

Digital Nations 2026

Accelerating the digital leap in Japan





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Executive summary



A legacy of innovation challenged by a 'digital cliff'

Japan has long been recognised as a global leader in technological innovation – a legacy that spans centuries and continues to shape its modern industrial and digital capabilities. A combination of factors, including forward-looking government policies and a strong emphasis on science education, enabled Japan's rapid industrialisation and positioned it for leadership in emerging technologies. However, in 2018, Japan's Ministry of Economy, Trade and Industry (METI) published the results of a landmark investigation into the nation's digital infrastructure, warning that the country was heading towards a 'digital cliff' by 2025.

For Japan, 2026 marks a critical point, as the challenges identified by METI are predicted to reach a peak and impact economic performance. It also marks 10 years since the implementation of Society 5.0 – the

government's flagship vision for a "Super Smart Society". Although full disruption appears to have been avoided, Japan's global competitiveness has felt the impact of the digital cliff. The country's aggregate score of 76 out of 100 in the Digital Nations Index indicates considerable room for further progress.

The Japanese government and private sector have intensified their efforts to make a decisive 'digital leap' – a shift away from the incremental modernisation of legacy systems towards a bold, comprehensive transformation aimed at establishing a fully integrated, human-centred digital nation. This renewed focus on digitalisation is brought to life by recent initiatives such as the government's 17 strategic focus areas, which highlight AI, semiconductors and cybersecurity as pillars of comprehensive national power.

From legacy to leap: Japan's path to digital leadership

Japan's digital leap has evolved into a strategic endeavour to reposition the country as a global leader in the digital era. It presents the opportunity to shift from being primarily a technology adopter to becoming a standards setter for digital nations. Achieving this will depend on Japan's ability to harness its distinctive competitive advantages and adopt international best practices through collaborative platforms. Specifically, it involves the following:

- **Capitalising on comparative advantages**, including next-generation connectivity beyond 5G, frontier technology deployment such as quantum and autonomous systems, and demographic technology leadership. This also includes operator contributions, such as NTT Docomo's AI-enabled network optimisation, KDDI's satellite-to-smartphone connectivity, SoftBank's expansion of AI-ready data centres, and Rakuten Mobile's cloud-native innovations.
- **Applying global best practices** to accelerate infrastructure deployment, strengthen a digital-first culture across sectors, and build digital trust by learning from leading peers in Asia Pacific and beyond.
- **Using international cooperation** to shape global norms for AI, cybersecurity, semiconductors and future connectivity including 6G. This should ensure Japanese strengths influence international frameworks rather than remaining domestically contained.

01 Japan's path to the digital era



1.1

A legacy of leadership in innovation

Japan has long been recognised as a global leader in technological innovation – a legacy that spans centuries and continues to shape its modern industrial and digital capabilities. The country’s tradition of engineering ingenuity can be traced back to the Edo period (1603–1868), when artisans developed sophisticated karakuri puppets powered by wooden gears, springs and counterweights. This early mastery of mechanical design laid the groundwork for Japan’s later strengths in automation and miniaturisation. The momentum accelerated during the Meiji era and early 20th century, marked by inventions such as the myriad year clock, the dry cell battery and the establishment of Japan’s first telegraph lines.

Building on the industrial foundations established in the 19th and early 20th centuries, Japan’s technological ascent accelerated in the latter half of the 20th century, evolving into global leadership in electronics, automotive engineering and robotics. This

transformation was underpinned by forward-looking government policies, sustained investment in R&D, a strong emphasis on science education, and the strategic adaptation of foreign technologies. Cultural factors, particularly a commitment to precision, craftsmanship and continuous improvement, reinforced Japan’s ability to scale innovation and maintain global competitiveness.

These developments cultivated the technical skills, institutional capacity and innovation culture that enabled Japan’s rapid industrialisation and positioned it for leadership in emerging technologies. They also established the technological base from which Japan entered the digital age and shaped the trajectory of its modern digital economy. Japan’s robust innovation ecosystem has helped shape many of the technologies that define today’s digital world, seeding the global shift towards mobile computing, portable media consumption, smart home automation and miniaturised electronics (see Table 1).

Table 1

Examples of Japanese innovations that underpin modern digital solutions

| Innovation | Year | Company | Impact on modern digital solutions |
|---------------------|------|------------|---|
| Compact disc | 1982 | Sony | Paved the way for digital file formats (MP3, AAC) and optical storage technologies (such as Blu-ray) used in the pre-streaming era. |
| Emoji | 1999 | NTT Docomo | Designed for limited screen space but evolved into the universal language of digital communication and social media. |
| Flash memory | 1980 | Toshiba | A key component of mobile technology that devices now rely on for the storage for apps, photos and OS. |
| i-Mode | 1999 | NTT Docomo | A pioneering mobile internet service that offered internet access, email, web browsing and apps on feature phones. |
| Lithium-ion battery | 1991 | Sony | Allowed for high-energy density in a slim form factor, supporting electric vehicles, smartphones and wearables. |
| QR code | 1994 | Denso Wave | Originally invented to track car parts in factories but now the global bridge between the physical and digital worlds, with applications in payments, marketing, ID verification and other areas. |

Source: GSMA Intelligence

1.2

Mobile as the foundation for the digital era

Japan entered the digital era with innovations in consumer electronics and early advances in mobile and web technologies, establishing a strong foundation for the expansion of its digital economy. These were complemented by policy frameworks aimed at building an advanced digital economy. For example, the e-Japan Strategy I & II¹ (2001–2005) accelerated the rollout of high-speed broadband and promoted the adoption of digital services across sectors, while the Priority Policy Program² (2006) aimed to create a “ubiquitous network society”. More recently, Japan’s Society 5.0 initiative³ (2016), a flagship vision for a “Super Smart Society”, has sought to integrate cyberspace and physical space through AI, IoT and robotics to address structural challenges such as an ageing population and labour shortages.

Driven by these factors, Japan’s digital economy has grown steadily over the last three decades, reflected in rapid digital transformation across key service industries, enabling the rise of digital payments, e-commerce, telemedicine and other services. Digital payments, for example, expanded from accounting for just 13.2% of total transactions in 2010 to 42.8% by 2024, with digital consumer spend reaching JPY126.7

trillion (\$803 billion) that year.⁴ A 2024 survey by METI further highlights the momentum: Japan’s B2C and B2B e-commerce markets reached JPY26.1 trillion (\$165 billion) and JPY514.4 trillion (\$3.3 trillion) respectively in 2024, representing year-on-year growth of 5.1% and 10.6%.⁵ Japan has also established itself as a global leader in smart city infrastructure, IoT ecosystems and autonomous mobility.

Mobile networks, particularly 5G, form the backbone of government efforts to integrate advanced digital technologies across the economy in line with the objectives of Society 5.0. Mobile apps, mobile cloud services, mobile payments and mobile enterprise tools have become the primary channels through which digital business models scale in Japan. At the same time, mobile-linked wearables enable remote health monitoring, alleviating pressure on hospitals, while 5G-connected sensors and drones provide real-time data for emergency response and disaster-relief operations, enhancing Japan’s resilience and operational readiness in crisis situations. A recent GSMA report details how mobile operators, government and the broader digital ecosystem collaborate and innovate to deliver these life-saving services.⁶

Mobile in Japan: in numbers



90%

subscriber penetration



83%

mobile internet adoption



96%

5G coverage with over 302,000 5G base stations, over half of which are 5G standalone (SA) capable



5G adoption

55%



4G adoption

44%



\$144bn

in cumulative mobile capex over the last decade

Source: GSMA Intelligence

¹ For further information, see e-Japan Strategy II Acceleration Package, at japan.kantei.go.jp.

