

The Mobile Economy North America 2025



GSMA

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Executive summary

Across North America, almost 320 million people are connected to the mobile internet. Around 60% connect through 5G networks, underlining the speed at which the region is migrating to next-generation devices and services. This acts as a key driver of technological innovation and growth, as highlighted by mobile's significant contribution to North America's economy.

Mobile technologies and services now generate around 5% of GDP in North America – a contribution that amounts to almost \$1.6 trillion of economic value added. A large part of this stems from the productivity effects generated by the use of mobile services, in addition to the direct contribution of the mobile industry ecosystem, which amounted to \$420 billion in 2024.



Key priorities for the digital ecosystem in North America

5G monetisation

Mobile operators have invested heavily in building out 5G networks. These investments are now translating into monetisation opportunities, though at varying speeds across different segments. 5G fixed wireless access (FWA) has emerged as the most achievable opportunity in the near term, while the rollout of 5G standalone (SA) offers the potential to tap into new revenue streams across the consumer and enterprise segments.

Technological leadership

Satellite connectivity and innovation in the radio access network (RAN) offer two examples of how North America is helping to shape the future of mobile networks. The region is home to some of the world's top satellite providers and is leading the way on the launch of direct-to-device (D2D) satellite services. Meanwhile, US companies have been at the forefront of open RAN efforts in the mobile industry, and are pioneering new solutions such as AI-RAN.

Mitigating cybersecurity threats

Operators recognise the critical need to secure their network infrastructure and safeguard customers against existing and emerging cybersecurity threats. This is crucial to prevent potentially significant consequences, including data breaches, financial losses, reputational damage and widespread operational disruption. Against this backdrop, operators have implemented various technical and non-technical measures to improve their security.

Effective spectrum policy

North America is laying the groundwork for future mobile services, highlighted by the robust spectrum legislation passed in the US to commercialise 800 MHz of spectrum in the 1.3–10.5 GHz frequency range. The move will bring the US on a par with the world's connectivity leaders in terms of spectrum assignments. Continued leadership in mobile connectivity will require all countries in the region to establish decisive spectrum plans for the 2030s across low-, mid- and high-frequency bands. It will also require North America to build on the solid regulatory steps it has taken to facilitate the development of D2D satellite services.

Simplifying regulation

While the implementation of the FCC's "Delete, Delete, Delete" initiative remains in its early stages, general sentiment in the mobile industry is broadly supportive. CTIA, representing major operators such as Verizon, AT&T and T-Mobile US, has highlighted key areas where deregulation is needed to accelerate 5G deployment. These include removing local and federal barriers that delay the installation of small cells; streamlining permitting and environmental review processes for tower construction; simplifying commercial wireless spectrum licensing and usage to enable more efficient use of spectrum; and eliminating rules that no longer reflect current technologies or market conditions.

Defining North America

This report defines North America as the US, Canada and the Caribbean (for analysis including Mexico, please see The Mobile Economy Latin America).

The Caribbean includes the following countries or territories: Anguilla; Antigua and Barbuda; Aruba; Bahamas; Barbados; Bermuda; Cayman Islands; Curacao; Dominica; Grenada; Guadeloupe; Haiti; Jamaica; Martinique; Montserrat; Puerto Rico; Saint Kitts and Nevis; Saint Lucia; Saint Pierre and Miquelon; Saint Vincent and the Grenadines; Trinidad and Tobago; Turks and Caicos Islands; British Virgin Islands; and the US Virgin Islands.

The Mobile Economy North America



Mobile's contribution to GDP

2024

\$1.6tn

→ 5.0% of GDP

2030

\$3.7tn

→ 10.2% of GDP



Employment

2024

1.3 million

jobs directly supported by
the mobile ecosystem

Plus 1.3 million indirect jobs



4G (percentage of connections)

44%

2024

11%

2030

Excluding licensed cellular IoT



5G (percentage of connections)

55%

2024

89%

2030

Excluding licensed cellular IoT



Public funding

Mobile ecosystem contribution to
public funding (before regulatory
and spectrum fees)

2024

\$140bn



Operator revenues and investment

Revenues

2024

\$318bn

2030

\$355bn

Investment

Operator capex for the period 2024–2030

\$348bn



Mobile internet users

2024

319m

→ 79% of the population

2030

344m

→ 82% of the population

01

The economic impact of mobile



1.1

Macroeconomic outlook

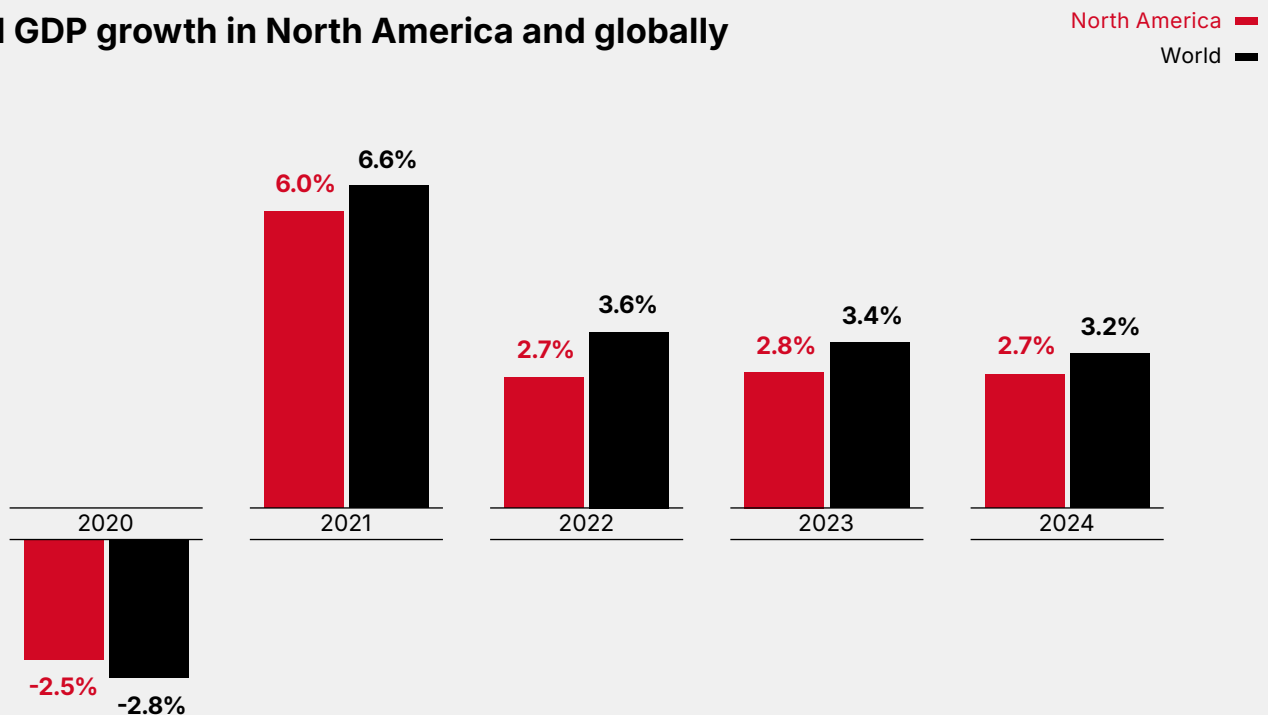
The North American economy has expanded at a solid pace after the pandemic. This has mainly been driven by private consumption and government spending, following a similar trend to the global economy though tracking slightly lower. Some of the challenges facing the region in the short term are high uncertainty around economic policy, a slowdown in net immigration and tighter trade policies.¹

In 2024, GDP growth in North America was 2.7%, slightly above the pre-pandemic average of 2.4% (2016–2019). In recent years, the technology and digital industries in the US have boosted the economy, while advances in artificial intelligence (AI) will continue to accelerate growth.

As shown in Figure 1, the North American economy is experiencing modest growth, supported by resilient consumer spending and relatively strong labour markets. However, the outlook remains uncertain, with risks stemming from persistent global headwinds, elevated interest rates and ongoing trade barriers that could decrease investment and cross-border activity. In this context, mobile technologies will play an important role in supporting the development of the digital economy and strengthening the region's long-term competitiveness.² This will drive efficiency and increase productivity for consumers and enterprises across all economic sectors through access to the latest wave of digital technologies, including 5G, IoT and AI.

Figure 1

Real GDP growth in North America and globally



Source: : GSMA Intelligence, based on WEO-IMF April 2025 data

1. For more details, see OECD Economic Outlook, Volume 2025 Issue 1.

2. The digital economy is defined as the economic activities that originate from the integration of individuals, business, devices, data and operations through technology.

