistically significant.

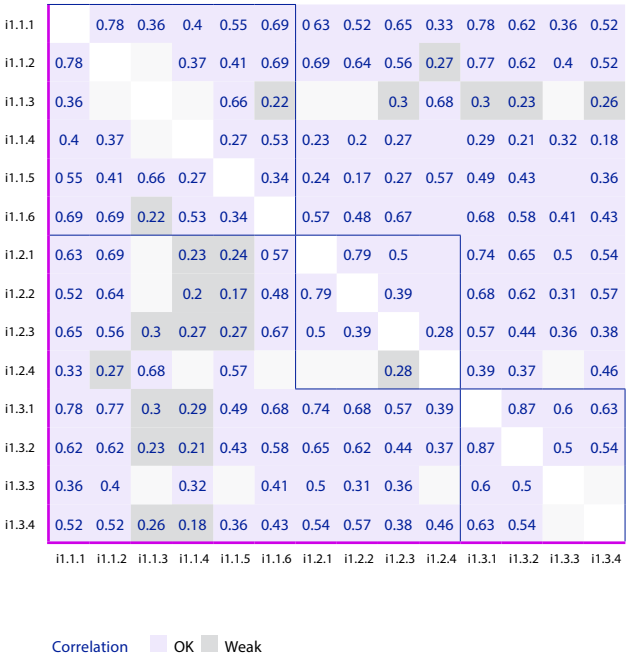
A strong negative correlation between the two aforementioned indicators suggests that they are related to each other but in in a conflicting way. Similar situation has been observed in the previous edition of the index. Nevertheless, the negative association between the two indicators is somewhat weaker in this edition. Furthermore, statistically insignificant correlations suggest that i2.1.6 does not entirely cooperate with the other indicators in the respective sub-pillar. However, when looking at the correlations between the indicators and their aggregates (**Figure 2**), the performance of i2.1.6 is generally good at the sub-pillar and pillar level, while its association with the overall index is somewhat weaker (correlation 0.33). This represents an improvement with respect to the previous edition of the index, where the correlation between i2.1.6 and NRI 2022 was not statistically different from zero. As in the previous edition of the index, it is worth noting that the interpretation of this result should be taken with caution since the share of missing values associated to this indicator is extremely high (64.9%).

The relationship between indicators within the remaining two pillars is generally satisfactory. Most of the correlations are above 0.30 and below 0.92, and no indicator is negatively correlated with the other elements of the respective sub-pillar, which suggests that most of the sub-pillars in the "Governance" (i3) and "Impact" (i4) pillars are statistically consistent. The only exception is the sub-pillar "SDG Contribution" (i4.3), where the indicator i4.3.4 ("SDG 7: Affordable and Clean Energy") weakly correlates with the other indicators, but not in a critical way. Similarly, the association between the indicator i4.1.6 ("ICT services exports") and other indicators within the "Economy sub-pillar" is generally weak or not statistically different from zero ("High-tech exports" and "Domestic market size").

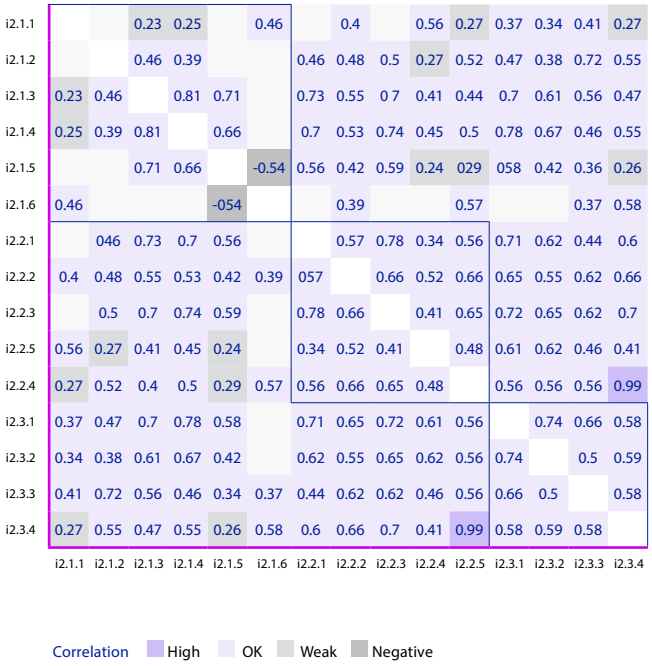
A general suggestion would be to continue monitoring the indicators with very low and statistically insignificant correlations and their position in the framework for future index editions in order to check their behaviour and, if necessary, modify or substitute them. Particular attention is suggested to the "People pillar" (i2) and the indicator i2.1.6 showing a negative and non-significant correlation. We would particularly suggest its substitution with another indicator that would fit conceptually into the pillar, unless a better data coverage is available and it determines an improved association with the other indicators.

Figure 1 Correlation between indicators in the same pillar

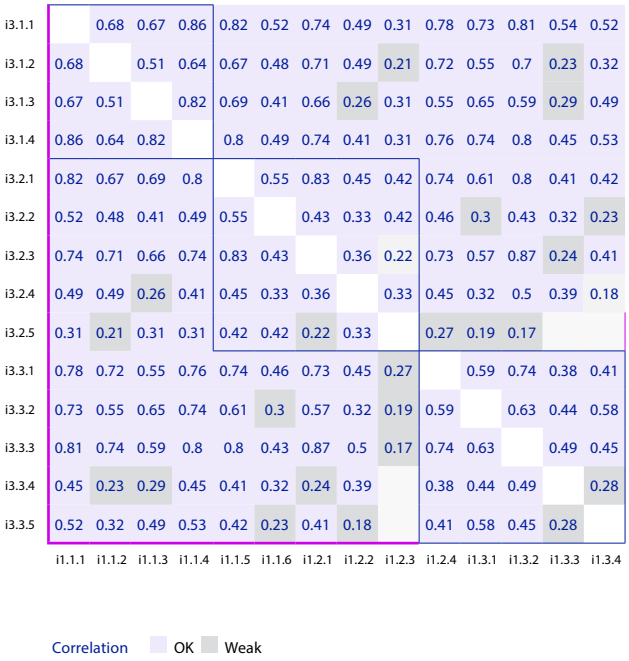
Technology pillar (i1)



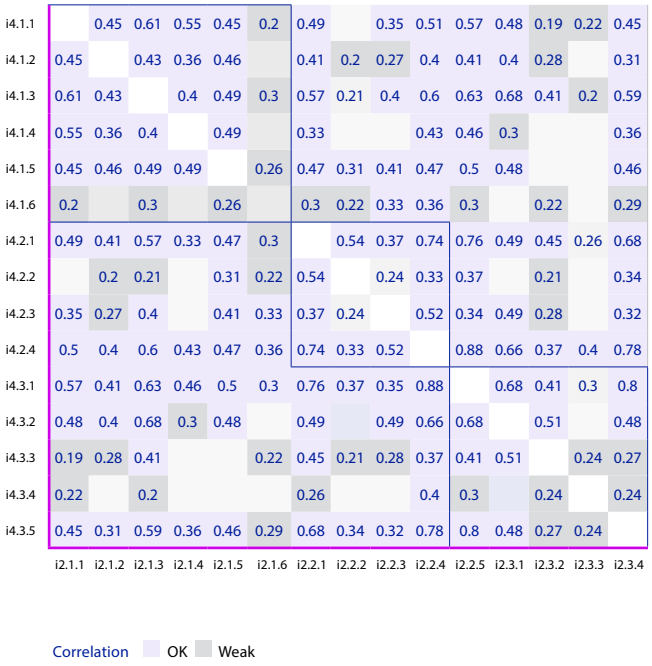
People pillar (i2)



Governance pillar (i3)



Impact pillar (i4)



Source: European Commission's Joint Research Centre, 2023.
Note: Numbers represent the Pearson correlations coefficients. Good correlations (i.e., Pearson correlation coefficients between 0.30 and 0.92) are highlighted in green. Weak correlations (lower or equal than 0.30) are written in grey. Statistically insignificant correlations are those with the Pearson correlation coefficients lower than 0.17 and are displayed as empty cells.

Figure 2 Correlations between indicators and their aggregates (sub-pillars, pillars and index)

Technology pillar (i1)

	Sub pillar	Pillar	Index
i1.1.1	0.89	0,84	0.85
i1.1.2	0.82	0.83	0.86
i1.1.3	0.55	0.38	0.34
i1.1.4	0.53	0.39	0.41
i1.1.5	0.65	0.56	0.53
i1.1.6	0.88	0.8	0.79
i1.2.1	0.88	0.81	0.8
i1.2.2	0.83	0.73	0.71
i1.2.3	0.68	0.69	0.67
i1.2.4	0.44	0.47	0.39
i1.3.1	0.92	0.94	0.92
i1.3.2	0.9	0.82	0.78
i1.3.3	0.73	0.68	0.69
i1.3.4	0.75	0.72	0.66

Correlation High OK

People pillar (i2)

	Sub pillar	Pillar	Index
i2.1.1	0.51	0.44	0.36
i2.1.2	0.5	0.64	0.67
i2.1.3	0.84	0.79	0.8
i2.1.4	0.74	0.79	0.8
i2.1.5	0.79	0.65	0.65
i2.1.6	0.65	0.55	0.33
i2.2.1	0.8	0.76	0.8
i2.2.2	0.86	0.81	0.78
i2.2.3	0.82	0.82	0.88
i2.2.4	0.57	0.61	0.56
i2.2.5	0.83	0.81	0.77
i2.3.1	0.88	0.87	0.88
i2.3.2	0.86	0.77	0.79
i2.3.3	0.81	0.75	0.77
i2.3.4	0.81	0.79	0.78

Correlation OK

Governance pillar (i3)

	Sub pillar	Pillar	Index
i1.1.1	0.9	0.91	0.91
i1.1.2	0.82	0.8	0.77
i1.1.3	0.85	0.78	0.73
i1.1.4	0.94	0.92	0.9
i1.1.5	0.86	0.89	0.87
i1.1.6	0.78	0.59	0.5
i1.2.1	0.79	0.84	0.88
i1.2.2	0.7	0.58	0.53
i1.2.3	0.65	.41	0.31
i1.2.4	0.83	0.83	0.84
i1.3.1	0.83	0.76	0.72
i1.3.2	0.87	0.88	0.92
i1.3.3	0.66	0.53	0.49
i1.3.4	0.7	0.57	0.49

Correlation High OK

Impact pillar (i4)

	Sub pillar	Pillar	Index
i4.1.1	0.79	0.71	0.72
i4.1.2	0.69	0.57	0.54
i4.1.3	0.79	0.76	0.79
i4.1.4	0.67	0.51	0.58
i4.1.5	0.76	0.64	0.7
i4.1.6	0.51	0.46	0.4
i4.2.1	0.88	0.84	0.76
i4.2.2	0.7	0.52	0.39
i4.2.3	0.7	0.58	0.53
i4.2.4	0.84	0.87	0.83
i4.3.1	0.86	0.86	0.87
i4.3.2	0.81	0.82	0.85
i4.3.3	0.66	0.52	0.46
i4.3.4	0.5	0.36	0.3
i4.3.5	0.8	0.78	0.77

Correlation OK Weak

Source: European Commission's Joint Research Centre, 2023.
Note: Numbers represent the Pearson correlations coefficients. Good correlations (i.e., Pearson correlation coefficients between 0.30 and 0.92) are highlighted in green. Weak correlations (lower or equal than 0.30) are written in grey.