² For further information, see Priority Policy Program 2006 at japan.kantei.go.jp.

³ For further information, see Society 5.0 at www8.cao.go.jp/cstp/english.

⁴ “Japan’s strategic approach to a digital yen”, East Asia Forum, July 2025

⁵ Results of FY2024 E-Commerce Market Survey Compiled, METI, 2025

⁶ [Japan’s Early Warning System: The Role of Mobile Network Operators](#), GSMA, 2026

1.3

The impact of the digital cliff takes effect

In 2018, METI published the results of a landmark investigation into the nation's digital infrastructure. It warned that Japan was heading towards a 'digital cliff' by 2025.⁷ The investigation predicted substantial economic losses and a decline in global competitiveness as the impact began to take hold from legacy IT systems, acute shortages of digital talent, deeply rooted cultural and organisational barriers, fragmented technology adoption, and escalating cybersecurity vulnerabilities. Many of these challenges have moved from forecasts to observable constraints on national performance. However, full disruption appears to have been avoided through incremental system upgrades and targeted policy interventions.

The Covid-19 pandemic was the first major stress test, revealing the structural fragility of Japan's analogue-heavy, public-administration systems. Critical processes still relied on obsolete media such as floppy disks, CDs and fax machines, requiring manual, in-person submissions and slowing the delivery of essential services. These bottlenecks hindered real-time information sharing between local authorities and central ministries, delaying decision-making at a moment when rapid coordination was vital. It was an early demonstration of how legacy infrastructure could undermine national resilience.

Similar patterns have persisted, increasing maintenance costs and disrupting business operations. For example, a major bank experienced multiple system failures in 2021 due to faults in ageing IT infrastructure, while a ransomware attack exploited outdated VPN hardware to

cripple operations at the Port of Nagoya in 2023. Delays in the initial rollout of the My Number digital ID system occurred because municipal offices relied on legacy databases, and many organisations (particularly SMEs) continue to depend on obsolete IT architectures, such as COBOL-based systems and mainframe computers from before the cloud era. This has contributed to a widening knowledge gap, as the pool of experts familiar with these systems continues to shrink.

Japan's global competitiveness has also been impacted by the digital cliff, leaving the country behind many regional and global peers at a time when digital capabilities are central to economic and social progress. This is reflected in Japan's stagnant productivity and a widening digital deficit over much of the past decade. For instance, the country's relatively slow transition to digital payments has left it trailing countries such as Singapore and South Korea, both of which have established highly integrated digital payment ecosystems that drive growth in digital commerce and fintech innovation. While digital payments still account for less than half of transactions in Japan, the proportion exceeds 90% in Singapore and South Korea.⁸

Japan ranked 30th out of 69 countries in IMD's 2025 World Digital Competitiveness Ranking.⁹ This was an improvement of one position from the previous year but still well behind regional peers such as Singapore (3rd), Hong Kong (4th), Taiwan (10th), China (12th) and South Korea (15th), underlining the risk to Japan's position as a global economic and technological leader.

⁷ For more information (Japanese), see www.meti.go.jp/policy/it_policy/dx/20180907_01.pdf

⁸ Statista

⁹ World Digital Competitiveness Ranking 2025, IMD, 2025

02 Moving from legacy to digital leap



2.1

A renewed focus on digitalisation

For Japan, 2026 marks a critical point. It is the first year when the challenges identified by METI are predicted to reach their peak and impact economic performance. In this context, the nation's digital transformation stands at a pivotal juncture where its historical technological strengths must adapt to address new digital and demographic realities. As a result, the Japanese government and private sector have intensified their efforts to make a decisive digital leap – a shift away from the incremental modernisation of legacy systems towards a bold, comprehensive transformation aimed at establishing a fully integrated, human-centred digital nation.

While Society 5.0 (now in its 10th year since implementation) remains central to Japan's digitalisation ambitions, the government has recently announced key initiatives that highlight a renewed emphasis on digitalisation and an intention to reposition Japan for global leadership in the digital era.

Following the **February 2026** elections in Japan, the government reaffirmed its focus on 17 strategic fields to drive economic growth and strengthen supply-chain resilience. Digital technologies are framed not merely as engines of growth but as pillars of comprehensive national power underpinning autonomy and peace. Alongside AI, semiconductors and cybersecurity, the strategy places a renewed emphasis on digital infrastructure, such as subsea cables, as a critical component of strategic autonomy amid rising geopolitical risks.

In **January 2026**, the government outlined its digitalisation priorities for the year, emphasising a shift from government-led to user-driven digital reform. Priorities include enhancing the functionality of My Number Cards (which have now exceeded 100 million in circulation, with approximately 80% of the population possessing one). The My Number Cards will be implemented as part of a larger My Number digital ID system, incorporating healthcare and government-to-person payment services. The government also intends to launch the Myna App to facilitate smartphone-based identity verification.

In **December 2025**, Japan approved its first national AI strategy – the AI Basic Plan.¹⁰ This aims to position the country as the “world's most AI-friendly nation” by pairing rapid innovation with strong risk management. Branded “Japan rebooted” through “trustworthy AI”, the strategy presents a comprehensive agenda to accelerate AI adoption across government, industry and society while ensuring transparency, safety and ethical use.

In **December 2025**, the government adopted a new cybersecurity strategy for the period to 2029, establishing a system that enables the police, Ministry of Defence and Self-Defense Forces to collaborate in neutralising critical attacks. This follows the enactment in May of legislation introducing Active Cyber Defence (ACD), which aims to monitor digital communications during peacetime for government-centred defence and deterrence. In July 2025, the government established the National Cybersecurity Office (NCO) to transition from a reactive to a pre-emptive cyber defence strategy.

In **June 2025**, the government devised the Digital Infrastructure Development Plan 2030,¹¹ which presents a unified roadmap to build the foundational infrastructure required for the AI era. The plan aims to deliver integrated, resilient and high-capacity infrastructure by 2030, with an emphasis on the expansion of data centres and submarine cable landing points beyond major metropolitan areas, and universal access to high-speed connectivity.

In **June 2025**, the government approved the Priority Plan for the Advancement of a Digital Society, which establishes Japan's short- to medium-term digital policy agenda for 2025–2030.¹² Led by the Digital Agency, it outlines the annual actions required to accelerate nationwide digital transformation and address structural challenges such as labour shortages, regional disparities and the need for faster AI adoption.

¹⁰ For further information, see Artificial Intelligence Basic Plan at www8.cao.go.jp/cstp/ai/.

¹¹ “Publication of Digital Infrastructure Development Plan for 2030”, Ministry of Internal Affairs and Communications, Japan, June 2025

¹² Priority Plan for the Advancement of a Digital Society, The Digital Agency of Japan, 2025

2.2 Strategic pillars

A closer look at Japan's recent digital policies and initiatives reveals several strategic pillars and underlying factors supporting the country's accelerated digital leap. The factors reflect the government's ambition and commitment, and carry significant implications for Japan's position on the global stage.

A whole-of-government approach

The systemic, cross-ministerial nature of the challenges Japan faces means they cannot be resolved through isolated, ministry-level reform. Meaningful digital transformation demands tightly coordinated action across government, industry and society. Reflecting this need for integration, many of Japan's key digital initiatives are directed from the highest levels of government. For example, the implementation of the AI Basic Plan is overseen by the AI Strategic Headquarters, chaired by the prime minister, ensuring the strategy can swiftly adapt to technological change and maintain coherence across ministries.