1.2

Mobile's contribution to the economy

Mobile technologies contributed \$1.6 trillion in economic value to North America in 2024

In 2024, mobile technologies and services generated 5% of GDP across North America – a contribution that amounted to \$1.6 trillion of economic value added. The greatest benefits came from productivity effects (which reached \$910 billion), followed by the direct contribution (\$420 billion). Growth in 5G adoption was an important driver of the economic benefits.

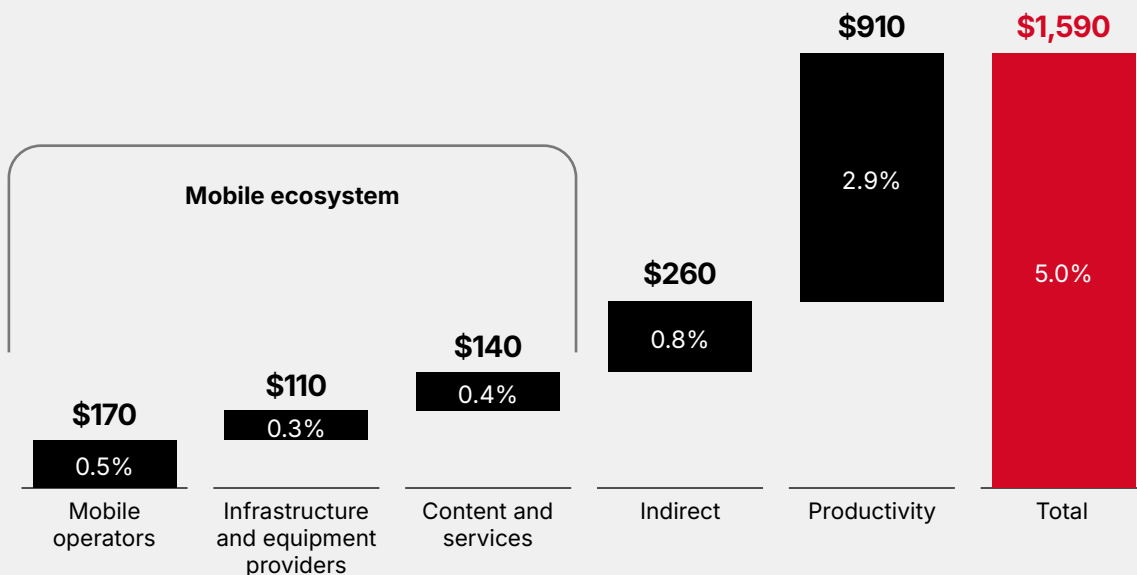
The impacts of mobile technologies include connectivity and digital transformation. The former refers to the use of mobile technologies. The latter involves the integration by enterprises of advanced mobile technologies such as 5G, IoT and AI.

The mobile ecosystem comprises three categories: mobile operators, infrastructure and equipment, and content and services. The infrastructure and equipment category encompasses network equipment providers, device manufacturers, and IoT companies. Meanwhile, content and services encompasses content, mobile application and service providers, distributors and retailers, and mobile cloud services.

Figure 2

North America: total economic contribution of mobile, 2024

Billion



Note: Totals may not add up due to rounding.
Source: GSMA Intelligence

The economic contribution of mobile in North America will reach \$3.7 trillion in 2030

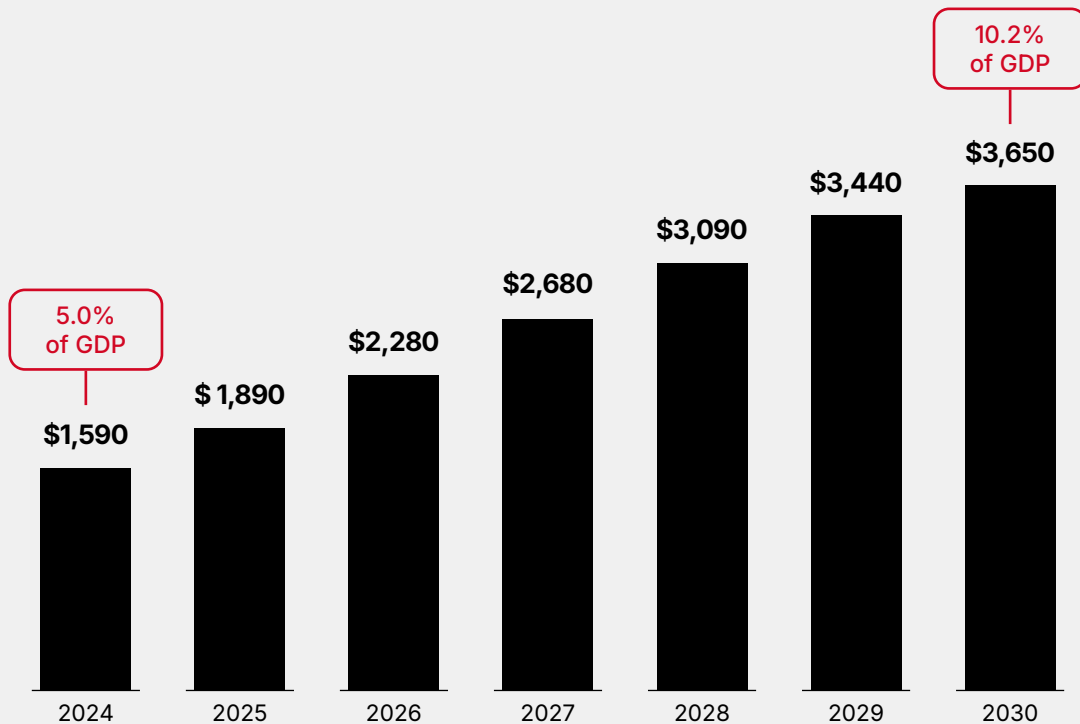
By 2030, mobile's contribution in North America is expected to reach approximately \$3.7 trillion, or 10.2% of GDP, driven by the improvements in productivity and efficiency brought about by the continued expansion of mobile services and the growing adoption of digital technologies, including 5G, IoT and AI.

In the second half of the decade, mobile's contribution is expected to grow at a CAGR³ of 14.9%, which is significantly higher than the expected growth in regional GDP at a CAGR of 2.1% for 2024–2030.⁴ This highlights the importance of mobile and digital technologies to accelerate economic growth.

Figure 3

North America: forecast of the economic impact of mobile

Billion



Source: GSMA Intelligence

3. Compound annual growth rate (CAGR) measures the mean annualised growth rate for compounding values over a given time period.

4. Source: IMF Data Mapper

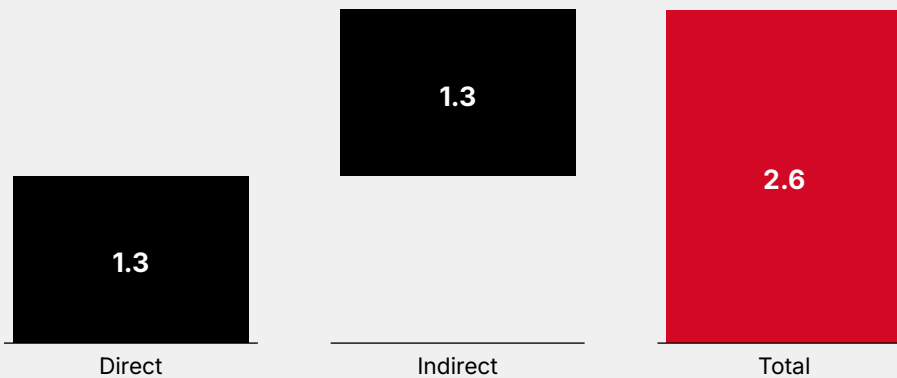
The mobile ecosystem in North America supported 2.6 million jobs in 2024

Mobile operators and the wider mobile ecosystem provided direct employment to approximately 1.3 million people in North America in 2024. In addition, economic activity in the ecosystem generated around 1.3 million jobs in other sectors, meaning that around 2.6 million jobs were directly or indirectly supported.