Correlations between sub-pillars, pillars and NRI 2023

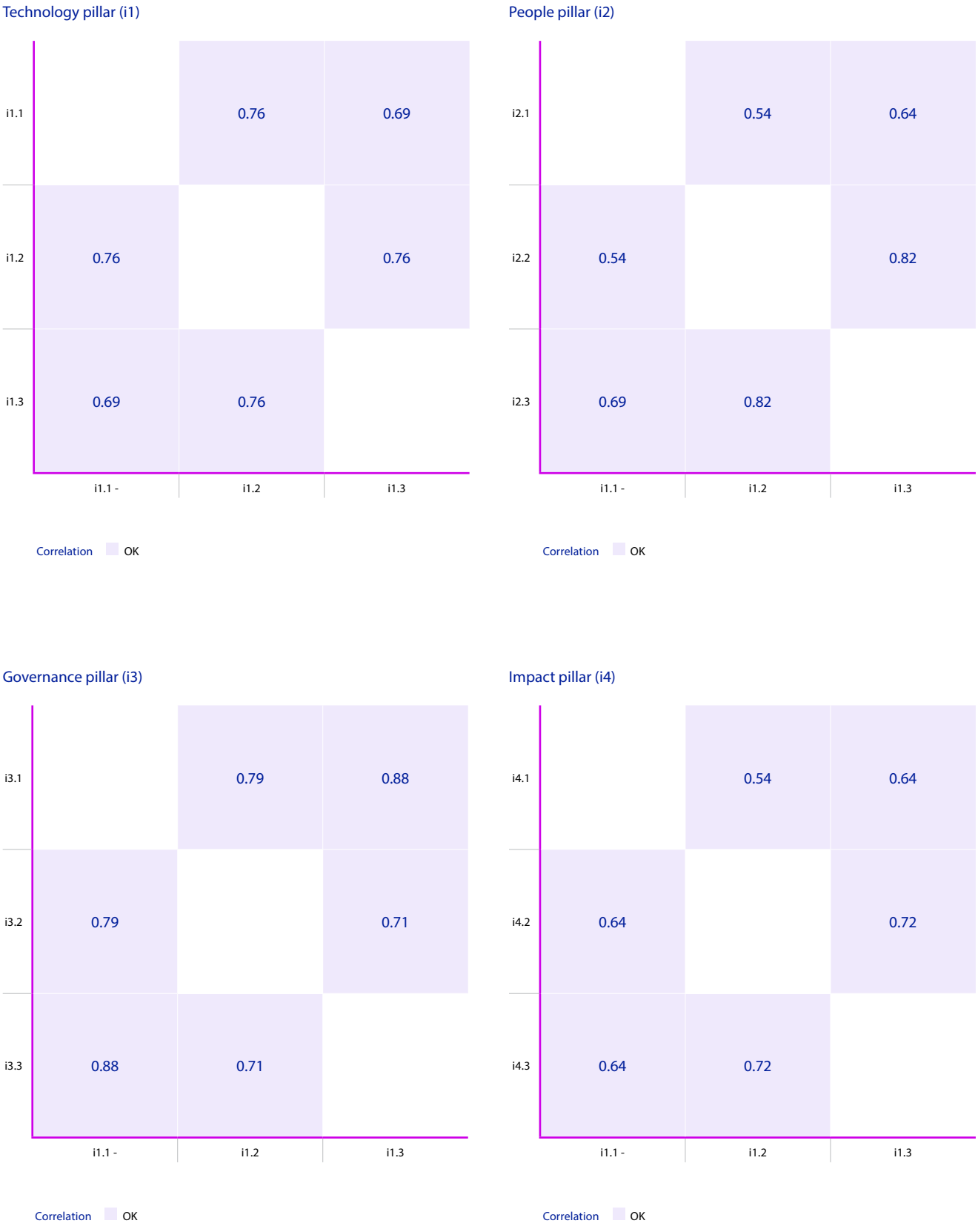
The correlation between the aggregates represents the most important element of the analysis of statistical coherence as it reflects the relations between the defined concepts. The evidence from **Figure 3**, **Figure 4** and **Figure 5** suggests that all pillars appear consistent, with the sub-pillars being well correlated with each other. The NRI 2023, therefore, has a generally satisfactory correlation structure, as evidenced by strong correlations between the sub-pillars, pillars, and the index.

Nevertheless, a note of caution is necessary. Some sub-pillars tend to be extremely correlated with their respective pillars. More precisely, the sub-pillars "Content" (i1.2), "Governments" (i2.3), "Trust" (i3.1) and "Inclusion" (i3.3) are highly correlated with their pillars (correlations exceeding 0.92), suggesting that there may be a risk of redundancy at the pillar level. This is partly mitigated at the index level (**Figure 4**), where two pillars, namely i1.2 and i3.3 show positive correlations that do not exceed the 0.92 set threshold.

The highest aggregation steps, between pillars and from pillars to NRI, also display very high correlations (around 0.9). High statistical reliability among the main components can be the result of redundancy of information. Overall, NRI 2023 indicator, pillars, and sub-pillars seem to be measuring similar phenomena. The exclusion of some elements from the framework will probably have a small effect on the final result. Keeping in mind the importance of parsimony, the reduction in the number of indicators could be an interesting option that the JRC-COIN suggests to consider for future editions.

Finally, **Figure 5** shows the correlation between the pillars and between the pillars and NRI 2023. This is the most important level of aggregation because it represents the consistency of the overall concept. All correlations are significant and positive (> 0.30). The correlation between "Technology" (i1) and "People" (i2) pillars is very close to the threshold, suggesting that there may be some risk of redundancy at the pillar level. This issue does not appear to be alleviated at the index level, where correlations are even higher (0.96), well exceeding the redundancy threshold (set at 0.92). Also, the remaining pillars show very high correlations with the index. This is not surprising evidence given the high correlations between sub-pillars, pillars, and index reported in **Figure 4**. Although not a critical issue for the reliability of the NRI, this should be taken into account in the Index's upcoming revisions.**Figure 5**. Correlations between pillars, and between pillars and NRI 2023

Figure 3 Correlations between sub-pillars in the same pillar

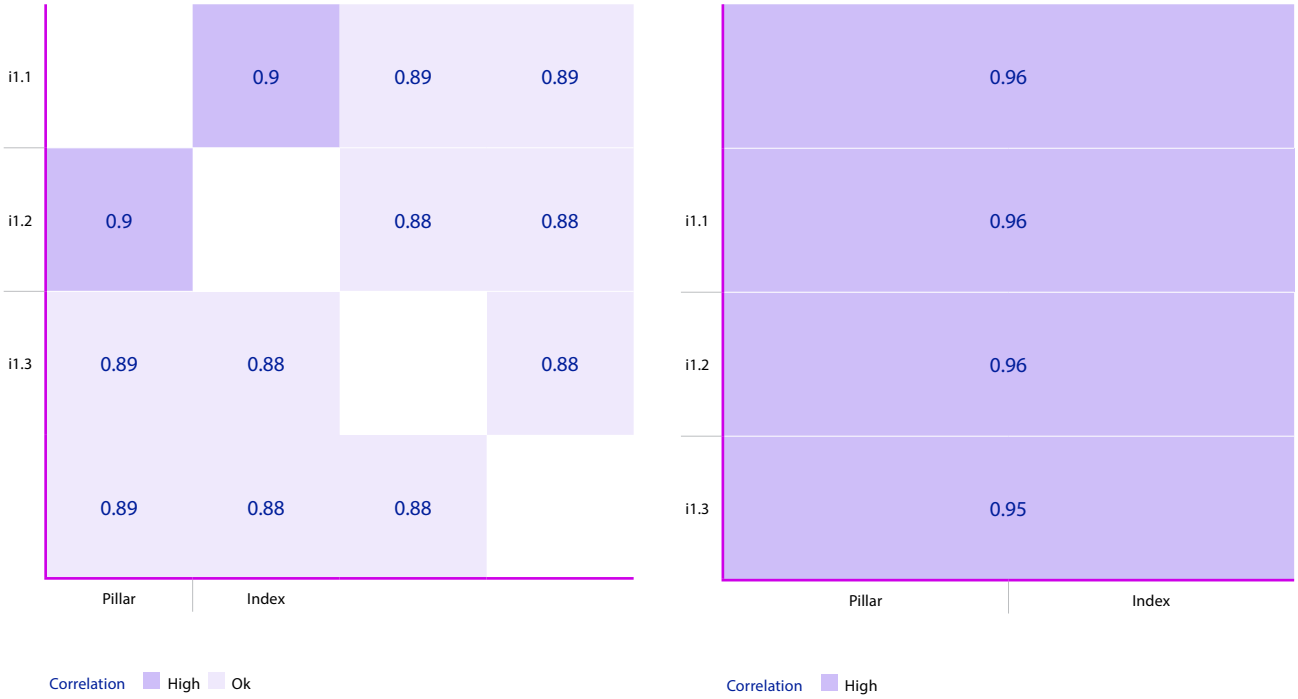


Source: European Commission's Joint Research Centre, 2023.
Note: Numbers represent the Pearson correlations coefficients. Good correlations (*i.e.*, Pearson correlation coefficients between 0.30 and 0.92) are highlighted in green.

Figure 4 Correlations between sub-pillars, pillars and NRI 2023

Source: European Commission's Joint Research Centre, 2023.
Note: Numbers represent the Pearson correlations coefficients. Good correlations (i.e., Pearson correlation coefficients between 0.30 and 0.92) are highlighted in green.

Figure 5 Correlations between pillars, and between pillars and NRI 2023



Source: European Commission's Joint Research Centre, 2023.
Note: Numbers represent the Pearson correlations coefficients. Good correlations (i.e., Pearson correlation coefficients between 0.30 and 0.92) are highlighted in green.

b. Principal components analysis of the NRI 2023

As a further step in the analysis of statistical coherence, we perform a principal component analysis (PCA). The aim of principal component analysis is to assess to what extent the conceptual framework is confirmed by statistical approaches. The objective is to observe only one principal component with an eigenvalue greater than 1, or able to explain more than 70% of the total variance. The achievement of these thresholds suggests the presence of a common, unidimensional phenomenon underlying the pillars.

The four pillars share a single statistical dimension that summarizes 91.49% of the total variance (**Table 3**). Moreover, the four loadings (correlation coefficients) of these pillars are almost equal (0.96). This similarity suggests that the four pillars make roughly equal contributions to the variation of the NRI 2023. The second principal component is much less influential since it accounts for only 3.15% of the total variance.

Figure 6 illustrates the projections of the pillars onto the plane spanned by the first two principal components in a "factor map". The correlation between each pillar and the principal component is given by the projection of the NRI 2023 vector onto the component axis. The pillars trajectories are very close to each other, suggesting that there may be some risk of redundancy at the index level, which offers a significant room for simplification. This is not a surprising evidence and is in line with the results obtained in the correlation analysis.

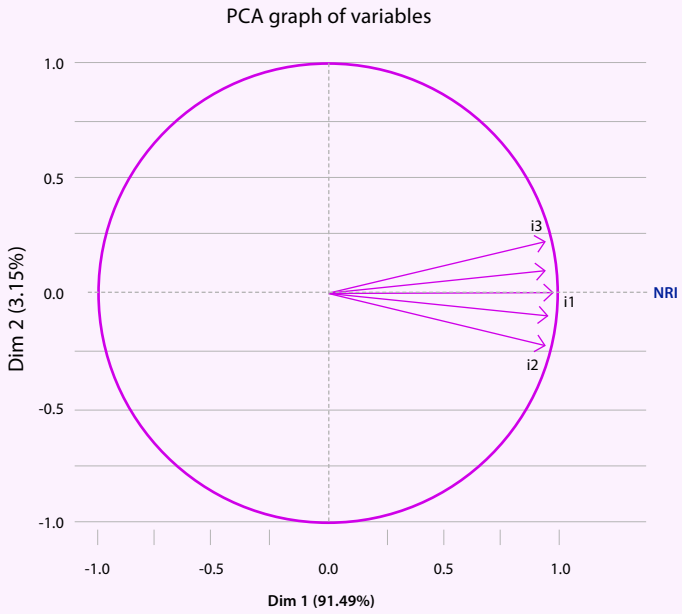
Moreover, PCA results also confirm the presence of a single latent dimension in each of the four pillars (one component with an eigenvalue greater than 1) that captures between close to 77.7% ("Impact pillar") up to 86.2% ("Governance pillar") of the total variance in the three underlying sub-pillars.

Table 3 Eigenvalues and explained variance for the first ten principal components

PC	Eigenvalue	% of variance	Cumulative % of variance
PC1	3.66	91.49	91.49
PC2	0.13	3.15	94.64
PC3	0.12	2.96	97.60
PC4	0.10	2.40	100.00

Source: European Commission's Joint Research Centre, 2023.

Figure 6 Factor map of the four pillars and comparison with the overall NRI 2023



c. Added value of the NRI 2023

High statistical reliability among the main components of an index can be the result of redundancy of information. The main objective of this exercise is to test whether the NRI 2023 rankings highlight aspects of countries' network readiness that do not emerge by looking into the four pillars separately. In other words, NRI 2023 should tell us more about the underlying concept than each of the four pillars alone.

The results in **Table 4** suggest that the percentage of countries where the NRI 2023 rankings differ by 15 or more positions with respect to the pillars ranges from 8.2% in the case of i2 ("People") to 18.70% in the case of i4 ("Impact"). In other words, NRI 2023 rankings depict aspects of countries' network readiness that do not emerge from each of the four single pillars for less than 20% of the countries considered. **Figure 7** represents graphically the relationship between the NRI 2023 and its constituent elements. In line with the evidence in **Table 3** and the correlation coefficients reported in **Figure 5**, the four pillars appear linearly associated with the index.

Even though the presence of a strong concordance among the aggregates does not represent a problem "per se", it offers a room for simplification. Therefore, in order to improve readability, the developers may consider excluding some elements of the index without jeopardising the integrity of the pillars or the overall index.