Public-private investment

Modernising legacy systems, building next-generation infrastructure and enabling AI-driven public services all require long-term, coordinated and capital-intensive funding – demands that are far too great for either government or industry to meet alone. Consequently, Japan's digital leap depends on a closely coordinated investment model involving the public and private sectors.

In November 2024, the government set a public-private investment target of more than JPY50 trillion (\$317 billion) over the next decade to revitalise its semiconductor and AI industries.¹³ Of this, at least

JPY10 trillion (\$63 billion) will come from direct state support through to fiscal 2030, aimed at catalysing a further JPY40 trillion (\$254 billion) of private-sector investment. For fiscal 2026, METI quadrupled its budget for AI and chips to approximately JPY1.23 trillion (\$7.9 billion).¹⁴

In February 2026, Taiwanese firm TSMC announced plans to mass-produce advanced 3-nanometre chips in Kumamoto, southern Japan, in a project worth \$17 billion.¹⁵ Japan's digital investment push has been reinforced by domestic mobile operators too. As examples, NTT Docomo is scaling 5G and AI-enabled network optimisation, KDDI is integrating satellite-to-smartphone connectivity, SoftBank is expanding data-centre capacity to support AI workloads, and Rakuten Mobile's low-cost, cloud-native model demonstrates an alternative path to efficient infrastructure deployment.

Digital sovereignty

After decades of reliance on foreign providers for software and cloud infrastructure, Japan is now moving rapidly to reassert control over its data, critical technologies and supply chains. Digital sovereignty serves as a strategic enabler of resilience, autonomy and sustainable growth amid geopolitical tensions, supply-chain fragility and intensifying competition in AI and semiconductors. For example, METI plans to establish a joint venture with more than 10 domestic companies, including SoftBank and Preferred Networks, to develop a homegrown AI model. The initiative will be backed by JPY1 trillion (\$6.3 billion) in public funding over five years, beginning in fiscal 2026. In parallel, SoftBank is in discussions to invest JPY2 trillion (\$12.6 billion) over six years in domestic data centres to support the development of homegrown AI models.¹⁶

Rapidus exemplifies Japan's digital sovereignty ambitions

In August 2022, Rapidus Corporation was established as a national initiative to revive Japan's advanced semiconductor manufacturing capabilities and reduce reliance on foreign suppliers. Heavily backed by the Japanese government and major domestic corporations, including Toyota, Sony and SoftBank, Rapidus aims to mass-produce cutting-edge 2-nanometer chips by 2027, with full-scale production targeted for 2028.

The Japanese government, now also the largest shareholder in the company, invested JPY100 billion (\$640 million) in fiscal 2025, with private investment from more than 30 companies reaching JPY167.6 billion (\$1.1 billion).¹⁷ The project aligns closely with Japan's broader economic security and digital renewal strategies, seeking to secure domestic production of advanced semiconductors for AI accelerators, automotive applications and other high-tech industries amid growing global supply-chain risks.

¹³ "Japan to roll out \$65bn in support for chips, AI", Nikkei Asia, November 2024

¹⁴ "Japan to quadruple spending support for chips and AI in budget", The Japan Times, December 2025

¹⁵ "TSMC CEO flags 3-nanometre chip production in Japan, investment reported at \$17 billion", Reuters, February 2026

¹⁶ "Japan Commits USD 20 Billion to Build a Homegrown Model", The Economy Senate, December 2025

¹⁷ "Japan government to hold 10% voting rights in Rapidus but with veto power", Nikkei Asia, February 2026

Cybersecurity

As Japan's critical infrastructure, including energy grids, transport networks, telecoms, finance and healthcare, becomes increasingly digitally integrated and exposed to malicious actors, cybersecurity will remain a strategic pillar in support of the digital leap. Reflecting this priority, the government's growth strategy explicitly designates cybersecurity as a strategic investment area, alongside semiconductors and quantum technologies. Key measures to strengthen Japan's cyber posture include the enactment of the ACD Act, which empowers the government to monitor external communications and proactively neutralise threats before they reach critical infrastructure, and the proposed adoption of secure-by-design principles to align Japan with international best practices, including those in the US and EU.

Policy reform

Japan's move away from legacy systems towards becoming an advanced digital nation depends on the introduction of policies that foster innovation and unlock vital investment. For instance, in November 2025, METI announced that companies could claim tax credits on up to 40% of their R&D investments, specifically targeting government-designated national strategic technologies such as AI, robotics, semiconductors, communications, space and quantum. In addition, significant bureaucratic barriers are being dismantled, exemplified by reforms enabling the acceptance of electronic documents in place of traditional hanko seals. This shift is driven by the government's push for a digital-first society.

Spectrum policy reforms gain traction

The Ministry of Internal Affairs and Communications (MIC) is fundamentally reshaping its approach to spectrum management, shifting from traditional administrative allocations (often 'beauty contests' tied to rollout obligations) towards more market-oriented mechanisms that balance price with technological innovation. A key legislative milestone came with the April 2025 amendments to the Radio Act, which introduced a conditional auction system for high-capacity spectrum bands above 6 GHz, including the 26 and 40 GHz bands for 5G to support massive data needs for AI and robotics.

Under this conditional framework, bids are assessed not only on price but also on technological roadmaps, investment commitments, innovation potential and service diversity. The approach is designed to encourage participation from a range of players, including non-traditional entrants, and accelerate the development of new services and more efficient use of spectrum resources.

Talent

Japan's digital leap relies on cultivating a robust supply of highly skilled professionals in critical areas such as AI, quantum technologies and cybersecurity. As such, the government and private sector have placed significant emphasis on training, upskilling and talent development programmes designed to enhance the capabilities of the workforce. Talent development is a central pillar of Japan's digital transformation initiatives. Key aspects of the national cybersecurity strategy are the cultivation of domestic cybersecurity expertise through collaboration between industry, academia and government, and the promotion of homegrown technological innovation to reduce reliance on non-domestic solutions and foster greater autonomy. In the private sector, Microsoft, for example, plans to train more than 3 million employees as part of its investment to strengthen hyperscale cloud computing and AI infrastructure in Japan.

Inclusion

Unlike earlier development paradigms centred on industrial production, Society 5.0 adopts a human-centred approach, ensuring technology enhances quality of life for all, including vulnerable groups.

Recent digitalisation initiatives reflect this commitment. The 2026 digital agenda explicitly prioritises human-friendly digitalisation, with a core objective of ensuring no one is left behind. The Priority Plan for the Advancement of a Digital Society emphasises the creation of a safe, secure and inclusive digital environment. Key measures include demonstrating the benefits of digital transformation, improving digital literacy to enable effective use of technology, ensuring accessibility through inclusive digital design, and coordinating closely across ministries to support citizens who may feel anxious or hesitant about digital adoption, particularly older age groups, people with disabilities and those unfamiliar with digital tools. Meanwhile, as part of the AI Basic Plan, Japan aims to increase public AI use to 50% initially and eventually to 80%.