Figure 4

North America: employment impact of mobile, 2024

Jobs (million)



Source: GSMA Intelligence



The fiscal contribution of the mobile ecosystem in North America reached \$140 billion in 2024

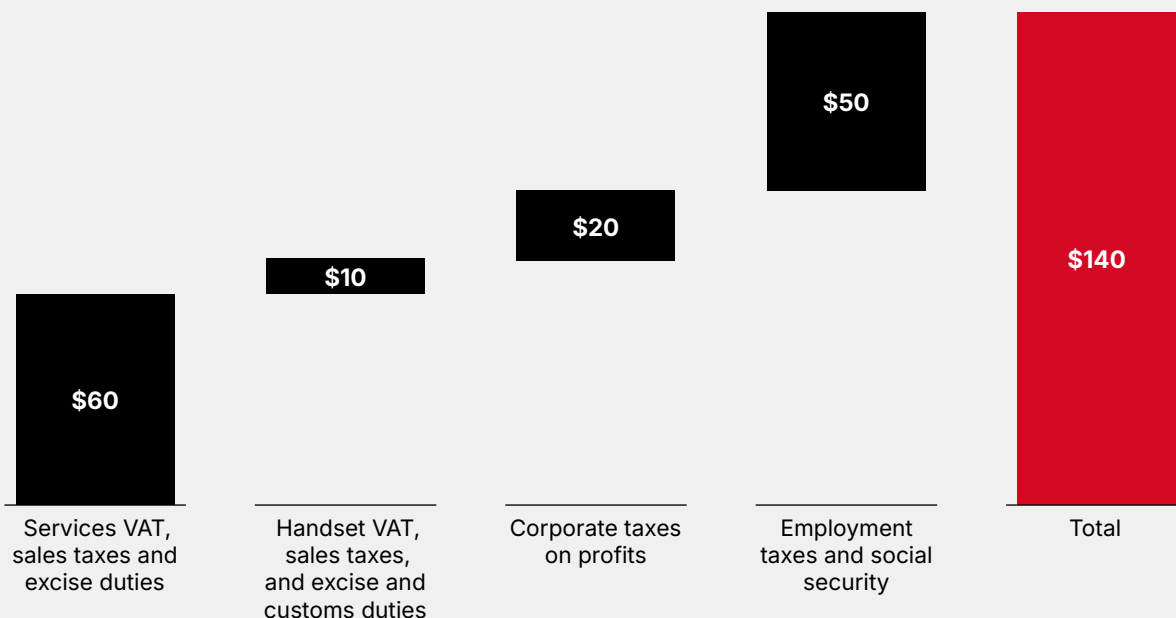
Total tax revenue in North America reached \$6.9 trillion in 2024 – an increase of 2.6% on the previous year.⁵ In 2024, the mobile sector in North America made a substantial contribution to the funding of the public sector, with more than \$140 billion raised through taxes. A large contribution was driven by services VAT, sales taxes and excise duties (\$60 billion). The fiscal contribution of the mobile ecosystem represented 2.6% of total tax revenue in the region.

Beyond its direct contribution, the mobile sector can enable more efficient collection of tax revenue by enhancing tax processes across the economy. Digital payments represent one channel for achieving this. Another method involves leveraging mobile platforms for tax filing and payment. High compliance costs are a significant barrier discouraging individuals and small to medium-sized enterprises (SMEs) from paying taxes. In response, governments are rolling out mobile apps for filing and paying taxes to reduce friction and improve compliance rates.

Figure 5

North America: fiscal contribution of mobile, 2024

Billion



Source: GSMA Intelligence

5. Source: IMF Fiscal Policies: World Revenue Longitudinal Database

5G and its ecosystem will significantly boost GDP in North America by the end of the decade

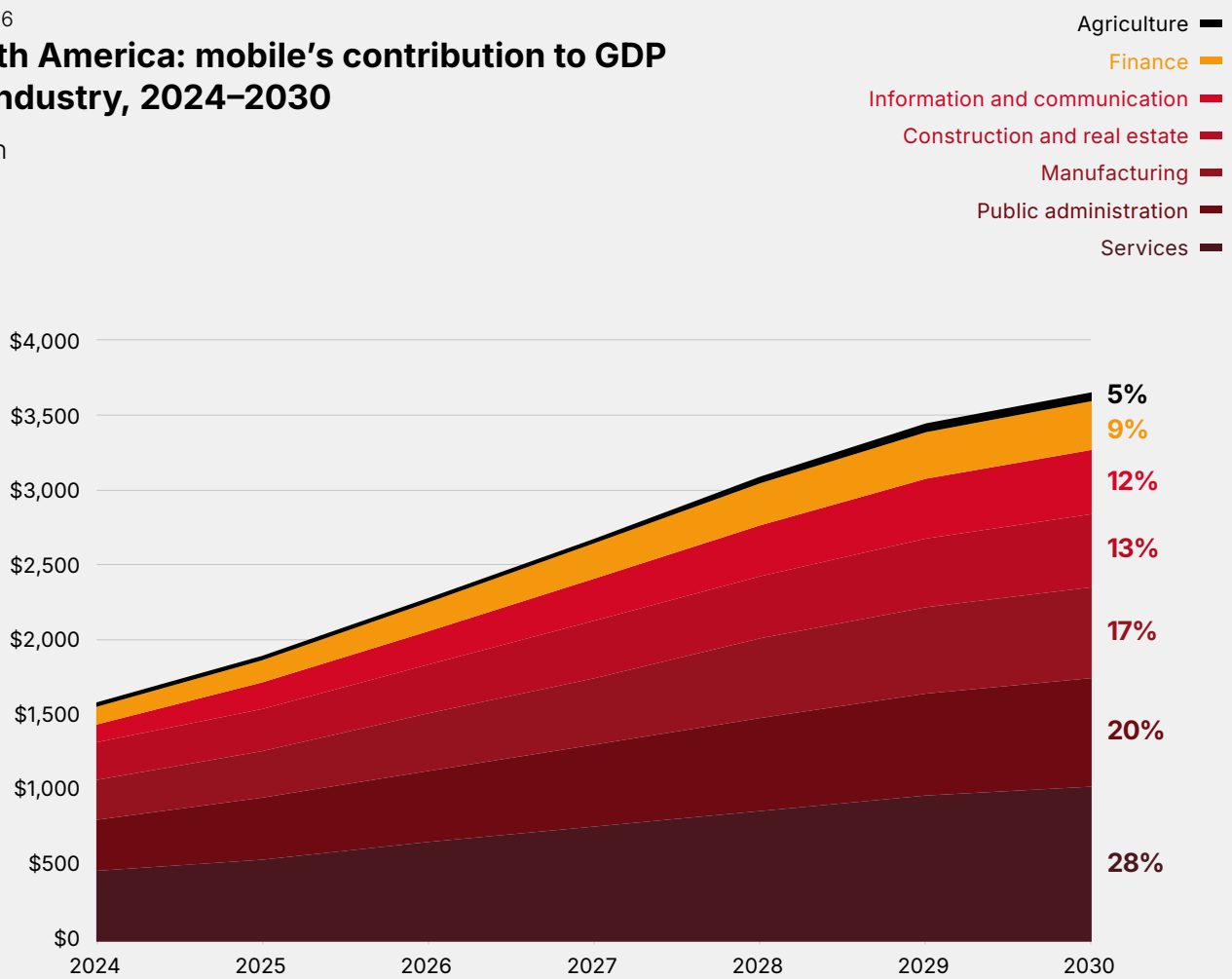
Mobile technologies and the ensuing digital transformation are expected to benefit the North American economy by \$3.7 trillion in 2030 (10% of regional GDP). This steep growth will be driven by the rapid adoption of advanced mobile technologies. By 2030, 5G use is expected to be widespread across most North American countries.

Mobile technologies are expected to drive growth across all sectors of the North American economy. However, some industries will benefit more than others due to their ability to incorporate the latest wave of digital technologies, including 5G, IoT and AI. These gains will stem from new revenue streams and improvements in productivity and efficiency enabled by the growing adoption of digital technologies. Over the six years to 2030, 28% of the growth generated by mobile-enabled technologies is expected to originate from the services sector.