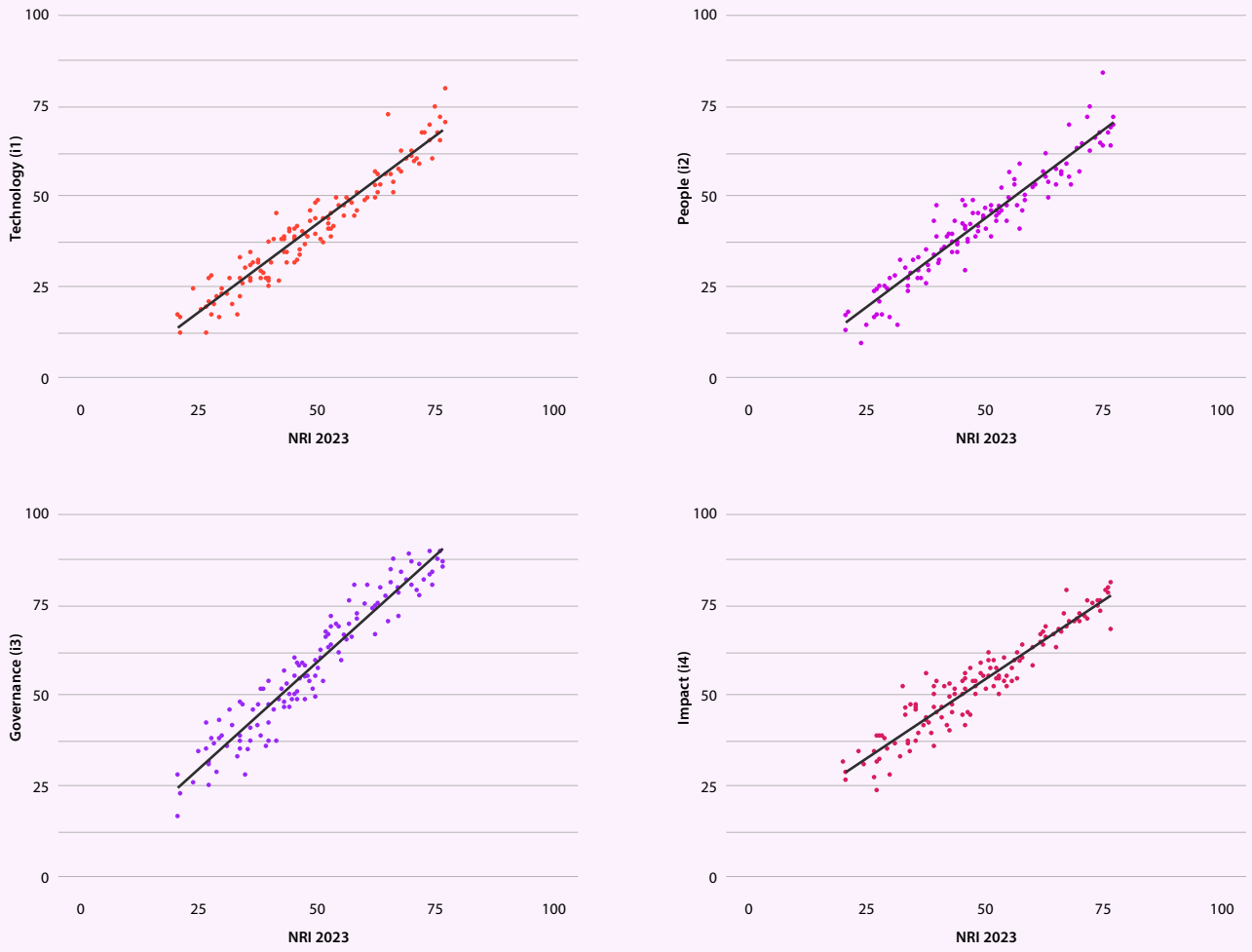
Photo by Billetto Editorial on Unsplash

Table 4 Distribution of differences between pillars and NRI 2023 rankings

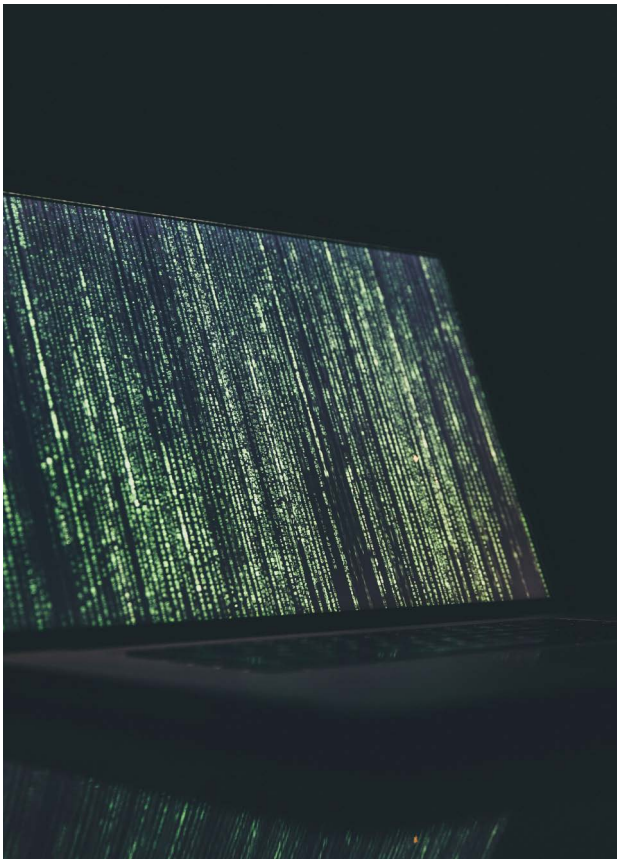
Shift respect to NRI	Technology	People	Governance	Impact
More than 30 positions	0.70%	2.20%	0.00%	3.70%
Between 15 and 30 positions	12.70%	8.20%	16.40%	18.70%
6 to 15 positions	35.10%	47.00%	43.30%	32.80%
Up to 5 positions	43.30%	36.60%	34.30%	40.30%
0 positions	8.20%	6.00%	6.00%	4.50%

Source: European Commission's Joint Research Centre, 2023.

Figure 7 Relationship between the pillars and the NRI 2023



Source: European Commission's Joint Research Centre, 2023.



rodion-kutsaev-unsplash

5. Impact of modelling assumptions on the NRI 2022 results

a. Uncertainty analysis

A fundamental step in the statistical analysis of a composite indicator is to assess the effect of different modelling assumptions on the country rankings. Despite the efforts in the development process, there is an unavoidable subjectivity (or uncertainty) in the resulting choices. This subjectivity can be explored by comparing the results obtained under alternative modelling assumptions. The literature on this topic[30] suggests assessing the robustness of the index by means of a *Monte Carlo simulation* and by applying a multi-modelling approach. This also assumes "error-free" data as possible errors have already been corrected in the preliminary stage of the index construction before the audit.

The Network Readiness Index analysed in this document, like most composite indicators, is the outcome of several modelling choices. Among other things, these choices usually include: (i) the underlying theoretical framework; (ii) the indicators selected; (iii) the imputation of missing values; (iv) the weights assigned; and (v) the aggregation method. Some of these choices may be based on expert opinion or other consideration driven by statistical analysis or the need to ease communication or draw attention to specific issues.

This section aims to test the impact of varying some of these assumptions within a range of plausible alternatives in an uncertainty analysis. The objective is therefore to try to quantify the uncertainty in the ranks of NRI 2023, which can demonstrate the extent to which countries can be differentiated by their scores and ranks. The modelling issues considered in the robustness assessment of the NRI 2023 are:

- the aggregation formula; and
- the pillars' weights.

The following paragraphs deal with each of these in turn.

Aggregation formula.

The developers of the NRI 2023 opted for the arithmetic aggregation formula with an equal weight given to each of the four pillars, which implies a strong compensability allowing for an outstanding performance in some aspects to balance the weaknesses in others and vice-versa. In other words, arithmetic averaging treats countries with outstanding high and low results in the same way as it treats a more "balanced" countries showing average results.

To assess the impact of this compensability issue, the JRC-COIN relaxed the strong perfect substitutability assumption inherent in the arithmetic average and considered instead the geometric average, which is a partially compensatory approach that rewards economies with balanced profiles and motivates economies to improve in the NRI pillars in which they perform poorly, and not just in any NRI pillar. The comparison of the two aggregation approaches, hence, should be able to highlight countries with unbalanced profiles.

Weights.

Weights. The Monte Carlo simulation conducted by the JRC-COIN comprised 1,000 runs of different sets of weights for the four pillars. The weights are the result of a random extraction based on uniform continuous distributions centred in the reference values (0.25) plus or minus 20% of these values.

As summarised in **Table 5**, four models were tested comparing the different aggregation formulas, the different imputation methods and applying the 1,000 runs of different sets of weights resulting in a total of 2,000 runs of simulations.

The main results obtained from the robustness analysis are shown in **Figure 8**, with median ranks and 95% intervals computed across the 2,000 Monte Carlo simulations. Countries are ordered from best to worst according to their NRI 2023 rank, where the blue dots represent the median rank among the simulations. For each country, the error bars represent the 95% interval across all simulations, that is, from the 5th to the 95th percentile of the country's rank among all the simulations.

The NRI 2023 ranks are shown to be representative of a plurality of scenarios and considerably robust to changes in the assumptions. Considering the median rank across the simulated scenarios as being representative of these scenarios, the fact that the NRI 2023 rank is close to the median rank (less than four positions away) for almost all the considered countries (133 out of 134) suggests that NRI 2023 is a suitable and stable summary measure. Furthermore, the majority of the countries' ranks (122 out of 134) do not vary much across simulations (10 positions or less). Only 12 countries (Bosnia and Herzegovina, Colombia, Kenya, Kuwait, Luxemburg, Mauritius, Nigeria, Nepal, Oman, Qatar, and Tunisia) are showing a simulated interval larger than 10 positions. These intervals are however smaller than 20 positions. The stability of the NRI rankings under different modelling assumptions is a direct effect of the correlation structure among pillars and the index.

Finally, **Table 6** reports the NRI 2023 country ranks along with the simulated intervals (the central 95 percentiles observed among the 2,000 scenarios) for full transparency and information, in order to better appreciate the robustness of these ranks to the computation methodology and to facilitate analysis of the behaviour of specific countries in response to perturbations.

Table 5 Alternative assumptions considered in the analysis

	Reference	Alternative
I. Aggregation formula	Arithmetic average	Geometric average
II. Weighting system	Equal weights	Varying
Technology	0,25	U [0.2; 0.3]
People	0,25	U [0.2; 0.3]
Governance	0,25	U [0.2; 0.3]
Impact	0,25	U [0.2; 0.3]

Source: European Commission's Joint Research Centre, 2023.

Figure 8 Robustness analysis: NRI 2023 rank vs median rank and 95% intervals.