03

Assessing Japan's progress using the Digital Nations Index



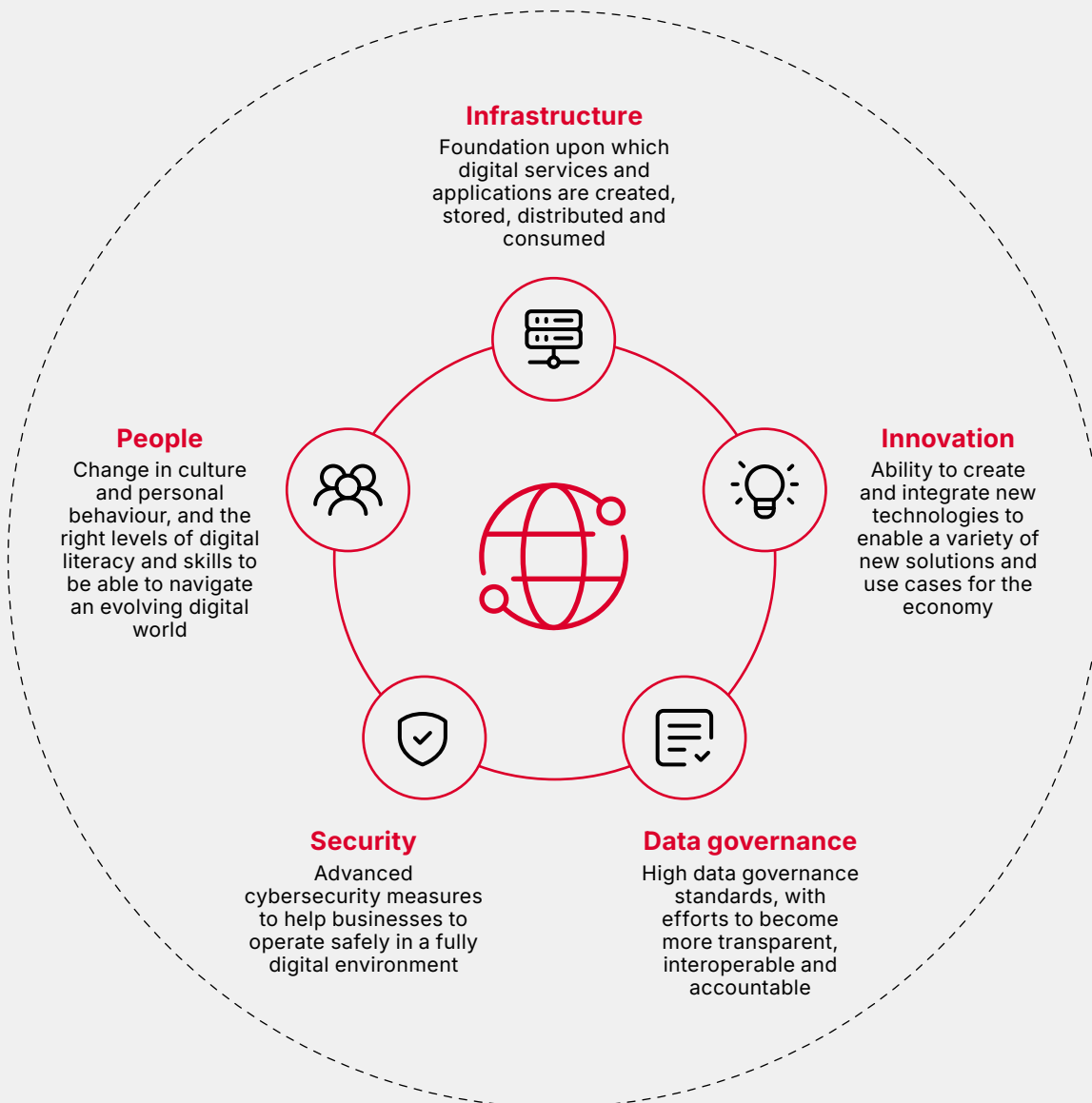
Japan's digital leap represents a critical move to becoming a fully-fledged digital nation – one in which digital technologies are seamlessly integrated across society to enable inclusive, resilient and sustainable social and economic progress.

As the realisation of this digital leap has become a priority for government and the private sector in Japan – particularly in response to the digital cliff, stagnant productivity in the last decade and shifting demographic realities – it has become essential to systematically track progress. Doing so enables policymakers and stakeholders to identify areas requiring targeted intervention, optimise resource allocation, sustain reform momentum and objectively assess Japan's positioning as a digital leader.

The GSMA Intelligence Digital Nations Index is an evidence-based tool that combines qualitative and quantitative indicators to assess the progress of countries in Asia Pacific with their digitalisation objectives, and to benchmark digital development across the region. It measures performance across five interrelated components: infrastructure, innovation, data governance, security and people. All are essential for individuals and organisations in a digital nation to use digital technologies effectively, securely and sustainably (see Figure 1). The index also helps stakeholders identify strengths and gaps in national digitalisation pathways, enabling continuous evolution towards a secure and competitive digital economy.

Figure 1

The five components of a digital nation



Source: GSMA Intelligence

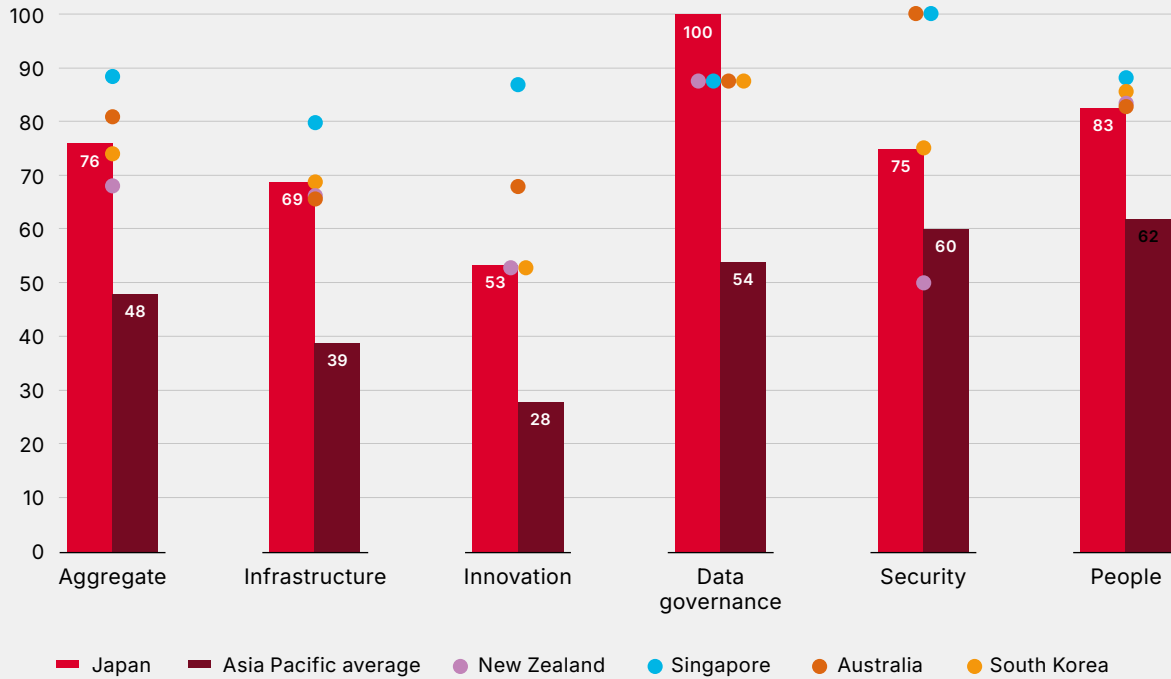
In the 2025 index, Japan achieved an aggregate score of 76 out of 100, ranking third overall, behind Singapore (88) and Australia (81), and just ahead of South Korea (74). While this demonstrates Japan is among the most advanced digital nations in the region, it also indicates

considerable room for further progress, which is anticipated as the country's digital-leap initiatives begin to take effect. Japan's strongest performance was in the data governance component, while its weakest was in innovation (Figure 2).