Figure 6

North America: mobile's contribution to GDP by industry, 2024–2030

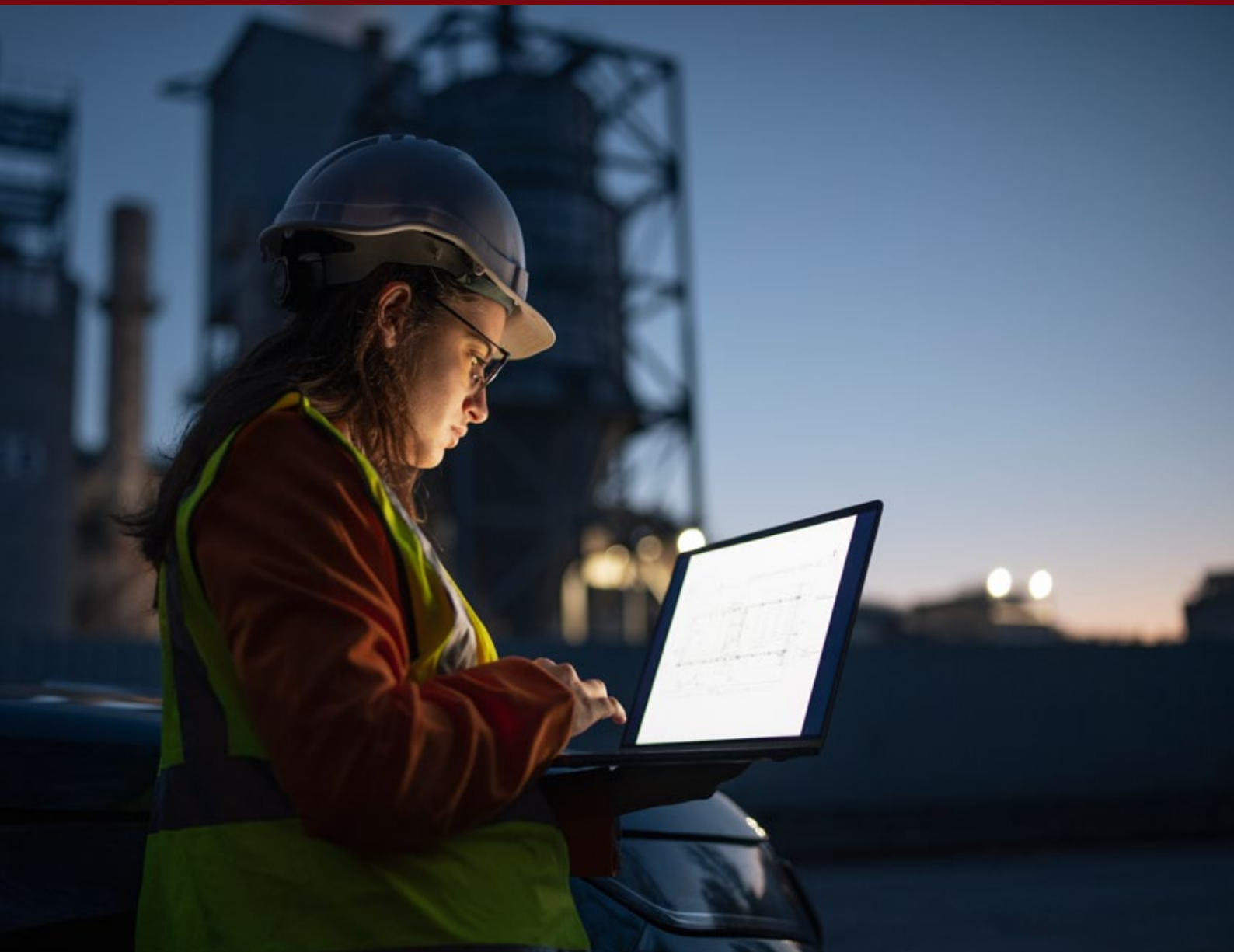
Billion



Source: GSMA Intelligence

02

Trends shaping the mobile industry



2.1

5G monetisation

Mobile operators have invested heavily in building out 5G networks. Between 2019 and 2024, mobile operator capex in North America totalled more than \$300 billion, with the majority for 5G infrastructure deployment. These investments are now translating into monetisation opportunities for operators, though at varying speeds across different segments.

5G FWA has emerged as the most achievable opportunity in the near term, enabling operators to grow service revenues by expanding their presence in the fixed broadband market. Growth in the consumer mobile market has proved more elusive, reflecting the challenges for operators in

driving a sustained price premium for 5G service plans. Nevertheless, work is underway to develop new products and services that tap into consumer demand for enhanced connectivity.

Enterprise 5G represents a longer-term opportunity for revenue growth. Efforts over the last few years have focused on putting the building blocks in place, demonstrated by the rollout of 5G standalone (5G SA) alongside investments in private 5G and network slicing. These enable operators to deliver connectivity that better matches the demands of specific applications, providing new income streams.

5G FWA: US remains the global benchmark

The US is the largest 5G FWA market globally, with 11.6 million 5G FWA connections at the end of 2024, representing 9.1% of its total fixed broadband market. Growth will remain strong over the next few years. By 2030, the US is expected to surpass 25 million 5G FWA connections, equivalent to almost 20% of US households.

Momentum behind 5G FWA is beginning to translate into an important revenue stream for operators. For example, Verizon reported FWA revenues of \$2.1 billion in 2024, equivalent to around 3% of its wireless service revenues. FWA is also an important part of T-Mobile US's growth story. The operator saw its service revenues increase 6% in 2024, supported by 1.7 million net broadband additions.

The speed of 5G FWA adoption in the consumer segment has garnered significant attention, but the technology is also beginning to gain traction among US enterprises. In the first half of 2025, Verizon reported 223,000 FWA net additions in the enterprise segment, taking its total enterprise FWA subscriber base to more than 2 million (40% of its overall FWA base).

5G FWA is particularly attractive to multi-location businesses with smaller branches or temporary sites, such as those in banking, healthcare, construction and retail. Operators are also pitching FWA as a back-up broadband connection, supported by new product launches. For instance, AT&T offers a gateway that automatically switches customers to wireless broadband in the event of a fibre outage. The service was available at launch at no extra cost to select new AT&T Business Fibre customers with speeds of 1 Gbps or higher.

Consumer 5G: operators showcase 5G capabilities through service plan innovation

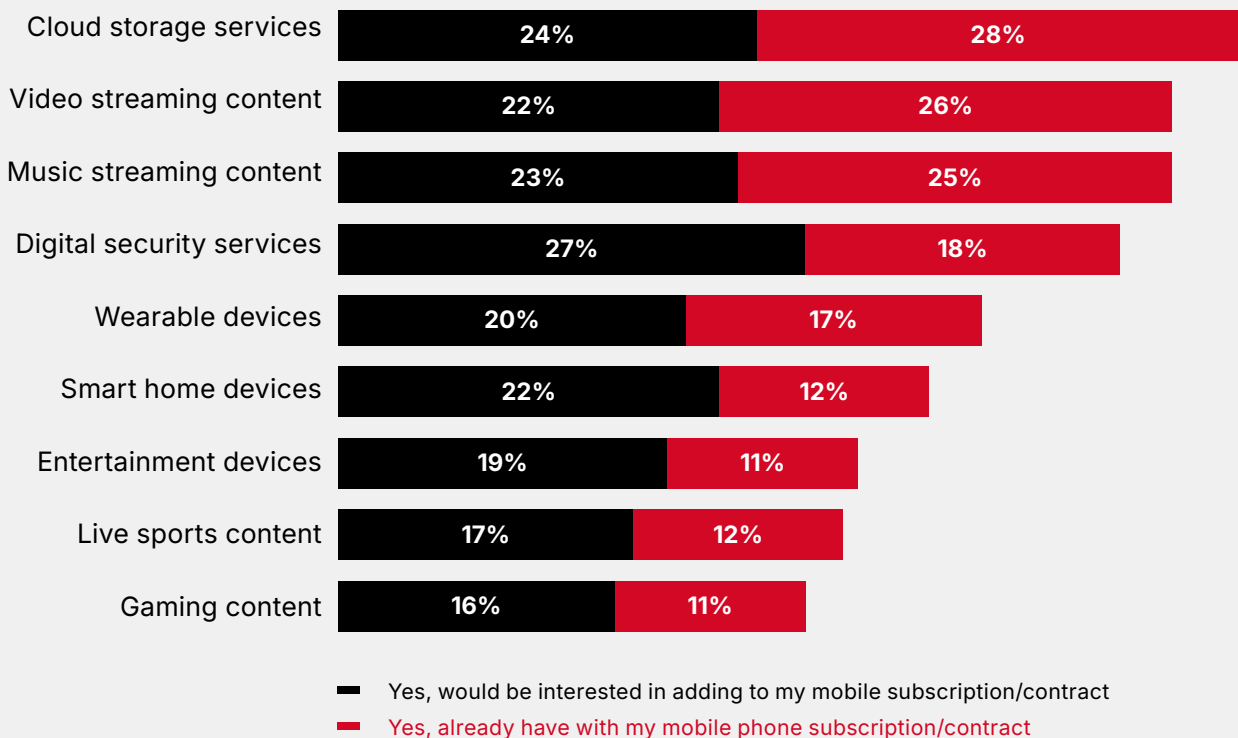
The number of 5G connections in North America is expected to exceed 300 million at the end of 2025, up from around 150 million at the end of 2022. As the number continues to grow, monetisation will be more pressing than ever, particularly in the consumer segment, which accounts for around 70% of mobile industry revenues. Operators are therefore exploring new ways to monetise their network investments. Examples include the following:

- Speed-based tariffs:** Mobile plans in the US have traditionally been tiered primarily based on mobile data allowance (volume-based pricing), but operators are increasingly bringing network speed into the mix. For example, Verizon's higher-priced myPlan 5G tariffs use its 5G Ultra Wideband network, with speeds three times higher than those on the normal 5G plan. A consumer survey by GSMA Intelligence shows that 45% of 5G mobile contract subscribers in the US are interested in speed-based mobile service plans.
- New service bundles:** Video and streaming services remain the focus of operators' bundling strategies. However, GSMA Intelligence research shows consumers have a strong interest in a range of value-added services. Digital security services stand out as a particularly promising opportunity, given consumers' high interest levels and the willingness of leading providers to partner with operators in this space. Satellite capabilities are also becoming an important feature of mobile service plans.
- Experience-driven pricing:** Some operators in Asia Pacific are offering differentiated prices for tailored connectivity based on specific user needs rather than data volume. Examples include service plans that provide access to premium connectivity for specific activities and during specific times, such as live content creation on social media platforms or online gaming sessions. Such propositions are not yet available in North America but could appeal to consumers given the levels of interest in adding value-added services to mobile subscriptions.