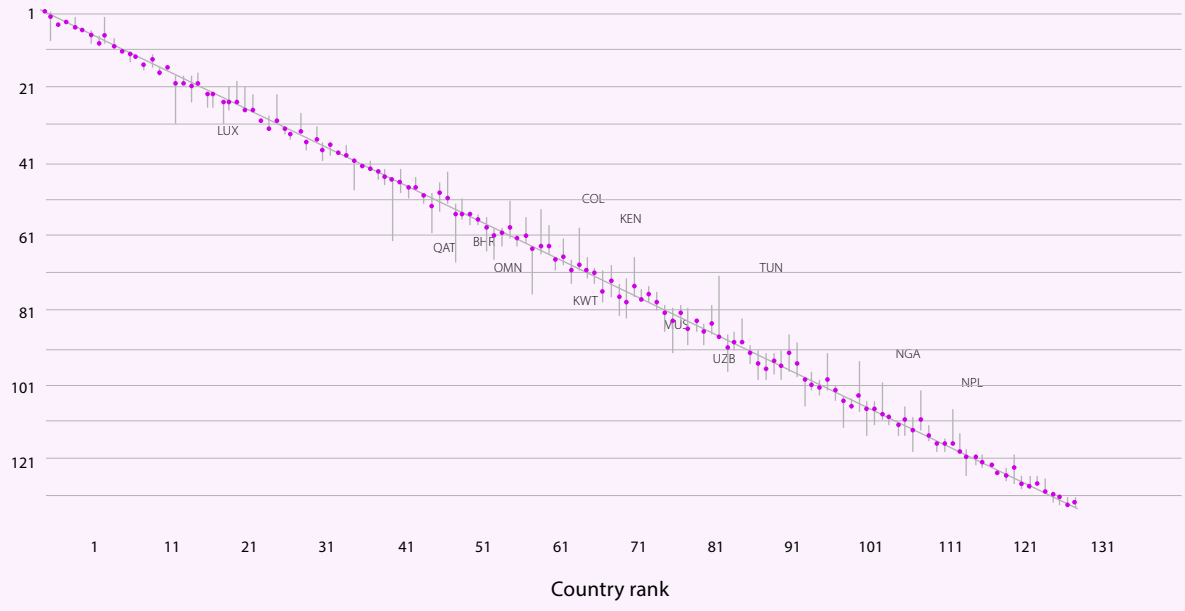


Table 6. NRI 2023 ranks and 95 percent confidence intervals

ISO	Index	interval	ISO	Index	interval	ISO	Index	interval
USA	1	[1-2]	QAT	46	[46-63]	BGD	91	[85-91]
SGP	2	[1-8]	TUR	47	[43-48]	BIH	92	[92-96]
FIN	3	[3-5]	CHL	48	[47-51]	VEN	93	[92-99]
NLD	4	[3-5]	GRC	49	[46-49]	KGZ	94	[94-100]
SWE	5	[2-5]	HRV	50	[50-50]	CPV	95	[94-98]
CHE	6	[6-7]	BHR	51	[51-60]	LBN	96	[92-99]
KOR	7	[6-9]	ROU	52	[47-52]	BOL	97	[88-97]
DNK	8	[7-10]	BGR	53	[45-53]	GHA	98	[91-98]
DEU	9	[2-9]	OMN	54	[54-68]	RWA	99	[99-106]
GBR	10	[9-10]	SRB	55	[52-55]	SLV	100	[99-102]
CAN	11	[11-12]	VNM	56	[54-57]	CIV	101	[100-104]
ISR	12	[11-14]	CRI	57	[56-58]	SEN	102	[94-103]
JPN	13	[13-14]	KAZ	58	[56-65]	DZA	103	[102-105]
AUS	14	[14-16]	IDN	59	[59-67]	TZA	104	[104-113]
FRA	15	[12-15]	IND	60	[59-63]	GTM	105	[105-108]
NOR	16	[16-18]	ARG	61	[52-61]	NGA	106	[96-108]
AUT	17	[15-17]	MEX	62	[61-64]	HND	107	[106-114]
LUX	18	[18-29]	ARM	63	[56-63]	KHM	108	[106-111]
IRL	19	[19-20]	KWT	64	[64-76]	LAO	109	[102-110]
CHN	20	[18-24]	COL	65	[54-66]	BWA	110	[109-111]
BEL	21	[17-21]	MNE	66	[58-66]	BEN	111	[111-114]
EST	22	[22-27]	MDA	67	[67-69]	NAM	112	[107-114]
NZL	23	[23-27]	JOR	68	[62-69]	TJK	113	[112-119]
ISL	24	[24-31]	PHL	69	[68-74]	NPL	114	[104-114]
HKG	25	[21-26]	KEN	70	[60-70]	NIC	115	[114-115]
ESP	26	[19-26]	MKD	71	[67-72]	ZMB	116	[116-118]
CZE	27	[21-28]	JAM	72	[70-73]	UGA	117	[117-119]
PRT	28	[24-28]	PER	73	[72-79]	CMR	118	[108-118]
SVN	29	[29-31]	ZAF	74	[71-75]	ZWE	119	[116-120]
ARE	30	[29-33]	AZE	75	[74-83]	GMB	120	[119-125]
ITA	31	[24-31]	MUS	76	[74-83]	MWI	121	[121-122]
MLT	32	[32-34]	MAR	77	[70-77]	GIN	122	[120-122]
LTU	33	[33-35]	GEO	78	[76-79]	MLI	123	[122-123]
POL	34	[28-34]	ALB	79	[75-79]	MDG	124	[124-126]
CYP	35	[35-38]	LKA	80	[76-81]	SWZ	125	[124-127]
HUN	36	[32-36]	EGY	81	[80-86]	ETH	126	[120-127]
LVA	37	[37-40]	UZB	82	[82-93]	AGO	127	[126-129]
RUS	38	[36-39]	MNG	83	[81-84]	LSO	128	[127-130]
SVK	39	[38-39]	DOM	84	[83-89]	BFA	129	[127-129]
MYS	40	[37-40]	ECU	85	[83-87]	MOZ	130	[128-130]
SAU	41	[41-49]	PAN	86	[85-90]	MRT	131	[131-133]
THA	42	[41-42]	IRN	87	[80-87]	COD	132	[131-132]
UKR	43	[41-43]	TUN	88	[72-89]	TCD	133	[133-134]
BRA	44	[44-45]	PRY	89	[88-97]	BDI	134	[132-134]
URY	45	[44-47]	PAK	90	[87-91]			

Source: European Commission's Joint Research Centre, 2023.

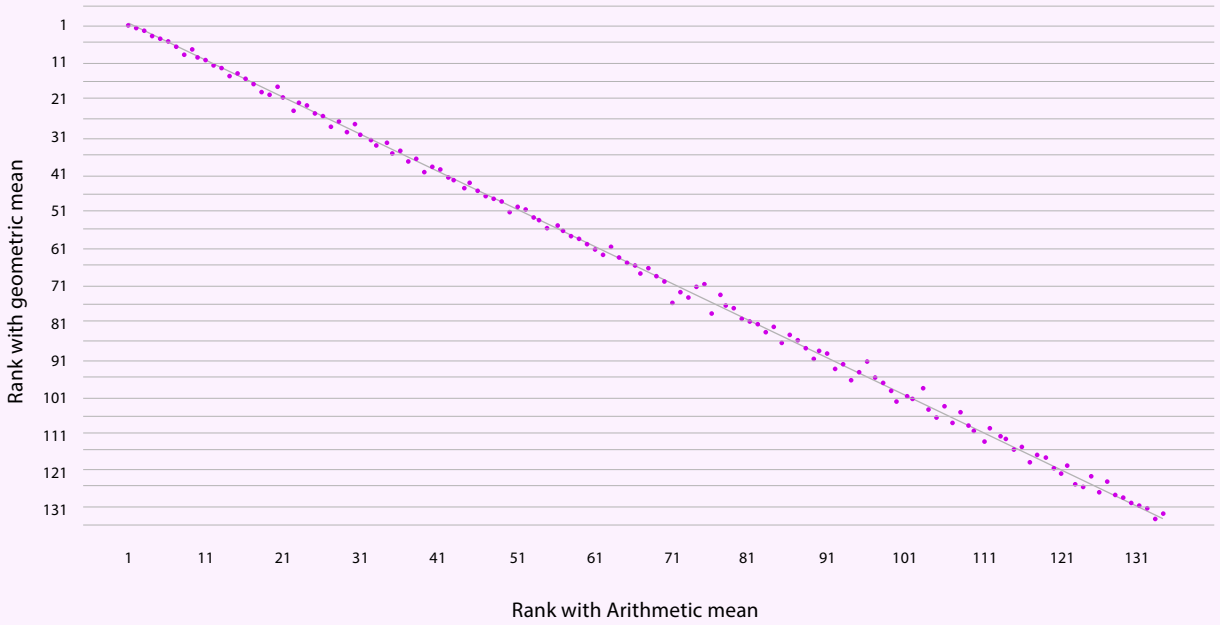
b. Sensitivity analysis

Complementary to the uncertainty analysis, sensitivity analysis has been used to identify which of the modelling assumptions have the highest impact on certain country ranks.

Figure 9 compares the ranks derived from NRI 2023 with those that would have been obtained by changing the aggregation procedure from arithmetic to geometric mean for the final aggregation of the four Pillars to the NRI. This comparison allows us to inquire whether the variability in the rank intervals is originating from the modelling assumptions underlying the aggregation procedure or by the weights' perturbation. When countries are placed under the main diagonal their values are worse in rank positions when computed with the geometric mean. This is probably the case of countries penalised by the geometric mean because of their unbalanced profiles. One such example is North Macedonia, which is ranked 71st when the arithmetic aggregation is used, and 76th when the geometric aggregation is employed.

In any case, the aggregation formula does not significantly affect the NRI 2023 ranks. In particular, the average change in ranks[31] between the two scenarios is less than one rank position (0.97), suggesting that, on average, a country's gains or losses on average about one rank position when the geometric aggregation is applied instead of the arithmetic one. This result is a direct consequence of the very strong correlation structure described in Section 4. In essence, when the Pillars are so strongly correlated, it is unlikely to have countries with very unbalanced values across the Pillars.

Figure 9 Sensitivity Analysis: Comparison of ranks according to arithmetic and geometric mean.



Source: European Commission's Joint Research Centre, 2023.

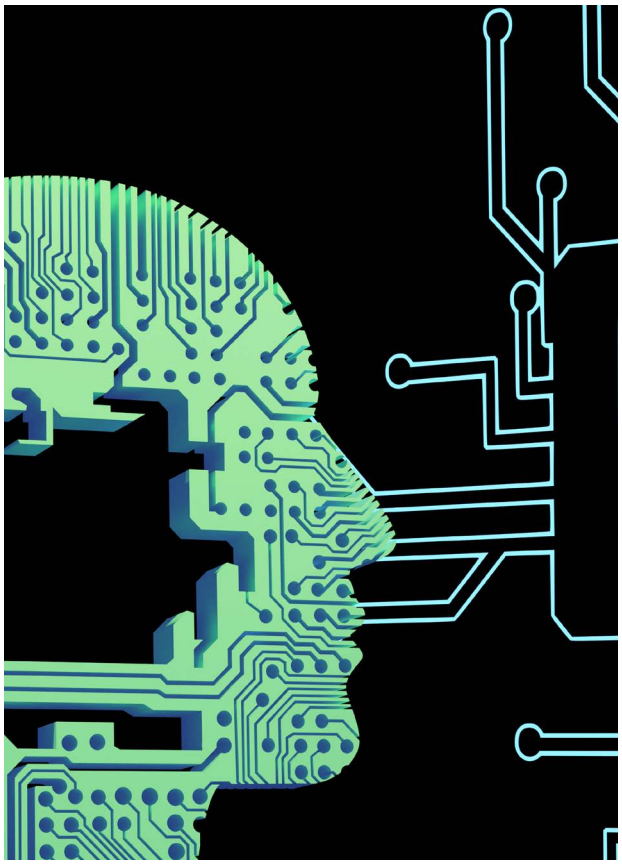


Photo by Steve Johnson on Unsplash

6. Best-practice frontier in the NRI by data envelopment analysis

Is there a way to benchmark economies' multidimensional performance on network readiness without imposing a fixed and common set of weights to the four pillars of the NRI - Technology, People, Governance, Impact – which may not be fair to a particular country/economy?

Several network readiness-related policy issues at the national level entail an intricate balance between global priorities and economy-specific strategies. In addition, some countries may be facing harsher "environmental" conditions than others at a given year, which may prevent their network readiness strategies from being as effective as designed. Comparing the multidimensional performance on network readiness by subjecting all the 134 economies included in the NRI to a fixed and common set of weights of the four NRI pillars may prevent acceptance of the index on the grounds that the particular weighting scheme selected to compute the Index might not be fair to a particular economy, for reasons such as those highlighted above. An appealing alternative to the fixed and common weight scheme is to give to each country the "benefit-of-the-doubt" to select the aggregation weights that better reflect its own policy priorities and the underlying conditions that may be affecting policy implementation. This is conducted through data envelopment analysis (DEA), a performance evaluation method widely applied in real decision-making settings, in which each country is assigned a set of endogenously determined weights that maximize its overall score within a given dataset of countries.

In this type of analysis, the assumption of fixed pillar weights common to all 134 economies is relaxed, whereby country-specific weights that maximize a country's network readiness score are determined endogenously by a special form of DEA which is known as the Benefit-of-the-Doubt" (BoD) model.[32] In theory, each country/economy is free to decide on the relative contribution of each network readiness pillar to its score, so as to achieve the best possible score in a computation that reflects its own strategy for network readiness. In practice, the DEA method assigns a higher (or lower) contribution to those pillars in which a country/economy is relatively strong (or weak). Reasonable constraints are applied to the weights to preclude the

Table 7 Pillar shares and efficiency scores for the top 25 economies in the NRI 2023

	Pillar							
	Technology	People	Governance	Impact	Best-practice frontier score (DEA)	Best-practice frontier rank (DEA)	NRI rank	Difference NRI rank
United States of America	0.40	0.10	0.40	0.10	1.00	1	1	0
Singapore	0.15	0.10	0.35	0.40	1.00	1	2	1
Finland	0.10	0.10	0.40	0.40	1.00	1	3	2
Netherlands	0.17	0.10	0.40	0.33	1.00	1	4	3
Republic of Korea	0.10	0.40	0.38	0.12	1.00	1	7	6
Sweden	0.16	0.10	0.37	0.37	0.99	6	5	-1
Switzerland	0.40	0.10	0.17	0.33	0.99	6	6	0
Denmark	0.17	0.13	0.40	0.29	0.98	8	8	0
Genmany	0.15	0.31	0.32	0.22	0.96	9	9	0
Israel	0.10	0.36	0.14	0.40	0.96	9	12	3
United Kingdom	0.15	0.31	0.32	0.22	0.95	11	10	-1
Canada	0.21	0.16	0.40	0.23	0.95	11	11	0
Japan	0.13	0.34	0.31	0.22	0.94	13	13	0
Australia	0.11	0.31	0.40	0.18	0.93	14	14	0
Norway	0.15	0.10	0.40	0.35	0.93	14	16	2
France	0.14	0.31	0.32	0.22	0.92	16	15	-1
Austria	0.11	0.32	0.40	0.17	0.91	17	17	0
Ireland	0.10	0.10	0.40	0.40	0.91	17	19	2
Luxembourg	0.17	0.10	0.40	0.33	0.90	19	18	-1
China	0.12	0.38	0.10	0.40	0.90	19	20	1
Belgium	0.10	0.10	0.40	0.40	0.89	21	21	0
Estonia	0.10	0.10	0.40	0.40	0.89	21	22	1
New Zealand	0.10	0.10	0.40	0.40	0.88	23	23	0
Iceland	0.10	0.10	0.40	0.40	0.87	24	24	0
Hong Kong China	0.40	0.10	0.21	0.29	0.87	24	25	1

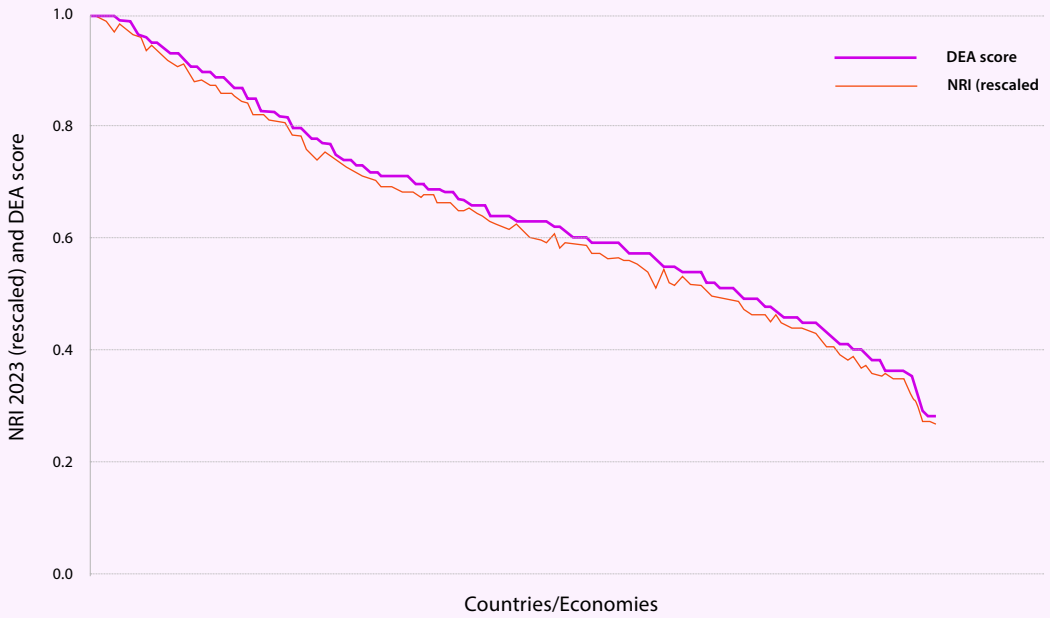
Source: European Commission's Joint Research Centre, 2023.