Figure 2

Digital Nations Index: Japan versus developed Asia Pacific, 2025

Score out of 100



Source: GSMA Intelligence

Infrastructure

Japan has established a strong digital infrastructure foundation that underpins its broader objectives of technological autonomy and economic resilience. In the mobile sector, 5G deployment has advanced rapidly, with population coverage exceeding 95% and 155,721 5G base stations based on 5G SA architecture, equivalent to more than half of total 5G base stations as of March 2025.¹⁸ Japan is also advancing next-generation optical networking through the Innovative Optical and Wireless Network (IOWN) initiative. By extending all-photonic technologies across long-haul transmission, including submarine cables, Japan aims to deliver higher bandwidth, lower latency and improved energy efficiency. This supports cross-border data flows, particularly for AI workloads and data-centre interconnection, while contributing to sustainability objectives.

Industry estimates indicate Japan's data-centre capacity has more than doubled over the past five years, reaching approximately 6.8 GW by 2025. Public cloud expenditure has also risen sharply, totalling \$40.26 billion in 2024 and placing Japan among the world's largest cloud markets.¹⁹ Despite these advances, structural limitations in construction capacity and resilience could slow the pace of digitalisation. Data-centre capacity remains heavily concentrated in the Tokyo–Osaka corridor, which accounts for 80–85% of the nation's total, restricting geographic diversification in a disaster-prone environment. Expansion is further hindered by escalating construction costs, labour shortages and challenges with power availability. Meanwhile, with AI identified as a key strategic priority for Japan's digital transformation, demand for computational capacity is expected to surge in the coming years, requiring accelerated investment in data centres and other cloud infrastructure to support AI workloads.

¹⁸ Ministry of Internal Affairs and Communications

¹⁹ "Bottlenecks in data center construction threaten Japan's AI ambitions", Nikkei Asia, December 2025

In response, service providers are increasingly adopting more flexible deployment models, including retrofitting existing buildings and modular, phased construction. At the policy level, the government is promoting regional dispersion, including large-scale hubs such as the planned 3.1 GW Toyama data-centre cluster, alongside coordinated investments in power and telecoms infrastructure.

The 'watt-bit' integration framework²⁰ is a strategic approach being developed in Japan to optimise the convergence of power (watts) and communication technology (bits) to address the immense power demands of AI, promote decarbonisation and enhance the resilience of local, regional power grids. This

Innovation

Despite the innovation component of the Digital Nations Index seeing Japan's weakest performance, the country remains a global innovation powerhouse, underpinned by sustained R&D intensity and strong industrial capabilities. Total R&D expenditure reached JPY23.79 trillion (\$152.4 billion) in FY 2024 – equivalent to 3.7% of GDP²² – a record high and placing Japan among the world's most R&D-intensive economies. This performance is driven largely by strong private-sector engagement, with enterprises accounting for approximately 79% of total R&D spend in 2022.²³ Japan also benefits from a large and highly skilled research workforce, with a researcher density of around 10 per 1,000 employees,²⁴ ranking it among leading OECD economies.

However, these strengths mask underlying structural weaknesses. Business-led R&D investment remains heavily concentrated in the manufacturing sector, limiting the development of digital and ICT-related innovation and constraining its conversion into scalable digital outputs. OECD data shows that Japan ranks relatively low for ICT value-added growth. It reached only 4.96% in 2023, while the fastest-growing economies, including the UK, Belgium and Germany, recorded growth rates above 10%.²⁵ At the same time, Japan's trade deficit in telecoms, computer and information services widened from 0.17% to 0.27% of GDP between 2014 and 2023.²⁶ This trend highlights ongoing competitiveness challenges in the country's digital industries. The comparatively lower investment in software and digital-native sectors has also weakened

supports capacity expansion beyond Tokyo and Osaka under the GX Strategic Zone initiative, which aims to establish large-scale data-centre concentrations in regional areas through efficient infrastructure development, resilience assurance and decarbonised power utilisation.²¹

In terms of regional revitalisation and public-private cooperation, the government will in May 2026 introduce a framework for the development of industrial 'clusters' at the regional, prefecture and municipality levels. These are focused on attracting large-scale investment in the government's 17 priority sectors. The hope is that Japan's more rural areas can see the same economic benefits that come with advanced technologies.

the translation of innovation into productivity gains, contributing to Japan's position of 28th out of 38 OECD economies for labour productivity in 2024 – the lowest in the G7.²⁷

The concentration of R&D in incumbent industries also reflects limited capacity for innovation diffusion, particularly among small and medium-sized enterprises (SMEs). The adoption of advanced digital technologies remains uneven, with SMEs lagging significantly behind large firms in areas such as cloud computing, data analytics and AI.

At the same time, financing channels for startups remain relatively limited. In 2024, Japanese startups raised a total of approximately JPY779.3 billion (\$4.9 billion), equivalent to 0.13% of GDP; in comparison, US startups raised \$209 billion in the same year, equivalent to 0.72% of GDP.²⁸ These gaps continue to constrain innovation diffusion and limit the emergence of globally scalable, digitally driven business models. Prior to the Japan Growth Strategy, in 2021 Japan announced the New Form of Capitalism plan to increase startup investment funding by 10-fold to JPY10 trillion (\$64 billion) by 2027. The plan prioritised fostering deep-tech startups and building entrepreneurial ecosystems in multiple cities. While the current administration has moved beyond the New Form of Capitalism framework towards a "crisis management investment" and "growth investment" strategy, as illustrated through the 17 strategic sectors, Japan's support for digital entrepreneurs continues.

20 "Watt-Bit Integration for Local Production and Consumption of Renewable Energy", Mitsubishi Research Institute, September 2025

21 "GX Policy Achieving Decarbonization and Economic Growth Together", Agency for Natural Resources and Energy, METI, October 2025

22 "Results of the Survey of Research and Development", Statistics Bureau of Japan, January 2026

23 The UK Innovation Report 2022, Cambridge Industrial Innovation Policy, 2022

24 Japan JP: Total Business Enterprise R&D Personnel: Per Thousand Employment In Industry, CEICC, 2021

25 OECD Digital Economy Outlook 2024 (Volume 1), OECD, 2024

26 "Gains from Digital Services Imports in Japan", CSIS, June 2025

27 "Japan 2024 labor productivity 28th among 38 OECD members, lowest in G7", The Mainichi, December 2025

28 Statista

Data governance

Japan's economy is highly integrated with global trade, with exports of goods and services representing 21.85% of its GDP as of 2023.²⁹ Global hyperscalers play a central role in the domestic cloud ecosystem, with Microsoft Azure and AWS together accounting for 80% of the market.³⁰ This high level of external integration makes the governance of data flows a strategic priority, requiring Japan to manage cross-border data in ways that safeguard economic value creation. Reflecting this, Japan has established a sustained approach to balancing openness and security in cross-border data governance, recording the maximum score of 100 in this component of the Digital Nations Index.

As data is increasingly framed as a strategic asset in broader economic security considerations, Japan has maintained a policy direction that supports data openness for key technologies and economic activities, underpinned by strong governance within trusted frameworks. Embedding data regulation in AI governance has become a central focus. In 2025, Japan's data governance framework was recalibrated to better support AI development, shifting from strict consent-based controls towards a more flexible, risk-based approach. Proposed amendments to the Personal Information Protection Law would permit the

use of personal data without consent when processed into statistical information, with the aim of accelerating AI development.³¹

At the same time, safeguards are being strengthened through enhanced penalties and administrative fines for the misuse of data. Data governance is also extending to AI system security, with new guidelines addressing risks such as prompt injection and adversarial attacks, alongside the establishment of an AI Safety Institute. These measures signal Japan's transition to an AI-ready data governance framework that balances protection with utilisation.