Figure 7

Value-added services for mobile subscribers

Percentage of US respondents



Source: GSMA Intelligence Consumers in Focus: Global Consumer Survey August 2024

Enterprise 5G: 5G SA and 5G-Advanced aim to unlock the opportunity

The majority of 5G networks were constructed using non-standalone (NSA) architecture, prioritising wide-area coverage, capacity and reliability. However, there is a growing shift towards 5G SA and new standards (e.g. 5G-Advanced).

As of August 2025, 74 operators globally offered commercial 5G services on SA networks. This includes seven operators in North America: AT&T, Bell, Dish Network, Rogers, Telus, T-Mobile US and Verizon. The transition to 5G SA can help unlock innovative 5G applications, generating new revenue opportunities for operators.

Network slicing is a core capability associated with 5G SA networks. While commercial applications for network slicing remain relatively thin on the ground, T-Mobile has begun to demonstrate how the technology can be leveraged to develop new solutions for customers. The operator uses network slicing to support first responders (T-Priority), offer enhanced security services (T-Mobile SASE), optimise video calling and improve connectivity at sports events. Verizon is also leveraging 5G SA and network slicing to serve first responders. It launched the Verizon Frontline Slice in April 2025, providing first responders with dedicated network capacity and the ability to scale up resources as needed.

In addition, 5G SA enables operators to offer a broader range of connectivity options. For example, AT&T has achieved nationwide coverage of its 5G reduced capability (RedCap) network, which runs on 5G SA. RedCap technology can be used to enable IoT devices such as sensors, cameras and video surveillance equipment to use network resources more efficiently.

Operators ramp up 5G-Advanced activity

In April 2025, T-Mobile US announced it had launched 5G-Advanced nationwide, highlighting the technology's potential for expanding network slicing capabilities in sectors such as healthcare, manufacturing and retail. Similar investments are underway in Canada, where Rogers and Ericsson have partnered to launch the country's first 5G-Advanced network.

Alongside efforts to monetise public 5G networks, operators have been central to the development of private 5G networks in North America. Such deployments provide dedicated connectivity to enterprises in situations where there are limited public cellular or Wi-Fi connectivity options. For example, Rogers and Ericsson recently deployed a private 5G network at a mining site in Ontario for NORCAT. The installation allows mines to leverage autonomous vehicles, remote-controlled drilling and advanced IoT applications.

Airports and ports are also prime candidates for private 5G networks due to their size and diverse connectivity requirements. Canadian operator Telus has signed a decade-long deal to install and run private 5G infrastructure at YYC Calgary International Airport. The network is expected to streamline operations at the site and improve the passenger experience. Meanwhile, Verizon has inked several private 5G deals to provide dedicated connectivity to ports, both inside and outside North America, underlining the range of opportunities emerging for operators in private 5G.

T-Mobile US and Rogers are among the 56 operators worldwide to have announced plans to launch 5G-Advanced networks. Those operators that hold either first or second position in terms of mobile market share account for around 80% of planned launches. This suggests 5G-Advanced is seen as a way to strengthen market positions in an increasingly competitive market. T-Mobile US and Rogers fit this trend, with both operators ranking in the top two by mobile connections in their respective markets.



5G continues to gather momentum in the Caribbean

Guadeloupe and Martinique became the latest markets in the Caribbean to go live with 5G when SFR and Orange launched commercial 5G services in both markets in February 2025. The introduction of 5G services followed the conclusion of a spectrum auction in late 2024. This saw Arcep award licences in the 700 MHz, 900 MHz and 3.4–3.8 GHz bands. Other countries in the Caribbean to have launched 5G commercial services include Bermuda, Cayman Islands, Puerto Rico and the US Virgin Islands.

As of mid-2025, 5G accounts for 6% of total mobile connections in the Caribbean. This is expected to rise to more than 20% by 2030, driven by the arrival of 5G in markets such as Jamaica and Trinidad & Tobago, in addition to continued growth in larger Caribbean islands such as Puerto Rico.

Some operators are using the transition to 5G to introduce new network technologies. For instance, Liberty Latin America announced in December 2024 that it is collaborating with Samsung to test the vendor's O-RAN compliant virtualised RAN (vRAN) technology in its mobile network in Puerto Rico. This represents the first deployment of 5G vRAN and open RAN technologies in the Caribbean.

2.2 Technological leadership

North America has long been a benchmark for the rapid migration to next-generation devices and networks. It has some of the highest levels of mobile internet penetration, mobile broadband and smartphone adoption globally. The US and Canada are also at the forefront of 5G adoption, with the technology accounting for around 60% of total mobile connections in both countries.

Several leading telecoms and tech companies operate from North America, including the world's six largest companies by market capitalisation (Nvidia, Microsoft, Apple, Alphabet, Amazon and Meta). The scale and R&D capabilities of these companies, and their close collaboration with the mobile industry, are helping to deliver new use cases for mobile connectivity and accelerate the development of new network architectures.

Satellite connectivity and RAN innovation are two examples of where North America is helping to shape the future of mobile networks. The region is home to some of the world's leading satellite providers, notably Amazon's Kuiper, AST SpaceMobile, Lynk Global, Starlink and Telesat. It is leading the way when it comes to launching direct-to-device (D2D) satellite services, first with the launch of Apple's satellite connectivity system and now with new services involving mobile operators. In terms of RAN innovation, US companies have been at the forefront of open RAN efforts in the mobile industry, and are pioneering new solutions including AI-RAN.

North America pioneers the next era of D2D satellite connectivity

The integration of satellite networks has been a key theme in the telecoms industry over the last couple of years. While 2024 was characterised by a widening of telco-satellite partnerships (now standing at around 100 worldwide), 2025 is about commercialisation.

D2D smartphone services continue to be the main attraction for operators, as they can offer customers improved capabilities in remote areas. North American operators are leading the way on this front, with a flurry of commercial launches over recent months.

In June 2025, T-Mobile US launched a nationwide D2D satellite service provisioned by Starlink. The service is available free for subscribers of T-Mobile's Experience Beyond or Go5G Next plans. For T-Mobile customers without premium plans, or non-T-Mobile customers, it is being offered for \$10 per month for a limited time before increasing to \$15 per month.

In addition, AT&T and Verizon are developing D2D satellite capabilities. Verizon's D2D service with Skylo went live in February 2025 on Samsung's new Galaxy S25 devices, starting with SOS messaging across North America. Verizon, along with AT&T, also plans to launch a D2D service with AST SpaceMobile, with both operators successfully completing a range of test and trial activities with the satellite company in 2025.

D2D satellite activities have been gathering pace in Canada too. In July 2025, Rogers launched a beta version of its D2D satellite service, providing text messaging capabilities over Starlink infrastructure. In addition, Telus has held trials with Skylo, while Canadian satellite providers such as Telesat are developing new satellite constellations that could support D2D applications in the future.

Although new D2D services are coming to market quickly, the path to monetisation remains unclear. Operators may charge a premium or bundle satellite into high-value tariffs as a value-add/churn prevention tool. With more customer data, it should become clear which option offers the best returns and the extent to which customers will pay for new satellite-enabled features.

The other challenge concerns capabilities. Initial D2D satellite services have focussed on supporting text messaging and LPWA for IoT. As capacity is augmented, voice services will follow, while data services are the final frontier. This will likely come at 3G-like speeds (approximately 3–5 Mbps), though the speeds could be slightly higher in some scenarios where economics and technology provide the right mix.

It will therefore be important to set customer expectations around the performance of D2D satellite solutions, given the discrepancy in performance and capabilities versus existing mobile services. This serves as a reminder that telecoms networks will remain the primary form of connectivity, despite the growing role of D2D satellite connectivity.