Note: The results are based on the "Benefit-of-the Doubt" model, a special form of Data Envelopment Analysis. Pillar shares are expressed in percentages, bounded by 0.10 and 0.40 for all four pillars of network readiness - Technology, People, Governance, Impact. Instead, in the NRI 2023, the four pillars each have a fixed weight of 0.25. Darker colors represent a higher contribution of those pillars to the overall DEA score as a result of an economy's stronger performance in those pillars, which may help to provide evidence for economy-specific strategies. Economies are ordered by their Best-practice Frontier score.

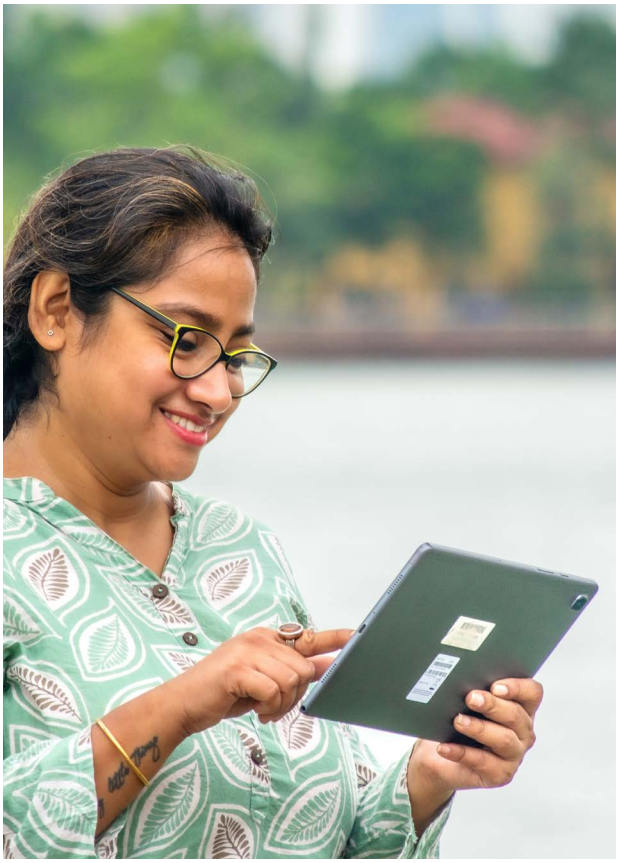
possibility of an economy achieving a perfect score by assigning a zero weight to weak pillars: for each economy, the share of each pillar score (i.e., the pillar score multiplied by the DEA weight over the total score) has upper and lower bounds of 10 percent and 40 percent, respectively. The DEA score is then measured as the weighted average of all four network readiness pillar scores, where the weights are the economy-specific DEA weights, compared to the best performance among all other economies with those same weights. The DEA scores, ranging between 0 (lowest) and 1 (highest) can be interpreted as a measure of the "distance to the best-practice frontier."

Table 7 presents the pillar shares and DEA scores for the top 25 economies in the NRI 2023, next to the NRI 2023 ranks. All pillar shares are in accordance with the starting point of granting leeway to each economy when assigning shares, while not violating the upper and lower bounds (10 percent and 40 percent). The pillar shares are quite diverse, reflecting the different national strategies for network readiness. These pillar shares can also be seen to reflect different economies' comparative advantage in certain NRI pillars vis-à-vis all other economies and all pillars. For example, five countries – the United States of America, Singapore, Finland, the Netherlands, and the Republic of Korea - obtain a perfect DEA score of 1.00 and hence they are all on the baste-practice frontier when it comes to network readiness. In the case of the United States, this is achieved by assigning the maximum possible share (40 percent) of its DEA score to the Technology and Governance pillars, while 10 percent of the USA's DEA score comes from the People and Impact pillars. Having different strengths, Republic of Korea has assigned 40 percent and 38 percent and 40 percent of its DEA score to the People and Governance pillars, while the remaining 10 percent and 12 percent and 16 percent of its DEA score comes from respectively the Technology and Impact pillars. This most favourable allocation of weights across the four Pillars enables the Republic of Korea to reach the maximum possible DEA score of one and be designated as one of the best-practice countries by DEA, while it was ranked 7th by the NRI index. The top five countries are closely followed by Sweden (0.99), Switzerland (0.99) and Denmark (0.98) in terms of efficiency. **Figure 10** shows how close the DEA scores and the NRI 2022 scores are for all 134 economies (Pearson correlation of 0.999).

Figure 10 NRI 2023 scores and DEA "distance to the best-practice frontier" scores



Source: European Commission's Joint Research Centre, 2023.
Note: For comparison purposes, the NRI scores were rescaled by dividing them by the result of the best performer in the overall NRI 2023 (the United States).



rodion-kutsaev-unsplash

7. Conclusions

The JRC statistical audit delves into the extensive work carried out by the developers of the NRI 2023 to suggest improvements in terms of data characteristics, structure and methods used. The analysis aims to ensure the transparency of the index methodology and the reliability of the results.

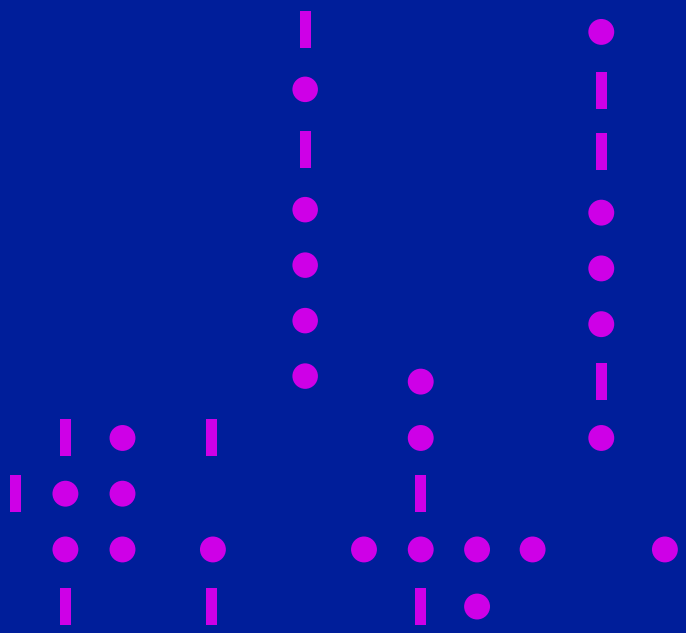
The NRI 2023 represents a sound index in terms of conceptual and statistical consistency. It shows that ICT deployment is a multifaceted phenomenon where technology, users, and several aspects of ICT regulation go hand in hand. The data coverage of the framework is generally satisfactory. Most indicators contain an acceptable level of missing values. Nevertheless, four indicators are characterized by the remarkable presence of missing values, two of which are well above the suggested exceptional limit of 40%. The statistical audit of the previous edition of the NRI contains additional analysis on the role of missing data in the framework. The developers decided not to impute them. This is common practice in relevant contexts and justified on grounds of transparency and replicability. However, JRC-COIN suggests to pay particular attention to the aforementioned indicators in future editions of the index.

The index is statistically well balanced with respect to its indicators, sub-pillars, and pillars. Correlations between each pillar and the respective sub-pillar are mostly significant and positive. Most of the indicators are meaningfully correlated with the index and relative pillars. The very strong correlations between some NRI 2023 components and between the four pillars and the index may be a sign of redundancy of information in the NRI 2023. This possibility is further confirmed by the analysis of added value of the NRI 2023 rankings. The suggestion is to use the index's very stable and correlated structure to explore and open up to the simplification of the framework or to some even more specific aspects of the network economy.

Finally, JRC-COIN analysed the robustness of the index respect to the selected weights and aggregation formula at pillars level. The results of the uncertainty analysis show that NRI 2023 is a robust summary measure.

All things considered, the present JRC-COIN audit findings confirm that the NRI 2023 is a reliable tool with a statistically coherent framework and acknowledge the important efforts made by the developers' team.

The JRC statistical audit delves into the extensive work carried out by the developers of the NRI 2023 to suggest improvements in terms of data characteristics, structure and methods used. The analysis aims to ensure the transparency of the index methodology and the reliability of the results.



About Portulans Institute

rodion-kutsaev-unsplash

Co-founded in 2019 by Soumitra Dutta and Bruno Lanvin, the Portulans Institute (PI) is an independent nonprofit, nonpartisan research and educational institute based in Washington DC.

Our Mission

Portulans Institute's areas of expertise include technology competitiveness, innovation readiness, and people and global talent. Our mission includes:

- To develop cross-community knowledge and dialogue on how people, technology, and innovation contribute to sustainable and inclusive growth.
- To inform policymakers by producing independent, data-based research.
- To collaborate with private sector leaders in driving a business agenda that invests in people, technology and innovation.
- To host and co-organize events and conferences on the above issues affecting human-centric sustainable economic prosperity.

Where Our Name and Logo Come From

Portulans (or portolans) are ancient nautical maps, first made in the 13th century in the Mediterranean basin and later expanded to include other regions. The word portolan comes from the Italian portulano, meaning "related to ports or harbors," and which since at least the 17th century designates "a collection of sailing directions," In these maps, only a few harbors were visible, and much of the coastlines were hypothetical.

This is how we see our mission: In an uncertain world, much is yet to be explored, and many opportunities have yet to be identified. Like the navigators of the 16th century, modern leaders have to make decisions on the basis of imperfect information and incomplete maps.

The Portulans Institute aims to provide them with the best available data and analysis, and the directions that they need. This is why our logo combines a compass and pi, which is not only a powerful number found in geometry, algebra, physics, and arts, but also an infinite series of digits, with no pre-written rule telling us what the next one might be.

Learn more at: www.portulansinstitute.org and www.networkreadinessindex.org

About Saïd Business School, University of Oxford

The talents and efforts of our faculty, students, alumni and staff have translated into accomplishments that demonstrate that we are achieving our aim. The people at Oxford Saïd are exceptional, not only as measured conventionally but in the depth of their character. Our ideas, produced through rigorous research, are measurably changing the way leaders think and act, and in so doing, helping make businesses more effective and principled. By bringing young and experienced leaders to Oxford Saïd, whether as undergraduates or MBAs, or as CEOs or Nobel laureates, we are at the centre of the most important issues of the day.

Saïd Business School at the University of Oxford blends the best of new and old.

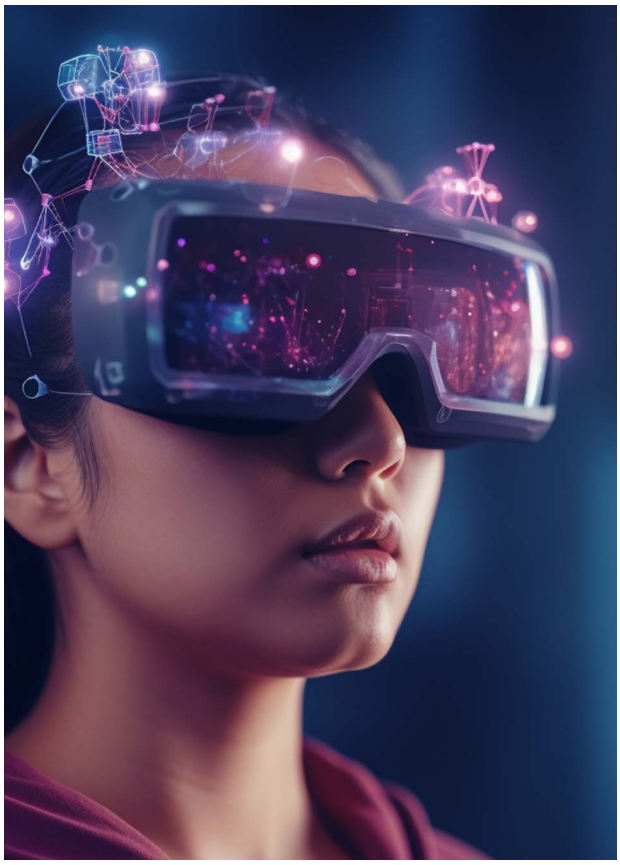
We are a young, vibrant, and entrepreneurial business school deeply embedded in the world's most prestigious university. We deliver cutting-edge education and ground-breaking research that transform individuals, organisations, business practice, and society.

We educate people for successful business careers and, as a community, we seek to harness our collective expertise and knowledge to help solve pressing global issues such as demographic change, natural resource scarcity and technological challenges.

rodion-kutsaev-unsplash

We are a young, vibrant, and entrepreneurial business school deeply embedded in the world's most prestigious university. We deliver cutting-edge education and ground-breaking research that transform individuals, organisations, business practice, and society.