Beyond AI governance, enabling interoperable cross-border data flows has become a priority to support increasingly globalised economic activity. Japan continues to advance data free flow with trust as a core principle, promoting trusted data exchange across jurisdictions. At the global level, Japan supports the expansion of the Cross-Border Privacy Rules (CBPR) system into the Global CBPR Forum,³² facilitating trusted data transfers through certification-based mechanisms. In parallel, Japan engages with the EU through adequacy arrangements and digital partnerships, focusing on regulatory alignment and trusted data sharing.³³



29 Japan – Exports Of Goods And Services (% Of GDP), Trading Economics

30 "A Journey Through the Cloud Maze: Comparing Azure, AWS, and GCP", HYS Enterprise, April 2024

31 "Japan weighs easing rules on personal data use", Digwatch, December 2025

32 "Global Cross-Border Privacy Rules (CBPR) Forum Publishes Documents (such as Policies, Rules, and Guidelines) for Operationalization of the Global CBPR System", METI, May 2024

33 "European Commission adopts adequacy decision on Japan, creating the world's largest area of safe data flows", EC, January 2019

Security

With a score of 75 out of 100, Japan remains a leading economy in Asia Pacific in addressing cybersecurity challenges. This reflects the country's ability to continuously adapt its governance structures and policy frameworks in response to the evolving threat landscape, demonstrating a dynamic and iterative approach to cybersecurity management. Japan adopts a multi-layered and adaptive approach to cybersecurity, combining legal obligations with sector-specific operational frameworks and tailored response mechanisms that reflect differences across industries and technologies. Rather than relying solely on compliance-based controls, this layered model integrates prevention, detection, response and recovery, strengthening systemic resilience across critical infrastructure and digital services:

- **Legal frameworks.** As cyber incidents increasingly threaten critical infrastructure, posing systemic risks to essential services, economic activity and national security, Japan has established a strong statutory basis for cybersecurity, anchored by the Basic Act on Cybersecurity and the Act on the Protection of Personal Information. These provide clear mandates for risk management, data protection and coordination across government and critical sectors, forming the backbone of Japan's cybersecurity governance framework. The passage of Active Cyber Defence (ACD) legislation in May 2025 marked a shift from predominantly reactive measures to early detection and intervention. Additionally, updated strategic frameworks emphasise standardised approaches to critical-infrastructure resilience, including the application of the plan, do, check, act (PDCA) cycle for continuous risk management, alongside strengthened incident-reporting obligations for critical infrastructure operators and service providers.
- **Institutional capacity.** Japanese policymakers have advanced a set of strategic measures to strengthen resilience and response capacity. A central pillar of this progress is the strengthening of institutional governance. The reorganisation of the National Centre of Incident Readiness and Strategy for Cybersecurity (NISC) into the National Cybersecurity Office (NCO) in July 2025 represents a significant step towards a more centralised and coordinated governance framework. By consolidating oversight and improving cross-ministerial coordination, this reform embeds a secure-by-design approach across

policy development and implementation, while enhancing national-level coordination in response to large-scale or cross-sector cyber incidents.

- **Cross-sector collaboration.** Japan has developed mechanisms for real-world threat intelligence sharing and coordinated response. These include J-CSIP (Cyber Security Information Sharing Partnership of Japan) – a mature public-private collaboration platform that enables timely sharing of threat intelligence and coordinated responses to cyber incidents affecting critical infrastructure; and JC-STAR (Japan Cyber-Security Technical Assessment Requirements Labelling Scheme) – an initiative that strengthens IoT security by promoting secure by design through technical assessment and labelling, helping reduce systemic vulnerabilities at the device level.

Despite these efforts, human capital constraints remain a limiting factor. Recognising an estimated shortfall of approximately 110,000 cybersecurity professionals,³⁴ Japan has elevated workforce development to a policy priority. For example, METI has outlined a tiered national talent strategy aimed at expanding the pool of certified cybersecurity specialists. Meanwhile, programmes such as Security Camp and Cyber Defense Exercise with Recurrence (CYDER) support pipeline development across students, government agencies and critical infrastructure operators. While these initiatives strengthen long-term capacity, scarcity of talent in the short term continues to constrain Japan's cybersecurity capabilities.

Japan's cybersecurity challenge is increasingly shaped by global risks, particularly amid rising geopolitical tensions and new vulnerabilities stemming from disruptions to established international supply chains. As these vulnerabilities are embedded in globally developed models and as attack techniques can be quickly replicated across borders, the effectiveness of relying solely on domestic responses is declining. Furthermore, the use of AI is adding greater sophistication to cyberthreats, heightening the need for cross-border cooperation in threat intelligence sharing, the development of standards and coordinated response efforts. While industry-led initiatives (such as Fujitsu's Frontria alliance launched in December 2025) contribute to practical collaboration and innovation, achieving further gains may require more structured and institutionalised international cooperation frameworks.

34 "Japan Seeks to Enhance Cybersecurity by Doubling Industry Professionals by 2030", Cybersecurity Asia, May 2025

People

Although performance across developed Asia Pacific markets is broadly strong on this component, Japan's score of 83 (compared to a regional high of 88) indicates scope for further improvement, particularly in strengthening its position among leading markets in digital talent and people development. The core constraint on Japan's People component lies in uneven basic digital skills, closely linked to its ageing demographics. As of 2024, around 29% of Japan's population was aged 65 and above – the highest proportion globally.³⁵

This is reflected in a pronounced 'grey digital divide'. While internet use exceeds 90% among those under the age of 70, it falls to 59.6% for those aged 70–79 and just 25.6% among those over 80, indicating a steep decline in digital engagement with age.³⁶ However, ageing does not inherently imply low digital literacy. With targeted interventions, adoption among older age groups can improve substantially. In Australia, for example, internet usage reaches 98% among those aged 65–74 years old, and 94% among those over 75, supported by community-based training, subsidised access and the expansion of digital public services. Japan has adopted several measures to address the challenge, including the following:

- **Digitalisation of public services.** Despite initial concerns and operational challenges with the My Number programme, Japan has strengthened its usability and uptake. It is now advancing towards machine-verifiable digital credentials, with the Digital Agency exploring the use of credentials and digital identity wallets to enable end-to-end digital verification and distribution.
- **Inclusive service design.** In October 2025, the Digital Agency released a Web Accessibility Introduction Guidebook, providing practical guidance for organisations on designing user-centric digital services. Improving service accessibility, rather than relying solely on users' digital skills, can support adoption among older age groups, people with disabilities and other vulnerable groups.
- **Community campaigns and offline assistance.** Mobile operators are leveraging their nationwide retail networks to deliver large-scale digital skills training. SoftBank, for example, rolled out free smartphone classes in retail stores and public venues in May 2025, covering services such as MyNa Portal, My Number Card usage, e-tax and broader digital literacy, including introductory generative AI modules. KDDI and NTT Docomo have launched similar programmes under the MIC's digital inclusion initiative. In parallel, the government has established an offline support layer through trained 'digital supporters', targeting individuals unfamiliar with digital devices and services.

³⁵ Statistics Bureau of Japan

³⁶ Bridging the gray digital divide: A cross-cultural qualitative study on digital inclusion and healthy aging in Germany, Japan, and Thailand, Telematics and Informatics Reports, Volume 18, 2025

04 Realising digital leadership ambitions



Japan's digital leap is increasingly understood not only as a response to the risks highlighted in METI's digital cliff warning, but also as a strategic effort to reposition the country as a global leader in the digital era.