North American operators remain at the forefront of RAN innovation

The global rollout of 5G services is taking place in tandem with myriad new mobile network innovations and technology evolutions. Open RAN has been a dominant topic in this network transformation, as

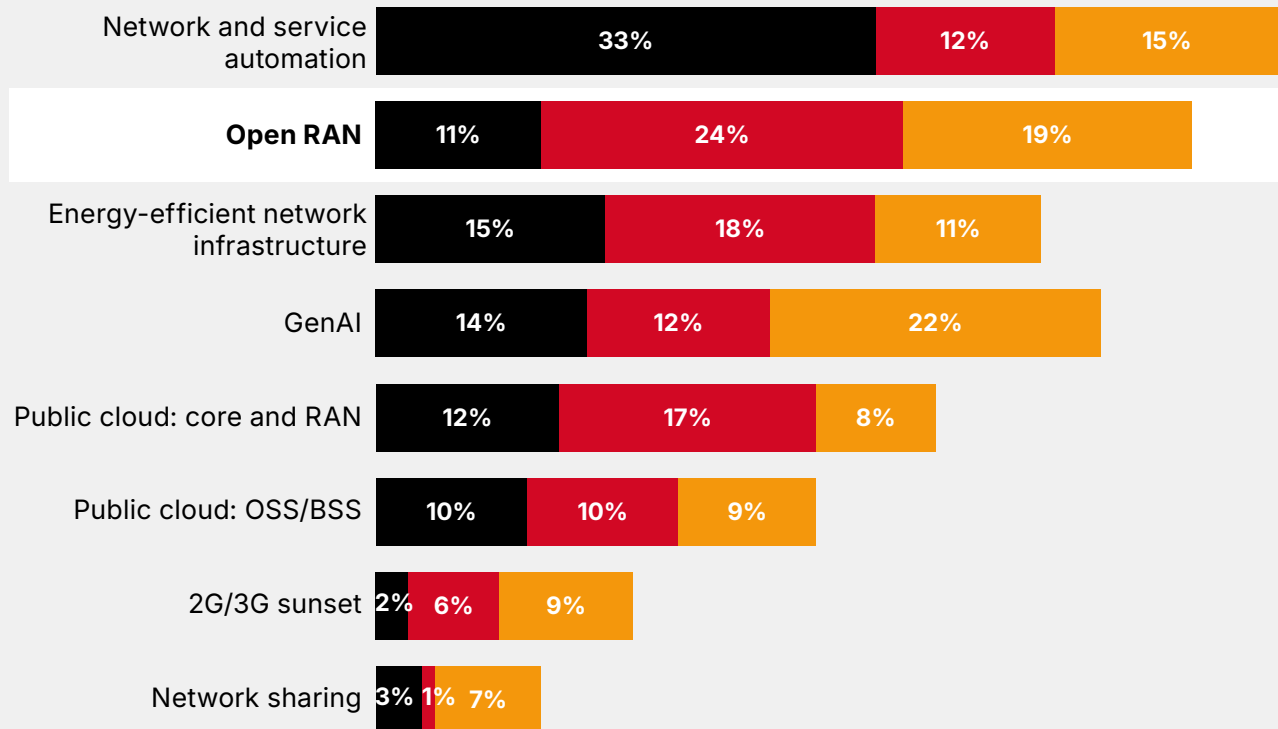
operators develop their strategies to make the RAN more automated and virtualised, with the aim of accelerating new service development and unlocking cost efficiencies.

Figure 8

Favoured technologies and strategies for opex reduction

Top three choices ranked by operators

■ Rank 1
■ Rank 2
■ Rank 3



Source: GSMA Intelligence Operators in Focus: Network Transformation Survey 2024

Initial deployments of open RAN were led by greenfield operators, including Rakuten in Japan and Dish Network in the US. Now, though, brownfield operators are beginning to embrace the technology at scale. This is evident from recent developments in North America.

AT&T's five-year open RAN deal with Ericsson, valued at up to \$14 billion, marks one of the biggest commitments to open RAN technology to date. The operator is on track to have 70% of its network data running over open RAN by 2026.

There have also been large-scale open RAN commitments in Canada. Telus, for example, has partnered with Samsung to build Canada's first 5G virtualised and open RAN network. By 2027, 50% of Telus mobile sites will run open RAN technology, with this figure reaching 100% by 2029.

As part of these deployments, operators are expanding their number of network infrastructure partners. AT&T lists Ericsson, Fujitsu, Corning, Dell Technologies and Intel among those it is working with, while Telus is working alongside Samsung, Wind River, Intel and HPE.

Open RAN can also support new companies and third-party innovations through the RAN intelligent controller (RIC), which is a software platform that uses AI and automation to optimise and manage RAN functions. For example, Verizon has teamed up with Samsung and Qualcomm to deploy a multi-vendor RIC in its commercial network. The solution integrates Samsung's AI-powered Energy Saving Manager with Qualcomm's Dragonwing RAN Automation Suite. Meanwhile, Bell Canada and Cohere have recently trialled the vendor's Universal Spectrum Multiplier software in a brownfield network setting; this is designed to boost the capacity of radios that have already been deployed.

As open RAN deployments continue to evolve, the future direction of the RAN will remain a key focus for the industry. Networks will continue to adapt to meet the demands of future applications. In the last 18 months, the launch of the AI RAN Alliance has spurred discussion of the potential for AI to improve RAN performance but also the use of RAN compute assets to support new AI workloads. North American operators are among the leaders

in testing these new concepts. T-Mobile US has partnered with Nvidia, Ericsson and Nokia to open the industry's first AI-RAN Innovation Centre in the US. The centre will align with the AI-RAN Alliance's work and aims to build on the promises of open RAN. It will use Nvidia's AI Aerial platform – a suite of computing software and hardware for designing, simulating, training and deploying AI-RAN on wireless networks.

Caribbean operators embrace D2D and RAN innovation

D2D is moving from concept to early commercialisation in the Caribbean. For example, AST SpaceMobile counts Liberty Caribbean (Flow/BTC/UTS) and Liberty Communications (Puerto Rico/USVI) among its regional partners. Meanwhile, Lynk Global has staged multiple trials with operators and signed an agreement with Aliv in the Bahamas for satellite-based messaging, with plans to add further capabilities in the future.

In terms of RAN innovation, open RAN is present in the Caribbean but remains a niche solution. One notable deployment is in Barbados, where Neptune Communications and Parallel Wireless deployed an O-RAN-compliant LTE system on the 700 MHz band to support mission-critical services to government agencies.

2.3 Cybersecurity threats

Concerns about national security and moves to classify mobile infrastructure as critical national infrastructure in many jurisdictions have increased the focus on the security of mobile networks.⁶ While the mobile industry has long aimed to develop and deploy robust security measures to protect its assets, customers and services, attacks continue directly on mobile networks and services.

In December 2024, US officials said that nine telecoms operators had been compromised by a cyber-espionage operation known as Salt Typhoon. A separate group of attackers, known as Volt Typhoon, has also targeted critical US infrastructure, including telecoms networks. US officials warned that the Volt Typhoon hackers were seeking to pre-position themselves on critical infrastructure for disruptive or destructive cyberattacks.

Operators recognise the critical need to secure their network infrastructure and safeguard customers against both existing and emerging cybersecurity threats. This is crucial to prevent potentially significant consequences, including data breaches, financial losses, reputational damage and widespread operational disruptions. Against this backdrop, operators have implemented technical and non-technical measures to improve their security.