About Brazilian National Confederation of Industry (CNI)



rodion-kutsaev-unsplash

The Brazilian National Confederation of Industry (CNI) is the main representative institution of Brazilian industry. It serves as the apex body within the industrial trade union system and, since its foundation in 1938, it has defended the interests of the national industry. It also acts as the main interlocutor with the Executive, Legislative and Judiciary, besides several entities and organizations in Brazil and abroad.

It represents 27 state federations of industry and 1.306 trade unions, to which around 900 thousand industries are affiliated. It is directly in charge of the Social Service of Industry (SESI), the National Service of Industrial Training (SENAI) and Euvaldo Lodi Institute (IEL). Together, these three organizations form the Industry System, which yet assembles the state-level industry federations and trade unions.

Since its establishment, CNI has played a leading role in society, promoting debate, and building consensus on key national issues. Especially concerning those matters that have strong influence on the development of Brazilian industry and economy, such as the digital transformation.

CNI, headquartered in Brasília with a representative office in São Paulo, is recognized as a key voice at the national level, examining and presenting suggestions for the development and refinement of policies and laws that strengthen the productive sector and modernizes the country.

CNI, headquartered in Brasília with a representative office in São Paulo, is recognized as a key voice at the national level, examining and presenting suggestions for the development and refinement of policies and laws that strengthen the productive sector and modernizes the country.

In addition, CNI promotes national industry research, innovation, and technological development. Moreover, it supports initiatives that promote the self-recognition, social development, and professional training of the worker.

These actions are based on studies, technical researches, consultations and constant dialogues with industry federations and trade unions, national sectoral associations, forums, and business councils.

About malomatia


rodion-kutsaev-unsplash

malomatia was established in June 2008, as a 100% Qatari Shareholding Company with a vision to enable government and businesses to excel by being a leading provider of professional information technology services and solutions.

Motivated by Qatar's National Vision 2030 of economic transformation, malomatia recognizes the importance of Qatar's need to become a knowledge-based society. To meet the IT requirements of Qatar, malomatia was incorporated to support national objectives in delivering integrated IT services and solutions in several sectors, including: Public, Healthcare, Energy, Education, Transportation and BFSI.

Based in Doha, Qatar, malomatia is committed to creating, deploying, managing, and sustaining local IT skills and expertise. malomatia is also dedicated to boosting the adoption of IT in critical economic sectors and increasing the contribution of IT to the country's GDP.

malomatia enjoys trust of 50+ entities including leaders in sectors such as the Public Sector, Energy, Healthcare, Education, Transportation, Utilities, Commerce & Trade, Banking and Technology.

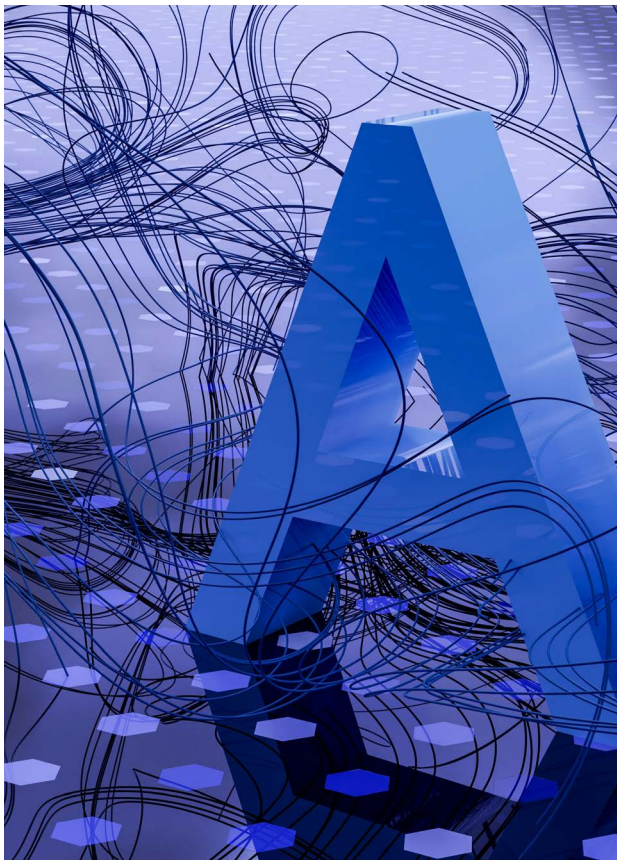
malomatia has grown to be an organization with a wide spectrum of services ranging from Cybersecurity, Contact Center services, Digitization, Data & AI, IoT, Cloud, Business Apps to Business Process Outsourcing.

malomatia bets on its Human Capital as the genuine assets of malomatia, for that it devoted its strategic vision to develop and provide them the necessary support. From less than 10 employees malomatia now has reached more than 1100, when it is looking forward to being the natural home of the digital talent.

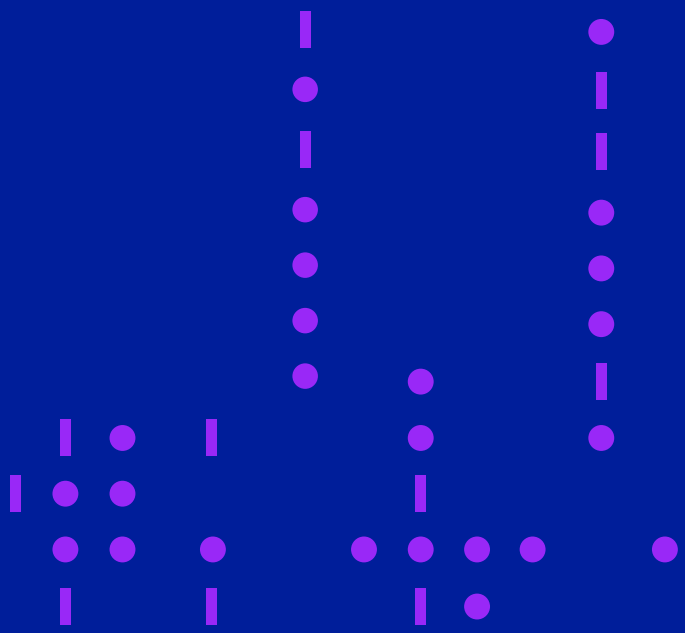
Also, malomatia expanded its operations by establishing regional offices in India, working around the clock to support the company's operations in Qatar and meet the Qatari market's needs.

About AWS

Since 2006, Amazon Web Services (AWS) has been the world's most comprehensive and broadly adopted cloud. AWS has been continually expanding its services to support virtually any workload, and it now has more than 240 fully featured services for compute, storage, databases, networking, analytics, machine learning and artificial intelligence (AI), Internet of Things (IoT), mobile, security, hybrid, virtual and augmented reality (VR and AR), media, and application development, deployment, and management. These services are offered in 102 Availability Zones within 32 geographic regions, with announced plans for 15 more Availability Zones and five more AWS Regions in Canada, Germany, Malaysia, New Zealand, and Thailand. Millions of customers—including the fastest-growing startups, largest enterprises, and leading government agencies—trust AWS to power their infrastructure, become more agile, and lower costs.



rodion-kutsaev-unsplash



The NRI 2023 Team

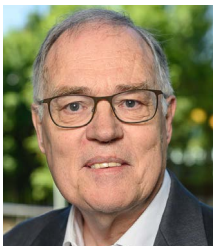
The NRI 2023 Core Team

Soumitra Dutta
Co-editor and Co-author

Soumitra Dutta is co-founder and President of Portulans Institute. He is also the founder and co-editor of the Global Innovation Index (GII) published in partnership with the World Intellectual Property Organization - WIPO. Since 1 June, 2022 Soumitra is the dean of Saïd Business School at the University of Oxford.

Previously, he was a Professor of Management and the former founding dean of the Cornell SC Johnson College of Business. Prior to joining Cornell in 2012, he was on the faculty and leadership team of INSEAD. Prof. Dutta is an authority on technology and innovation policy, and has engaged in a number of multi-stakeholder initiatives to shape global, regional, and industry agendas.

He is the co-editor and author of The Global Information Technology Report, published by the World Economic Forum. Mr. Dutta is on the global boards of Sodexo and Dassault Systèmes, and is a member of the Shareholder Council of Chicago-based ZS Associates. He serves on the advisory boards of several business schools, including HEC, Montreal; ESADE, Barcelona; and ESCP, Paris. He has co-founded two firms, including Fisheye Analytics, which WPP group acquired. He is currently Chair of the Board of Directors of the Global Business School Network.



Bruno Lanvin
Co-editor and Co-author

Bruno Lanvin is a co-founder and Senior Advisor of Portulans Institute. He is also co-editor of the Global Innovation Index (GII) published in partnership with the World Intellectual Property Organization - WIPO.

Bruno is a Distinguished Fellow at INSEAD and the President of IMD's Smart City Observatory. Initially a mathematician and a specialist of international trade, his research and publications have focused on information technology, innovation and talent strategies. He has over forty years of experience in advising governments and large corporations, including twenty years at the United Nations and ten at the World Bank.

Since 2001, Bruno Lanvin has been co-authoring The Global Information Technology Report (NRI), the Global Innovation Index Report (GII), and the Global Talent Competitiveness Index (GTCI), the Smart City Index Report, and of the award-winning book 'Sixteen Shades of Smart'. His latest book 'The Future is Young' was published in July 2022.

A frequent speaker at high-level meetings, he has been a member of numerous boards for many years, including those of ICANN, IDA-Infocomm, GovTech, IP-Watch, AAID, Kazakhstan's Presidential Board on ICT Strategy, and the Bin Rashid Foundation for Government Innovation.

William Dutton
Director, Portulans Institute

Bill Dutton is an Oxford Martin Fellow, supporting the Global Cyber Security Capacity Centre of the Department of Computer Science, and a Senior Fellow at the Oxford Internet Institute, at the University of Oxford. He is also a Visiting Professor in Media and Communication at the University of Leeds.

Until 2018, Bill was the Quello Professor of Media and Information Policy at Michigan State University, where he was Director of the Quello Center. Prior to that, he was the OII's Founding Director (2002-11), a Fellow of Balliol College and the first Professor of Internet Studies at Oxford University (2002-2014). Before his appointment to Oxford in 2002, he was a Professor in the Annenberg School for Communication at the University of Southern California, where he continues as an Emeritus Professor. While at USC, Bill was a Fulbright Scholar 1986-87 at Brunel, UK, and was National Director of the UK's Programme on Information and Communication Technologies (PICT) from 1993 to 1996, also at Brunel.

His recent publications on the social aspects of information and communication technologies include Society on the Line (Oxford University Press, 1999), Transforming Enterprise, co-edited (MIT Press, 2005), World Wide Research: Reshaping the Sciences and Humanities, co-edited with P. Jeffreys (MIT Press, 2011), the Oxford Handbook of Internet Studies (OUP, 2013), Society and the Internet, 2nd Edition, co-edited with Mark Graham (OUP 2019), and editor of A Research Agenda for Digital Politics (Elgar 2020 forthcoming). He is currently writing a book on the Fifth Estate. His service includes two terms as chair of the Advisory Committee for England of the UK's Office of Communications (Ofcom), and participating on the NHS Direct Innovation Committee.

Rafael Escalona Reynoso
CEO, Portulans Institute

Rafael Escalona Reynoso has been Senior Research Associate and Data Scientist for Portulans Institute since 2020. Before joining the Portulans Team he was the Lead Researcher at The Global Innovation Index (GII) from 2013 to 2020.

His previous professional experience was as a member of the Trade and Foreign Investment Advisory Board at the office of the President of Mexico and as Economic, Science and Technology Policy Advisor to the Senate of Mexico (LVIII Legislature). As part of the congressional advisory group he led research on the economic effects of international biosafety regulations on Mexico's basic research, industry, and trade and directed comparative analyses on international food and drug safety policies and regulations.

His research experience at Cornell University includes comparative studies between Mexico and Spain's National Systems of Innovation and regulatory aspects of modern biotechnology and the biosafety of genetically modified organisms (GMOs), and on the reach and scope of intellectual property rights (IPRs) in the information technologies era. He holds a PhD in Regional Planning with concentrations on Science and Technology Studies and Risk Analysis, Communication, and Policy and a Master of Public Administration with a concentration in Science, Technology, and Infrastructure Policy from Cornell University. He also holds a Bachelor of Arts in Economics from Universidad Panamericana in Mexico.

Mariam Chaduneli
Lead Project Manager

Mariam Chaduneli is a Policy Research and Management Associate who has worked extensively on research and policy analysis in the area of technology policy, emerging threats and digital rights.

Mariam is in charge of monitoring relevant national and international policy developments and producing research relating to digital policy, innovation readiness, and digital transformation. She is also responsible for coordinating long-term research projects, communications, and administrative work across key focus areas for PI. She is the lead project manager for the Network Readiness Index (NRI) published in partnership with Saïd Business School, University of Oxford.

Mariam has a master's degree in Innovation, Technology, and the Law from the University of Edinburgh focusing on the interplay of law, technology, and human rights. Prior to obtaining the UK Government's Chevening Scholarship for her master's studies, she was a Chief Project Manager in the Ministry of Internal Affairs of Georgia where she gained hands-on experience initiating and managing international projects with public and private sector organizations operating on a national, regional and international level. She is also the co-founder of Lawformer, a legal technology platform that simplifies routine legal tasks for lawyers and law students.

Sylvie Antal
Digital Strategy Manager

Sylvie is a Policy Research and Communications Associate with prior experience in digital privacy issues relating to minors and vulnerable populations, as well as in consumer education and technology for international development. She is an advocate for ethical, inclusive, and innovative solutions and policies that make digital experiences safer and more effective for all populations.