Recent policy developments reinforce this ambition. The AI Basic Plan, for instance, emphasises leadership as well as trustworthy and human-centric AI governance. In a period defined by rapid technological change

and intensifying geopolitical and supply-chain risks, Japan has an opportunity to shift from being primarily a technology adopter to becoming a rule setter and standards maker for digital nations.

Realising this ambition will depend on Japan's ability to harness its distinctive comparative advantages and systematically adopt international best practices through collaborative platforms (see Figure 3).

Figure 3

Global leadership lies in the intersection of comparative advantages, best-practice learning and collaboration



Source: GSMA Intelligence

4.1

Comparative advantages

Next-generation infrastructure development

As 5G approaches maturity in pioneer markets worldwide, attention is increasingly shifting to the future digital infrastructure landscape, shaped by the transition to 6G and the growing role of non-terrestrial networks (NTNs) in the ecosystem.

Japan is well positioned to play a leadership role through its Beyond 5G (B5G) initiative – often described as the roadmap to 6G. This aims to establish the country as a global architect of digital infrastructure in the 2030s.³⁷ The following examples highlight Japan's strengths in developing next-generation, high-performance digital infrastructure:

- At MWC Barcelona 2026, the National Institute of Information and Communications Technology (NICT) showcased beyond-5G technologies under the theme The IQ Era, demonstrating performance well beyond today's mobile networks, including terahertz-band wireless communications (100 GHz –10 THz) and AI-enabled "ultra-spot" connectivity.
- Japan currently ranks third globally in 6G patent filings, with a 10% share, after China (40%) and the US (35%),³⁸ driven by NTT's Innovative Optical and Wireless Network (IOWN). The IOWN Global Forum now counts more than 170 members around the world and is emerging as a key international platform for shaping standards for green, high-performance next-generation networks.
- In March 2026, KDDI announced the world's first cross-border satellite-to-mobile roaming service in partnership with SpaceX, allowing users to connect in dead zones in Japan and the US. The service fills a c40% gap in geographic coverage for Japan's mountainous terrain, extending reach to 100% of the country.
- The MIC has established a regulatory framework to support the commercial deployment of high-altitude platform stations (HAPS) from 2026, enabling direct-to-device mobile connectivity. This could serve as a blueprint for bridging coverage gaps in rural and mountainous regions, remote islands, maritime zones and disaster-prone areas where population density does not justify conventional terrestrial infrastructure. HAPS plays a role in the government's Digital Garden City Nation Infrastructure Development Plan, established in 2022, serving as a key technology to revitalise rural areas and close the digital divide between urban and regional communities.
- Japan has been at the forefront of the open RAN movement. Rakuten Mobile became the first operator in the world to deploy a nationwide open RAN network in 2020, demonstrating the commercial viability of the model at scale, while NTT Docomo's Open RAN Ecosystem Experience (OREX) provides a platform where partners such as Nvidia, Dell and Fujitsu can address key challenges to broader open RAN adoption, such as vendor interoperability.

³⁷ For further information, see Beyond 5G promotion strategy - Roadmap towards 6G, MIC, 2020

³⁸ "From 5G to 6G: Patent and Legal Challenges in the New Tech Era", Kluwer Patent Blog, November 2024

Frontier technology deployment

Beyond AI, IoT and other emerging technologies, attention is increasingly shifting to frontier technologies that will shape the next digital era. Japan is well positioned to leverage its strengths in several of these areas (particularly translating theoretical research into practical deployment) to establish itself as a global leader in frontier-technology applications. Examples include the following:

- Japan aims to build a quantum ecosystem with 10 million domestic users by 2030 under its Quantum Future Society Vision, targeting JPY50 trillion (\$320 billion) in economic value and the growth of quantum-focused startups. It is also advancing quantum key distribution for next-generation secure communications and has established the Global Quantum Hub in Okinawa, in partnership with firms including IBM, to develop a quantum-literate workforce.
- In 2022, Japan deregulated its drone framework to allow Level 4 operations, enabling autonomous beyond-visual-line-of-sight (BVLOS) flights over residential and populated areas. This has accelerated deployment across high-impact use cases, including disaster response (e.g. following the 2024 Noto Peninsula earthquake), smart logistics for rural delivery services and industrial inspection (e.g. detecting structural faults on ageing bridges and tunnels).

4.2 Global best practices

Given the pace, scale and multidimensional nature of the digital landscape, no country can master every aspect of the digital era alone. Even with Japan's exceptional strengths and comparative advantages, there remain clear opportunities to learn from regional and global peers.

Japan trails several counterparts in key areas, reinforcing the importance of adopting proven best practices to accelerate progress and close structural gaps. Below outlines examples of practices Japan can adopt.

Accelerating digital infrastructure rollout

Since the start of this decade, the rollout and adoption of 5G have reshaped the digital landscape, transforming mobile connectivity from a consumer-focused, speed-driven service into foundational, low-latency infrastructure for industrial automation, IoT and immersive technologies. In this context, the speed

Demographic tech adaptation

Many high-income nations are experiencing demographic pressures from declining birth rates and ageing populations. Japan is widely regarded as at the frontier of this shift. In response, it has developed deep expertise in managing demographic change through digital technologies, particularly by leveraging its strengths in robotics to advance physical AI solutions for elderly care, manufacturing and disaster response, helping offset a shrinking workforce. These developments position Japan to set a global benchmark for demographic tech adaptation. For example, researchers at the University of Tokyo have developed a groundbreaking, biorealistic and self-healing skin for robots, engineered from living human cells and designed for elderly care and social-robotics applications.

At MWC Barcelona 2026, KDDI announced plans to deploy humanoid robots, following a partnership with Japanese startup Avita. The robots are expected to be introduced across retail stores, medical and welfare facilities, art museums and recreational venues. Meanwhile, NTT Docomo revealed it has begun recruiting pilot users for a personal AI agent called SyncMe, which is scheduled for commercial launch in mid-2026. It is described as a digital partner designed to understand each user's individual values and sensibilities, enabling natural, everyday interactions ranging from casual conversations to personal consultations.

and scale of deployment and adoption have become key indicators of digital leadership. Although Japan was among the early adopters of 5G, it has lagged many regional and global peers in rollout and uptake, particularly in the transition to 5G SA. Singapore, for example, met its 95% nationwide 5G SA coverage goal by mid-2022 – three years ahead of the original regulatory target of the end of 2025.³⁹ Japan can learn from international best practices to support faster and more effective infrastructure deployment.

Auctions are a fair way to assign spectrum where demand is high, but award design and associated conditions are also important. Most regulators have made spectrum available by auctioning nationwide, full power licences for mobile. Properly designed auctions or administrative processes, tied with long-term licences, investment-friendly conditions and a presumption of renewal, help encourage network investment.

³⁹ GSMA Intelligence, based on industry data

Establishing a clear long-term spectrum roadmap is also important to support the rollout of next generation mobile networks. This helps policymakers and regulators forecast future trends and manage their work. For mobile operators, a roadmap provides increased certainty to invest based on the government's future allocation, renewal plans and management of radio spectrum. Vietnam's recent success is a good example. Vietnam achieved one of Asia Pacific's fastest 5G rollouts by adopting a pragmatic, pro-deployment spectrum strategy that reduced reserve prices, imposed strict rollout obligations on awards and introduced incentives. In 2025, the regulator ARFM updated its National Radio Frequency Master Plan, allocating key mid-band ranges, including 6.425–7.125 GHz, for IMT and treating them as strategic assets for future expansion of mobile connectivity.