6. GSMA Mobile Telecommunications Security Threat Landscape, GSMA, February 2025

Figure 9

Examples of operator initiatives to bolster security

Security measure	Description	Example
Awareness and training programmes	Humans can be the weakest link in the security risk profile. Consequently, many operators have introduced programmes to educate staff on how to protect themselves against phishing, malware, ransomware and other cybersecurity threats.	In 2024, Liberty Latin America achieved 98% training coverage across its organisation. This is supported by incident-type tests, simulations and tabletop exercises aimed at keeping its workforce, processes and protocols vigilant against potential threats.
Multi-layered security	Operators use multi-layered defences – an approach where organisations combine several defensive measures to ensure that if one layer fails, others will still provide protection.	AT&T uses a multi-layered security approach including monitoring, active prevention and rapid response to security threats. It leverages tools, where available, including near-realtime data correlation, situational awareness reporting, active incident investigation case management, trend analysis and predictive security alerting.
Risk management	A risk-based approach to security management recognises the complexity of the current threat landscape, which makes it challenging to adequately address every threat in every dimension. The effective impact of security interventions can therefore be maximised by identifying the most likely and impactful risks, considering the technical security threats that a business may be exposed to.	Verizon uses both manual and automated detection methods on a scheduled and ad-hoc basis to identify vulnerabilities related to its operations and network infrastructure. Once a cybersecurity vulnerability is detected, it assigns a threat severity classification based on the risk profile associated with the vulnerability. Deadlines for remediation are then set based on the severity of the threat and closely tracked in a central system of record.
Threat intelligence sharing	Gathering information on potential threats and contributing to relevant sharing communities helps operators defend against security threats. Operators engage in both industry-specific sharing initiatives, commonly done via the GSMA's Telecommunication Information Sharing and Analysis Centre (T-ISAC), and broader country-level intelligence sharing schemes.	Bell Canada's internal Cyber Threat Intelligence team identifies threats facing Bell and its customers, complementing the intelligence the operator gathers from other industry sources. Furthermore, Bell is a founding member of the Canadian Cyber Threat Exchange (CCTX), a national, cross-sector threat forum where security professionals exchange actionable threat intelligence and mitigation measures with peers.
Zero trust	Zero-trust security assumes no implicit trust, requiring strict identity verification for all users and devices, regardless of their location (inside or outside the network). A zero-trust approach is increasingly recommended, notably under guidance from 3GPP and other standards bodies.	As part of T-Mobile's move towards a modern, zero-trust architecture, it implemented Zscaler's zero-trust cloud security platform. Following the principle of least-privileged access, the platform establishes trust based on user identity and context, including location, device, application and content.

Source: GSMA Intelligence



Strengthening North America's cybersecurity ecosystem

The growing sophistication of cyberthreats underlines the importance of the mobile industry's collaboration with private and public sector organisations. In Canada, for example, Rogers' Cybersecure Catalyst has delivered a range of cybersecurity programmes and initiatives to more than 7,000 individuals and 500 organisations. This includes training and certification programmes, innovation initiatives for start-ups and scale-ups, fellowship schemes for academic and industry experts, and wide-ranging public education programmes. These help to enhance threat monitoring across different organisations, accelerate innovation and build future talent pipelines.

Furthermore, operators are looking to improve end-user security through various measures, including implementing GSMA Open Gateway APIs. Aduna has announced a strategic partnership with EnStream LP that will enable access to network APIs from Bell, Rogers and Telus. AT&T, T-Mobile and Verizon have announced plans to deliver network APIs for Number Verification and SIM Swap, also as part of the Aduna initiative. The Number Verification API validates customers' identities by matching their phone numbers with their registered account details on the service provider's platform. Meanwhile, the SIM Swap API provides an additional layer of protection against unauthorised SIM swaps, helping prevent account takeover fraud and strengthen overall security.

Operators can provide further protection to end-users by partnering with consumer security software vendors. Consumer-facing solutions can be split

into two categories: network-based solutions and endpoint solutions. Network-based solutions analyse information about traffic on the network to block – or advise users against accessing – dangerous websites. Endpoint solutions focus on securing individual devices that connect to a network.

The collaboration between Telus and Gen Digital's Norton brand provides an example of the value of such partnerships. Together, the companies have developed Telus Online Security, which offers consumers greater protection through a 24-hour global threat monitoring service, secure VPN and private browser. The service was used by around 1 million Canadians as of 2024.⁷

Operators also offer a range of cybersecurity solutions tailored to enterprises, including distributed denial of service (DDoS) attack protection, managed firewalls, intrusion detection and prevention systems, and threat intelligence services. These are particularly important in the Caribbean, where operators are often among the largest ICT vendors in their respective markets. Recent moves by operators underline their commitment to offering cybersecurity solutions. For example, Digicel Group announced a deal in June 2025 to collaborate with Symptai Consulting Limited, a technology advisory and cybersecurity consultancy firm. The agreement brings together Digicel's connectivity and ICT solutions with Symptai's expertise in data privacy and protection, anti-money laundering, risk and compliance.

7. "TELUS helps protect customers' personal data and devices with Norton", Gen Digital, 2024

Enhancing cybersecurity in the Caribbean

Several countries in the Caribbean have developed national cybersecurity strategies and response teams to help tackle growing cybersecurity threats. Jamaica was among the first movers, launching its National Cybersecurity Strategy in 2015. As part of this, the Jamaica Cyber Incident Response Team (JaCIRT) was established. The unit works on public awareness campaigns and supports cybercrime investigations. Similar security units have been established in other Caribbean nations, such as Trinidad and Tobago, which formed TT-CSIRT in 2015.

Other countries in the region have more recently formulated their cybersecurity strategies. For instance, Barbados adopted its National Cybersecurity Strategy in 2022, after several high-profile security incidents against financial institutions exposed the need for more structured resilience planning. There remains a need for faster progress in some smaller nations. St. Lucia and Grenada, for example, have acknowledged the need for incident response teams but continue to rely on regional support and ad hoc assistance from external partners to bolster their security posture. The Organisation of Eastern Caribbean States (OECS) Commission has piloted shared approaches, such as regional digital forensics labs, to offset the lack of national capacity.

Industry tools and collaboration to improve security defences

Industry collaboration is essential to protect against rapidly evolving threats. As a global organisation unifying the mobile ecosystem, the GSMA provides various forms of support to its members. Examples include the following:

- **Network Equipment Security Accreditation Scheme (NESAS)** – This audits and tests network equipment vendors and their products against a security baseline. It can help avert fragmentation of regulatory security requirements by providing a globally recognised, robust security baseline that all stakeholders can adopt and adhere to.
- **Mobile Cybersecurity Knowledge Base (MCKB)** – This provides guidance on mobile security risks and mitigation measures. It combines the cybersecurity knowledge of the mobile ecosystem (including mobile operators, vendors and regulators) with input from public sources such as 3GPP, ENISA and NIST.
- **GSMA Baseline Security Controls** – Part of the MCKB, these provide a comprehensive set of security measures for mobile networks and can form the baseline for any mobile network security risk assessment.
- **Telecommunication Information Sharing and Analysis Centre (T-ISAC)** – This enables operator members to communicate cyber risk data, including new indicators of compromise, in real-time. It also allows operators to share best practices with each other in a trusted environment.

03

Mobile industry impact



Mobile technology plays a pivotal role in addressing critical challenges in society. It contributes to efforts aimed at reducing carbon footprints and facilitates the development of innovative solutions to improve access to and use of essential services.

Mobile operators across North America are at the forefront of many of these initiatives, collaborating with governments and other industry players to extend the benefits of connectivity to vulnerable populations and the broader community.

3.1 Reducing climate emissions

Nearly all North American operators disclose to the CDP and have committed to climate targets. This strong level of ambition is matched by action, with operational emissions per connection falling by half between 2019 and 2023. Consequently, North America is among the leading regions for climate action in the mobile industry, as highlighted in Figure 10.

Progress with energy efficiency and renewable energy underpin the region's success. Mobile operators in North America collectively purchased 16 TWh of renewable electricity in 2023, or nearly half their total electricity use. T-Mobile US matched 100% of its electricity use with renewable energy,

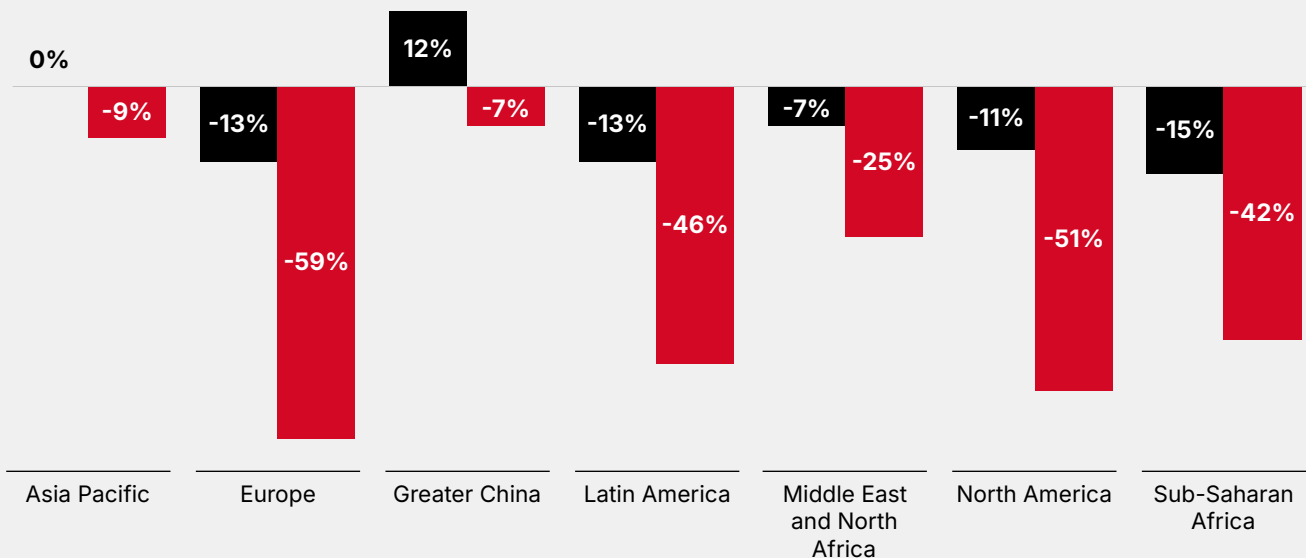
leading to a 95% reduction in operational emissions. AT&T and Verizon also achieved strong reductions, thanks to progress with energy efficiency and renewable energy.