At PI, she is responsible for monitoring relevant policy developments, assisting with research, developing communication strategy and content, and coordinating the Fellowship program.

Sylvie holds a bachelor's degree in Information Science from the University of Michigan's School of Information, where she was a member of Tech for Social Good, and a masters degree in Human-Computer Interaction. Prior to joining Portulans, she interned at the US Federal Communications Commission, and the Family Online Safety Institute in Washington DC.

Abdellah Bouhamidi
Data Scientist

Analytics consultant, founder of Science Data Value Ltd., a consulting practice focused on providing expertise in data management, aggregation and analytics, and on developing, delivering and integrating solutions to capture data and produce actionable insights in relation to growth and markets; organizational excellence and engagement; risk analysis and management; and sustainable impact.

With a background in Operations Research, an MBA from Cornell University, and more than eight years of hands-on experience in digital transformation, analytics and big data, Abdellah has helped 25 organizations across 12 industries find and activate levers for growth and sustainable ROI.

Shailja Bang
Research Analyst

Shailja Bang Shah is a Thematic Research Analyst and has experience in leading and managing Composite Index projects. At Portulans Institute, she is responsible for project management, research, policy analysis, and communications support for an upcoming composite index in association with VinUniversity. She is also the Co-Author and Lead Researcher for the Emerging Markets Economic Growth and ESG (EMI D-ESG) Country Ranking, a composite index published and created by the Emerging Markets Institute (EMI) at Cornell SC Johnson College of Business.

Previously, she has worked with J.P. Morgan in geopolitical and macroeconomic research, where she covered market-moving events like the implications of the COVID-19 pandemic, the consequences of unconventional monetary policy, outlook for the 2020 US elections, and the evolving U.S.-China trade tensions.

She is a qualified Chartered Accountant (India) with a Bachelors in Commerce from the Narsee Monjee College of Commerce and Economics (University of Mumbai). She is a partner at Imperium Partners, a research firm which specializes in Thematic Research.

Our Technical Advisory Board (2023)

Chris Ferguson
Technical Advisor

Since 2021, Chris Ferguson has been the Managing Director of Scott Logic, a consultancy that tackles some of the hardest problems in the world's largest organisations across a range of industries including Energy, the Public Sector and Finance.

Prior to this, Chris was a Senior Civil Servant in the original senior management team that built the UK's Government Digital Service in the UK's Cabinet Office. From 2015, Chris was the GDS Director responsible for the UK Government domain GOV.UK and all cross-government platform development. In 2017, after the UK was named the #1 digital government by the UN's Digital Government Index, Chris established the National, International & Research Group within GDS to focus GDS engagement and collaboration on the UK's wider public sector, devolved administrations, and partner organizations worldwide like the UN and OECD. While in government, Chris was also the chair of the cross-government Digital Leaders Network, Head of the Digital Profession within HM Government and led the Digital, Data and Technology elements of the Cabinet Office's response to the global pandemic.

Prior to 2011, Chris's career mainly focused on national security and diplomacy roles in the UK and overseas working with the UK's Home Office, Foreign Office and Ministry of Defence.

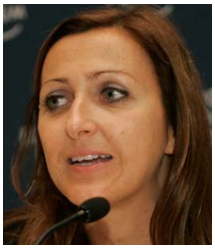
John Garrity
Technical Advisor

John Garrity is Chief of Party for USAID/Philippines' Better Access and Connectivity (BEACON) activity, a USD 33m USAID program to improve digital connectivity infrastructure, the ICT enabling environment, and cybersecurity capacity in the Philippines. His background is as an economist, policy advisor and project manager with twenty years of experience working on economic development issues in the public sector at the state, federal and international levels, and in the private sector. His focus is on digital inclusion programs, universal access policy and last-mile connectivity deployments to foster effective universal Internet adoption for inclusive growth and poverty alleviation.
Previously, he was an independent consultant to public sector and private sector organizations on digital infrastructure development, including the Asian Development Bank, UNDP Philippines, the UN Broadband Commission, the UN ITU, UNICEF, UNESCAP, among others. He was Senior Connectivity Advisor in the US Global Development Lab at USAID and before that spent ten years at Cisco, in emerging market strategy and global technology policy/government affairs based in Washington, D.C. He began his career at the World Bank and also worked at the US Federal Trade Commission. He serves as a technical advisor to the Network Readiness Index, on the advisory council of the Connect Humanity Fund, has co-authored several reports on technology and development and presented around the world on efforts to close the digital divide.

Elena Kvochko
Technical Advisor

Elena Kvochko is Chief Trust Officer working in the field of cybersecurity and started with SAP in 2020. She is a former COO of cybersecurity technologies at Bank of America, CISSP, CEH. She also served as a technology, cybersecurity, and business operations executive. Kvochko is a Certified Information Security Professional (CISSP) and Certified Ethical

Hacker (CEH). She was named one of the Top 100 CIOs and is a member of the Wall Street Journal CIO Council. Kvochko was named one of Fortune magazine's Most Powerful Women International, one of the "Leading CIOs Who Happen to Be Female" by CIO Magazine, and Business Role Model of the Year by Women in IT. She is also a published author and an inventor with patents pending in security, privacy, and digital payments technology.



Irene Mia
Technical Advisor

Dr Mia is an experienced professional (economist by training) with a successful 20 year track-record in economic and policy research and on engaging with policy-makers and senior corporate leaders. Dr Mia has expertise in managing large teams with proven strategic, financial, planning and team building skills. Dr Mia holds a PHD in International Economic and Trade Law from L. Bocconi University and MA in Latin American studies from the Institute for Latin American Studies, London University. Before her recent appointment as Senior Fellow for Latin America at the International Institute for Strategic Studies (IISS), Dr Mia was the Global Editorial Director for Thought Leadership at Economist Group, Economist Intelligence Unit.

Michaela Saisana
Technical Advisor

Michaela Saisana is the head of the Monitoring, Indicators and Impact Evaluation Unit, and she also leads the European Commission's Competence Centre on Composite Indicators and Scoreboards (COIN) at the Joint Research Centre in Italy. She has been working in the JRC since 1998, where she was awarded "best young scientist of the year" in 2004 and, along with her team, the "JRC policy impact award" for the Social Scoreboard of the European Pillar of Social Rights in 2018. As a scientist and engineer specializing in process optimization and spatial statistics, she collaborates, by auditing performance indices, with over 150 international organizations and world-class universities, including the United Nations, Transparency International, Oxfam, the World Economic Forum, INSEAD and WIPO. She is the author of about 30 articles in academic journals, 100 working papers, and a co-author of two books: 2008 OECD/JRC Handbook on Composite Indicators and 2008 Global Sensitivity Analysis-The Primer (Wiley).

Advisory Board (2023)

Hessa Al-Jaber
Advisor

Dr. Hessa Al-Jaber is the chairperson of Trio Investment, a technology investment company that invests in innovative technology that addresses some of the most pressing health problems in the MENA region. As an expert in technology, media, and telecom practice, her focus is the impact of a digital economy in productivity and competitiveness. Dr. Hessa was the former and the first-ever Minister of Information and Communication Technology in Qatar. Prior to becoming a minister, Dr. Hessa held the position of Secretary General of the Supreme Council of Information and Communication Technology since its inception in 2005. Dr. Al Jaber was a member of United Nations ITU Broadband Commission for Sustainable development and a member at the Network of Global Agenda Councils of the World Economic Forum (WEF). Dr. Al Jaber is currently the Chairperson of Qatar Satellite Company, and Malomatia, in addition to being a member of several boards including Volkswagen (AG) Supervisory Board in Germany, Qatar University's Board of Regents, Qatar Museums Authority's Board. Dr. Hessa holds a Bachelor of Science in Engineering from Kuwait University, and a Master's Degree and Ph.D in Computer Science from George Washington University, Washington, DC.

Tawfik Jelassi
Advisor

Dr. Tawfik Jelassi was appointed UNESCO Assistant Director-General for Communication and Information on 1st July 2021. In this position, he is responsible for the Organization's programmes on building inclusive knowledge societies, leading digital transformation, strategizing the role of ICT in education, and fostering freedom of expression.

Dr. Jelassi holds a Ph.D. doctorate in information systems from New York University (USA) and postgraduate diplomas from the University of Paris Dauphine (France). Dr. Jelassi has extensive experience in higher education, scientific research, and information & communication technologies. He held academic, corporate and government leadership positions in Europe, the USA, and Tunisia.

Among others, he was Programme Director and Professor of Strategy and Technology Management at IMD Business School in Lausanne (Switzerland, 2015 – June 2021). Prior to that, he served as Minister of Higher education, Scientific Research and Information & Communication Technologies in the democratic transition government of Tunisia (2014 – 2015). Prior appointments included being Chairman of the Board of Directors of Ooredoo Telecom in Tunisia, Dean at Ecole Nationale des Ponts et Chaussées (Paris), and Professor & Chairman of the Technology Management Department at INSEAD (Fontainebleau).

Diego Molano
Advisor

Diego Molano is an international consultant on digital transformation of companies and governments. He was the minister of information and communication technologies (ICT) of Colombia from 2010 to 2015. He transformed his country with his policy plan "Vive Digital," which aims to reduce poverty and create jobs using technology. Mr. Molano has a long career in the technology industry and has had responsibilities in more than 20 countries. He has been a board member of international organizations and corporations in the telecommunications, TV, radio, and postal services sectors. He is currently senior advisor to the Inter-American Development Bank, senior advisor to McKinsey & Co. in Washington DC. Mr. Molano is an electronics engineer and economist from Xavier University in Colombia and holds an MBA from IMD in Switzerland.

Osman Sultan
Advisor

Osman Sultan brings 35 years of leadership, rich with achievements in the telecom sector. His vast knowledge and expertise in the field as early as the pre-Internet period placed him as one of the pioneers in Europe, the US, Japan, and the entire MENA region. His distinguished achievements ranked him as one of the most powerful executives in the worldwide telecom industry twice on the "GTBPower100 List" in both 2010 and 2011.

Sultan has developed several strategies that helped produce the profound transformations that the telecom and information sectors have been creating in our lives. Sultan has been a board member for various institutions in the telecom industry, technology space, and academic world. incl. the advisory board of the Mohammed bin Rashid School of Communications (MBRSC), the Global Blockchain Advisory Council of the WEF, the Board of Endeavor UAE, and many others. His latest book 'The Future is Young' was published in July 2022.

Mona Abou Hana
Advisor

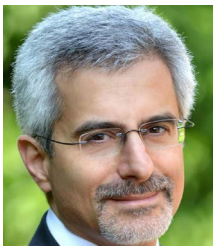
Mona is PwC Middle East Chief People Officer and a member of the leadership team, responsible for formulating and delivering the firm's people strategy. She is also a partner in PWC's consulting practice working with governments and the public sector. She specialises in strategy and policy formulation and focuses on national planning, innovation & entrepreneurship ecosystems as well as upskilling strategies to ready the workforce for the digital world. Mona also leads PwC Middle East Digital Upskilling Program. Mona holds a BA in Economics from the American University of Beirut and MBA from INSEAD. She is fluent in English, Arabic and French. Some of her publications include:

Building the Data Economies of the Future: Tomorrow's Data Economies Shaped by the Youth of Today
Inspire and Orchestrate: Innovation-Driven Government; Innovation in the UAE: From First Foundations to "Beyond Oil";
Middle East & North Africa Talent Competitiveness Index

Jacques Bughin
Advisor

Jacques is currently teaching business strategy and an investor and board member in a variety of ventures. Dr. Jacques Bughin was a director in McKinsey's Brussels office and supported clients in their Media & Entertainment, Corporate Finance, and Strategy Practices, in addition to co-leading the Digital Economy Initiative. He also acted as director of the McKinsey Global Institute (MGI), the firm's business and economics research arm. He worked for McKinsey for 28 years. Prior to joining McKinsey, Jacques was a consultant with Arthur Andersen Consulting and received a PhD in economics, operations research, and strategy from Université Catholique de Louvain in Belgium.

Jacques has led numerous research efforts on global economic trends such as globalization, productivity, and inclusive growth, as well as on the impact, opportunities, and challenges of technology including big data, the future of work and skills, and AI. He has authored 50+ articles published in titles including Harvard Business Review, and Sloan Management Review, as well as in academic journals and is quoted regularly in leading international media.



Karim Michel Sabbagh
Advisor

Karim Michel Sabbagh led global technology-centric businesses as CEO, investor and advisor covering space-based multi-orbit communication networks, terrestrial communication networks, ultra-secure communications, cyber security, digital transformation, AI and applied analytics. He is presently the Managing Director of E-Space & Lead for Europe and the Middle East.

Prior, he was the CEO of the DarkMatter Group where he led the restructuring of the company and oversaw its holistic transformation from a fluid start-up to a leading and highly influential firm with a focus on digital transformation and applied analytics, cyber security and ultra-secure communications.

This successful trajectory lead to multiple private equity buyouts in 2019.

Karim was also the President and CEO of SES (Société Européenne des Satellites), the world-leading satellite operator. He led the strategy-based transformation of SES, overseeing the evolution of the company's strategy and execution and its elevation to become the leading provider of satellite-enabled communications solutions in the video, fixed data, mobility, and government markets. Over the course of the transformation, SES rose to the no.1 position globally.

He also served as a Senior Partner and global practice leader for communications, media & technology at Booz&Co (previously Booz Allen Hamilton). At Board and CEO levels, he has shaped and served the strategic agenda of global players in the communications, media and satellite sectors. He led end-to-end multinational teams in long-term, large-scale privatizations, international expansion, mergers and acquisitions, growth acceleration and strategy-based transformation programs.