While Japan's move towards a spectrum auction model is a positive step, it is important to prioritise investment and deployment over short-term revenue, and offer stronger incentives to expand rural inclusion and accelerate next-generation connectivity.

The next phase of mobile network development, widely expected to be defined by 6G, will require additional capacity in 200–400 MHz channels to address capacity needs and traffic growth. An average of 2–3 GHz of mid-band spectrum will be required in 2035–2040.⁴⁰ Countries are now developing national and regional positions for the future of mobile spectrum in the 2030s. Clarity on Japan's long-term spectrum roadmap in the upper mid-bands, particularly the 6–8 GHz range, in the lead-up to WRC-27 would strengthen domestic momentum. In 2025, SoftBank and Nokia successfully completed field trials in the 7 GHz band, demonstrating significant potential for future 6G networks.

Implementing a digital-first culture

Japan boasts world-class infrastructure, reflecting its longstanding achievements in hardware and precision engineering. However, its cultural, institutional and structural context has cultivated an ethos that prioritises physical reliability and incremental improvement over the swift, software-led strategies commonly associated with digital services. As a result, many analogue

corporate and administrative practices, such as reliance on cash and paper-based approvals, have persisted and act as barriers to modern productivity. While Japan is taking steps to overcome these constraints and move away from legacy systems, it could accelerate this by learning from regional peers that have successfully embedded digital-first mindsets across government, business and society.

For example, Singapore excels in agile, whole-of-government execution with a strong central digital authority. It has created a public sector where digital-by-default is the norm. For Japan, which still struggles with fragmentation across ministries and uneven implementation, Singapore illustrates how clearer coordination mechanisms and empowered central leadership can help streamline bureaucracy. In Japan's context, this could involve strengthening the ability of bodies such as the Digital Agency to promote the interoperability of digital systems and encourage a more coherent digital culture, without imposing rigid, top-down mandates.

South Korea provides a different but equally valuable lesson: the power of speed and public-private collaboration, as demonstrated with 6G testbeds. Its close coordination between government and major technology firms has also created an environment where new digital services scale rapidly and citizens expect (and often demand) cutting-edge digital experiences. Japan is known for its advanced technology, but it can accelerate adoption, especially in areas such as digital payments and digital ID, by learning from South Korea's success in turning infrastructure investment into daily digital habits.

Meanwhile, India Stack has emerged as a global model for digital public infrastructure, demonstrating how digital-first cultures can be built through inclusion and simplicity. Comprising digital identity, payments and data-sharing layers, India Stack has enabled a digital ecosystem that delivers accessible, paperless, cashless and low-friction services, particularly for underserved citizens. Japan's My Number and My Number App systems could benefit from this emphasis on openness and modularity, helping ensure digital services are technically advanced but also intuitive and easy to adopt across generations and prefectures.

⁴⁰ [Vision 2040: Spectrum for the future of mobile connectivity](#), GSMA, 2025

Enhancing digital trust

Like many countries, Japan has seen an increase in the scale and frequency of online attacks targeting individuals and businesses. Online threats in Japan include highly sophisticated, AI-driven phishing, a sharp rise in ransomware attacks on the manufacturing sector, and widespread financial fraud.

As a high-income, technologically advanced nation, Japan is a prime target for financially motivated cybercriminals as well as state-sponsored espionage. According to the National Police Agency, combined losses from special fraud, romance scams and social media-based investment scams soared to a record JPY324.1 billion (\$2.1 billion) in 2025 – a significant increase from JPY199.1 billion (\$1.3 billion) the previous year. The number of reported cases also reached an all-time high at 42,900, up from 31,280.⁴¹

Tackling online threats requires the strengthening of domestic deterrents and response mechanisms (which Japan is already pursuing) but also collaboration with international partners and the adoption of best

practices to address emerging risks. Japan's 2025 Cybersecurity Strategy already reflects several of these best practices, including a secure-by-design approach, which has been embraced by countries such as Australia. Furthermore, Australia and Singapore's upgrade of their Comprehensive Strategic Partnership (CSP 2.0) on supply chain security highlights a trust-by-design approach that offers lessons for Japan in auditing critical infrastructure vendors.

Meanwhile, the newly established National Cybersecurity Office, which now centralises threat analysis to enable swift, government-led defence, could be modelled on Singapore's Cyber Security Agency (CSA). In March 2025, Japan officially launched JC-STAR – its IoT product security labelling scheme – which draws on best practices from international models such as Singapore's Cybersecurity Labelling Scheme. Japan is also transitioning its local government systems to the Government Cloud, which requires incorporating the zero-trust principles already established in standards in countries such as South Korea and Singapore.

4.3 International cooperation

In a world of escalating geopolitical risks, leadership in the digital era can no longer be achieved through siloed efforts or domestic capabilities alone. Instead, it emerges from integration within regional and global networks built on shared standards, co-developed technologies and collective resilience. Japan has taken a proactive approach to international cooperation to advance this vision:

- In January 2026, Japan and ASEAN adopted their first joint statement on AI cooperation, focusing on the development of trusted AI models, establishment of safety and governance frameworks, and talent development.
- In January 2026, Japan and India agreed to establish a Japan–India AI Strategic Dialogue under the Japan–India AI Cooperation Initiative, strengthening bilateral coordination on emerging technologies.
- Japan has participated in the US-led multilateral Pax Silica initiative since its launch in December 2025, signalling formal alignment with a coalition aimed at securing resilient and trusted supply chains for the AI era.

- Japan serves as a bridge between the G7 and the Global South by advancing rules-based digital ecosystems through its data free flow with trust (DFFT) principles. These promote secure and transparent data exchange that supports growth while protecting privacy and security.
- The EU–Japan Digital Partnership, launched in May 2022, promotes cooperation on human-centric digital transformation and alignment on key technologies such as 5G/6G, AI, semiconductors and quantum computing.

Such cooperation enables Japan to play to its strengths, shape global standards and ensure that its vision of safe, reliable and human-centred digital innovation is embedded in the international rulebook rather than confined to domestic policy. This becomes increasingly important given the rapid development of pivotal technologies, such as 6G, quantum computing, AI and cybersecurity, where international cooperation is essential for harmonised standards, interoperability and inclusive implementation across economies at different stages of digital maturity.

⁴¹ "Fraud soars to record high in Japan as scam tactics grow more sophisticated", The Japan Times, February 2026

Call to action: a digital leap provides an opportunity for global leadership

Japan's digital leap – intended to help the country overcome its impending digital cliff – presents a unique opportunity to reposition the country as a global leader in the digital era. While Japan has made significant progress in recent years, the government's renewed focus on digitalisation and its prioritisation of key technologies such as AI and semiconductors demonstrate its long-term ambitions.

In this context, the GSMA Intelligence Digital Nations Index serves as a valuable tool for Japanese policymakers, helping identify critical areas for improvement as the country seeks to become a truly digital nation. By combining its own technological capabilities and competitive strengths with the best practices of regional and global peers, Japan can shift from being

a cautious adopter to a confident standards setter – with its leadership not defined by scale alone, but also by trust, safety and the ability to cooperate with others around a shared digital future.

A critical component of this ambition is establishing a clear pathway to 6G. As global discussions on next-generation connectivity accelerate, Japan has an opportunity to shape the evolution of 6G by aligning its spectrum strategy, R&D investment and international standards engagement with its broader digital transformation goals. Positioning 6G as an enabler of innovation, productivity and resilience will ensure connectivity underpins Japan's leadership in the digital era.

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