He is a visiting professor in Technology and Innovation Management and member of the Academic Council for Écoles des Ponts Business School in France. He holds an MS in Technology Management from Columbia University (New York), a DBA in International Business Management from the International School of Management (Paris), and an MBA and BBA from the American University of Beirut.

Lynn St. Amour
Advisor

Lynn St. Amour is President and CEO of Internet Matters, an Internet consulting company, and is active in matters of Internet development and governance. She served as the UN Internet Governance Forum – Multistakeholder Advisory Group (IGF-MAG) Chair (2016 – 2019). From 2001 to 2014, she was President and CEO of the Internet Society (ISOC), a global non-profit organization dedicated to the open development, evolution, and use of the Internet. She joined the Internet Society in 1998 as Executive Director of its Europe, Middle East, and Africa operations, after previously holding senior positions in Europe and the United States with AT&T and Digital Equipment Corporation. She is Co-Chair, World Economic Forum, Digital Economy and Society Systems Initiative.

She is a graduate of the University of Vermont and has extensive experience in the global IT sector, international business, and corporate restructuring, with a background in strategic planning, international sales and marketing, and finance. Ms. St. Amour has served on a number of international boards.

Hildegunn Kyvik Nordås
Advisor

Hildegunn Kyvik Nordås is a Senior Associate with the Council on Economic Policies. She also holds a position as visiting professor at Örebro University in Sweden and research professor at the Norwegian Institute of International Affairs (NUPI) in Norway. Prior to that she was leading the OECD's work on services trade policy analysis, developing the Services Trade Restrictiveness Indices and database and related analytical activities (2005-2019). She also spent two years at the research department at the WTO (2002-2004).

Before joining international organizations, Hildegunn conducted research, teaching, policy analysis, and policy advice at Norwegian and South African universities and research institutes. She spent one year as a visiting scholar at Stanford University, USA. She also led a long-term project providing technical assistance on macroeconomic modelling and policy analysis to the Tanzanian government.

Hildegunn holds a PhD in economics from the University of Bergen, Norway. Her research interest lies at the interface between digital technology, services trade, and jobs in the services sectors; areas where she has published extensively.

Endnotes

1 "Unlocking Europe's Digital Potential," Public First, 2022

2 "Notes from the AI frontier: Modeling the impact of AI on the world economy," Mckinsey Global Institute, 2018.

3 This paragraph builds on a more detailed overview of these changing conceptions in Dutton, W. H. (2023). The Fifth Estate: The Power Shift of the Digital Age. Oxford University Press.

4 Dutton, W. H., Law, G., Bolsover, G., & Dutta, S. (2013). The Internet Trust Bubble: Global Values, Beliefs and Practices. World Economic Forum.

5 Statista. (2023, July). Number of internet and social media users worldwide as of July 2023 (in billions). https://www.statista.com/statistics/617136/digital-population-worldwide/

6 These dimensions are based on Dutton, W. H. (1999), Society on the Line: Information Politics in the Digital Age, Oxford and New York: Oxford University Press, Table 1.1, p. 5.

7 These dimensions are based on Dutton, W. H. (1999), Society on the Line: Information Politics in the Digital Age, Oxford and New York: Oxford University Press, Table 1.1, p. 5.

8 Bland, G., & Dutton, W. (2019). (rep.). Perceived Threats to Privacy Online: The Internet in Britain. Oxford: Oxford Internet Institute.

9 Dutton, W. H., and Shepherd, A. (2006), 'Trust in the Internet as an Experience Technology', Information, Communication and Society, 9(4): 433-51; and Blank, G., and Dutton, W. H. (2011), 'Age and Trust in the Internet: The Centrality of Experience and Attitudes Toward Technology in Britain', Social Science Computer Review, 30(2): 135-151. http://ssc.sagepub.com/content/early/2011/02/21/0894439310396186

10 Mesthene, E. G. (1981). The role of technology in society. In A. H. Teich (Ed.), Technology and Man's Future (pp. 99-129). St. Martin's Press.

11 Douglas Engelbart , inventor of the mouse, famously noted that AI should represent "augmented human intelligence", not artificial.

12 Tyson, A., & Kikuchi, E. (2023). Growing public concern about the role of artificial intelligence in daily life. Pew Research Center.

13 Zuboff, S. (2018). The Age of Surveillance Capitalism. Profile Books.

14 Ibid

15 Dutton, W. H., Reisdorf, B. C., Dubois, E., and Blank, G. (2017), 'Search and Politics: The Uses and Impacts of Search in Britain, France, Germany, Italy, Poland, Spain, and the United States', Quello Center Working Paper, East Lansing, MI: Quello Center, Michigan State University, May 1. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2960697

16 MacKenzie, D. (1990). Inventing Accuracy. MIT Press.

17 Dutton, W. (2017). Fostering a cyber security mindset. Internet Policy Review, 6(1). https://doi.org/10.14763/2017.1.443

18 Esteve-González, P., Dutton, W. H., Creese, S., & Agrafiotis, I. (2023). Cybersecurity risks of changing workplaces: A global survey of shifts in working from home through the COVID-19 pandemic. Paper presented at the 2023 TPRC Conference, Washington, DC.

19 Amazon Web Services (AWS) is one of the Knowledge Partners of the NRI 2023.

20 AWS Impact in Ireland," Indecon International Economic Consultants, 2023.

21 AWS Impact Study Germany. The importance of AWS for the German Economy," iWConsult, 2022

22 The Contribution of Cloud to Economic Growth in the Middle East and North Africa," Telecom Advisory Services LLC, 2023

23 Dutton, W. H., Reisdorf, B. C., Dubois, E., and Blank, G. (2017), 'Search and Politics: The Uses and Impacts of Search in Britain, France, Germany, Italy, Poland, Spain, and the United States', Quello Center Working Paper, East Lansing, MI: Quello Center, Michigan State University, May 1. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2960697; Dutton, W. H. (2017), 'Fake news, echo chambers and filter bubbles: Underresearched and overhyped', The Conversation, 5 May: https://theconversation.com/fake-news-echo-chambers-and-filter-bubbles-underresearched-and-overhyped-76688

24 Dutton, W. H. (2023), The Fifth Estate: The Power Shift of the Digital Age. New York: Oxford University Press.

25 Dutton, W. H., Law, G., Bolsover, G., & Dutta, S. (2003). The Internet Trust Bubble: Global Values, Beliefs and Practices. World Economic Forum.

26 An economy is identified as displaying outstanding performance when its pillar score is at least 10% above the trendline that is generated across all economies for that particular pillar. Trendlines are produced for each pillar by estimating a linear model to describe the relationship between pillar scores and GDP per capita. These trendlines are independent of, and display different results than, those presented in Figure which shows the outcome of modeling the relationship between the overall NRI scores and GDP per capita.

27 Groeneveld, R. A. and Meeden, G., 'Measuring Skewness and Kurtosis', Journal of the Royal Statistical Society,
Series D, vol. 33, pp. 391–399, 1984.

28 The statistical analysis in this audit has been performed with the COINr tool. For more details, see: Becker et al., (2022). COINr: An R package for developing composite indicators. Journal of Open Source Software, 7(78), 4567.

29 OECD/EC JRC (Organisation for Economic Co-operation and Development/European Commission, Joint Research Centre). 2008. Handbook on Constructing Composite Indicators: Methodology and User Guide. Paris: OECD.

30 Saisana, M., B. D'Hombres, and A. Saltelli. 2011. 'Rickety Numbers: Volatility of University Rankings and Policy Implications'. Research Policy, 40: pp. 165–177; Saisana, M., A. Saltelli, and S. Tarantola. 2005. 'Uncertainty and Sensitivity Analysis Techniques as Tools for the Analysis and Validation of Composite Indicators', Journal of the Royal Statistical Society A 168 (2): pp. 307–323.

31 Saisana, M., A. Saltelli, and S. Tarantola. 2005. 'Uncertainty and Sensitivity Analysis Techniques as Tools for the Analysis and Validation of Composite Indicators', Journal of the Royal Statistical Society A 168 (2): pp. 307–323.

32 Charnes, Cooper and Rhodes, 1978; Cherchye et al., 2008; Van Puyenbroeck et al., 2021.

Bibliography

- Dutton, W. H., Law, G., Bolsover, G., & Dutta, S. (2013). The Internet Trust Bubble: Global Values, Beliefs and Practices. World Economic Forum.
- Statista. (2023, July). Number of internet and social media users worldwide as of July 2023 (in billions). https://www.statista.com/statistics/617136/digital-population-worldwide/
- Bland, G., & Dutton, W. (2019). (rep.). Perceived Threats to Privacy Online: The Internet in Britain. Oxford: Oxford Internet Institute.
- Dutton, W. H., and Shepherd, A. (2006), 'Trust in the Internet as an Experience Technology', Information, Communication and Society, 9(4): 433-51;
- Blank, G., and Dutton, W. H. (2011), 'Age and Trust in the Internet: The Centrality of Experience and Attitudes Toward Technology in Britain', Social Science Computer Review, 30(2): 135-151. http://ssc.sagepub.com/content/early/2011/02/21/0894439310396186
- Mesthene, E. G. (1981). The role of technology in society. In A. H. Teich (Ed.), Technology and Man's Future (pp. 99-129). St. Martin's Press.
- Douglas Engelbart , inventor of the mouse, famously noted that AI should represent "augmented human intelligence", not artificial.
- Tyson, A., & Kikuchi, E. (2023). Growing public concern about the role of artificial intelligence in daily life. Pew Research Center.
- Zuboff, S. (2018). The Age of Surveillance Capitalism. Profile Books.
- MacKenzie, D. (1993). Inventing Accuracy: A Historical Sociology of Nuclear Missile Guidance. MIT Press.
- Dutton, W. H., Reisdorf, B. C., Dubois, E., and Blank, G. (2017), 'Search and Politics: The Uses and Impacts of Search in Britain, France, Germany, Italy, Poland, Spain, and the United States', Quello Center Working Paper, East Lansing, MI: Quello Center, Michigan State University, May 1. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2960697
- MacKenzie, D. (1990). Inventing Accuracy. MIT Press.
- Dutton, W. (2017). Fostering a cyber security mindset. Internet Policy Review, 6(1). https://doi.org/10.14763/2017.1.443
- Esteve-González, P., Dutton, W. H., Creese, S., & Agrafiotis, I. (2023). Cybersecurity risks of changing workplaces: A global survey of shifts in working from home through the COVID-19 pandemic. Paper presented at the 2023 TPRC Conference, Washington, DC.
- Deloitte & Telecom Advisory Services, LLC. (2023). The economic impact of cloud computing in Israel.
- iWConsult. (2022). AWS impact study Germany: The importance of AWS for the German economy.
- Telecom Advisory Services LLC. (2023). The contribution of cloud to economic growth in the Middle East and North Africa.
- Dutton, W. H. (2017), 'Fake news, echo chambers and filter bubbles: Underresearched and overhyped', The Conversation, 5 May: https://theconversation.com/fake-news-echo-chambers-and-filter-bubbles-underresearched-and-overhyped-76688
- Dutton, W. H. (2023), The Fifth Estate: The Power Shift of the Digital Age. New York: Oxford University Press.
- Dutton, W. H., Law, G., Bolsover, G., & Dutta, S. (2003). The Internet Trust Bubble: Global Values, Beliefs and Practices. World Economic Forum.

About the Network Readiness Index

Published by Portulans Institute and Saïd Business School, University of Oxford, the 2023 NRI is the fifth edition of a renewed NRI model, reflecting how technology and people need to be integrated within an effective governance structure in order to have the right impact on our economy, society and the environment. Multiple countries use the NRI to design their digital strategies, connecting Technology with People and Governance for Impact.

The 2023 edition of the NRI will be dedicated to the theme of trust in technology and network society. It draws attention to the potential for a serious crisis in public trust in the internet and related technologies in our increasingly interconnected world.

Recognizing the pervasiveness of digital technologies in today's networked world, the index is grounded in four fundamental dimensions: Technology, People, Governance, and Impact. This holistic approach means that the NRI covers issues ranging from future technologies such as AI and the Internet of Things to the role of the digital economy in reaching the Sustainable Development Goals (SDGs).

Origins: The Network Readiness Index (NRI) was first published in 2002 and provided a holistic framework for assessing the multi-faceted impact of ICT on society and the development of nations. Until 2016, the NRI was part of the Global Information Technology Report (GITR) published by the World Economic Forum (WEF), Cornell University, and INSEAD. The NRI anticipated various aspects that would become critical in the following years. Early on, it identified three essential stakeholders for ICT: individuals/society, businesses, and governments, and it included elements of ICT application that were novel for the time.

At a time when the primary concerns in ICT revolved around infrastructure issues, the NRI provided a forward-looking and holistic perspective on the application of ICT within national economies. The NRI rapidly developed into a global benchmark for the application and utilization of ICT. Many economies utilized the NRI to design their ICT strategies, and the NRI was used and frequently quoted by leaders from the public and private sectors.

In a major redesign of the NRI framework in 2019, current topical concerns of trust, governance, inclusivity and impact on SDG goals were included into the model. The NRI framework provides a simple yet holistic view of how economies can leverage the power of digital technologies while building sustainable and inclusive futures.

All editions of the NRI are available at www.networkreadinessindex.org

ISBN: 979-8-89238-367-7