An area for further progress in North America is fleet electrification. Vehicle fleets account for a relatively high share of operational emissions compared to other regions, highlighting the significant potential for emission and fuel savings from switching to electric vehicles. Government policies and incentives for fleet electrification can help operators accelerate this transition.

Figure 10

Change in electricity use and operational emissions, 2019–2023

Change in electricity use, per connection —
Change in operational emissions, per connection —



Source: GSMA Mobile Net Zero report 2025

Reducing climate emissions in the Caribbean

Progress with renewable energy is also evident in the Caribbean. For example, Digicel announced an agreement in March 2025 with Caban Energy to deploy solar energy and storage solutions across its cell sites and data centres in Jamaica. Once fully deployed, Digicel will reduce its greenhouse gas (GHG) emissions by more than 38,674 tonnes of CO₂e per year or 580,109 tonnes of CO₂e for the life of the project.

Liberty Caribbean's Flow has also made strides in its clean energy strategy. Almost a third of its energy usage came from renewable energy sources in 2023, thanks to power purchase agreements. The operator is targeting a 30% reduction in emissions by 2030 via its Sustainability-Linked Financing Framework. Moreover, Flow's partnership with the UN on the #ActNow campaign has helped to promote climate-conscious behaviour across the markets in which it operates.

Operators' green energy efforts stand to benefit from new public funds established to boost the availability of renewable energy sources in the Caribbean. For example, the Caribbean Development Bank and Green Climate Fund have mobilised \$26 million to enhance renewable energy in Barbados, Belize and Jamaica, supporting cleaner grids for telecoms networks.



3.2

Developing the circular economy

Circular business models are gaining traction in the mobile industry and beyond, offering commercial opportunities, including lower costs, new revenue opportunities and improved customer loyalty. In addition to these commercial benefits, circular business models help to lower the environmental footprint of equipment by extending the lifespan and reducing e-waste levels. Consumer devices are a case in point. Materials and manufacturing account for 70–90% of the lifecycle emissions of a typical smartphone. This means longer device lifespans can deliver substantial emission reductions and savings.

Most operators in the US and Canada offer smartphone trade-in programmes, allowing customers to return their old phones in exchange for credit towards new purchases or bill discounts. These programmes can be supported by partnerships with third-party trade-in companies and/or manufacturers.

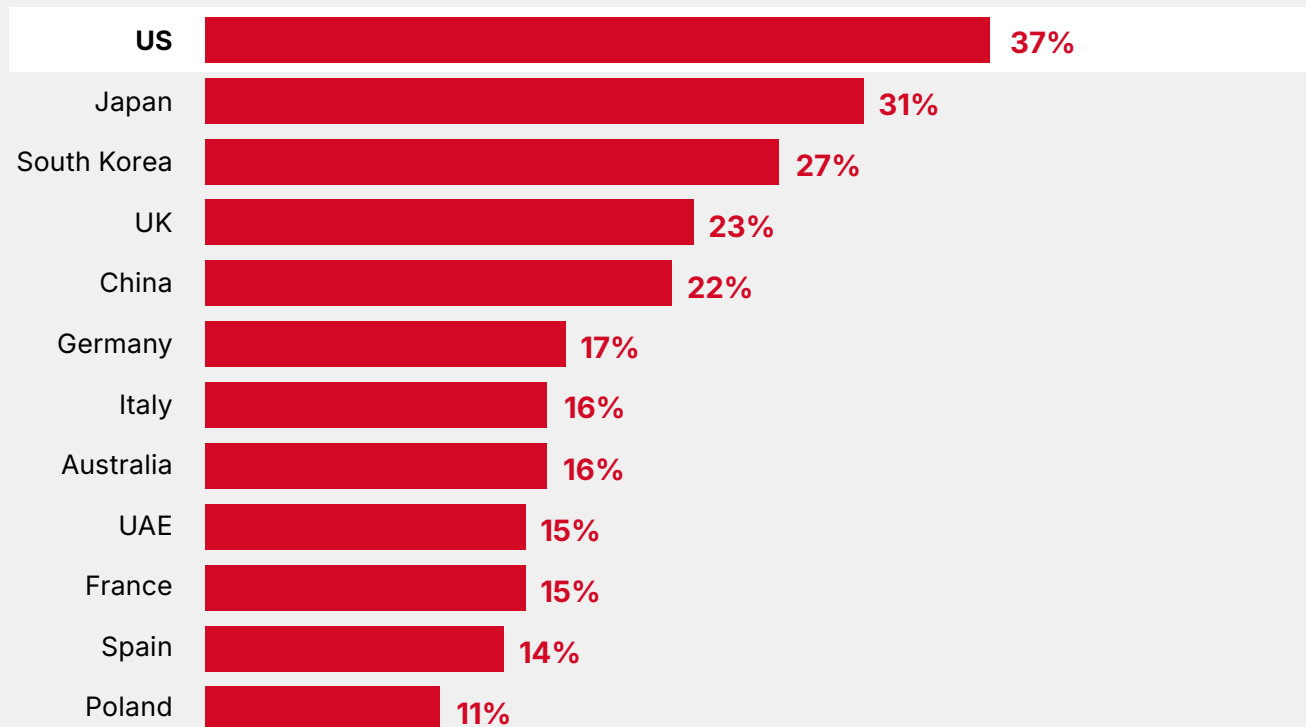
Smartphone trade-in rates in the US are much higher than in other countries. US operators typically offer much higher cash or credit incentives for trading in old devices than operators in other regions. The popularity of device trade-in schemes is expected to remain high judging by consumer sentiment, with almost 40% of US respondents saying they plan to trade in their smartphones when they acquire a new device.

Although this sentiment is encouraging, operators can do more to entice customers to trade in their old phones. In addition to cash incentives, the top drivers encouraging consumers to send in their old phones for reuse or recycling are knowing that their data will be deleted properly and the convenience of sending in their phones, according to a GSMA Intelligence survey.

Figure 11

Consumers planning to trade in their smartphone when acquiring a new phone

Question: When you replace your smartphone, which of the following (if any) are you likely to do with your current smartphone? Percentage of respondents who selected 'Trade it in when I acquire a new phone'.



Source: GSMA Intelligence Consumers in Focus: Device User Behaviour Survey Dashboard 2025

3.3

Enhancing digital skills

Although mobile internet subscriber penetration is high in most of North America, barriers to the adoption and use of mobile internet services persist among certain segments of the population. Breaking these down relies on not only affordable connectivity

but also the ability to use the internet safely and effectively. Operators continue to promote digital skills and education across all parts of society, embarking on a range of initiatives to improve outcomes for people across the country.

Figure 12

Bolstering digital skills: initiatives involving North American operators

Initiative	Description
AT&T – Connected Learning Centers (CLCs)	Since 2021, AT&T has collaborated with non-profit organisations to open 64 CLCs. These provide free resources for students and families, including high-speed internet, computers, tutoring and mentoring. This forms part of AT&T’s \$5 billion commitment to help 25 million people get and stay connected by 2030.
Bell Canada – MediaSmarts	Bell is a founding partner of MediaSmarts – Canada’s bilingual centre for digital media literacy, which is dedicated to equipping Canadians with the critical thinking skills needed to navigate the digital world.
Digicel – Smart Lab	In June 2025, Digicel announced that construction is underway on its Smart Lab at the NAZ Children’s Centre in Montego Bay, Jamaica. The lab is designed to support students with special needs and is one of several being rolled out island-wide to ensure no one is left behind in the digital age. Each lab is equipped with laptops, tablets, smart boards, printers and assisted software tailored to children with diverse learning needs.
Rogers – Connected for Success	Rogers continues to deliver Connected for Success – an initiative to provide more affordable and accessible internet and wireless services to more than 2.5 million eligible low-income Canadians. The operator also runs initiatives such as Jays Care Foundation, Rogers Youth Grants and the Ted Rogers Scholarship programme to support the development of young Canadians.
Telus – Telus Wise workshops	Telus runs a series of digital literacy workshops through its Telus Wise initiative. In 2024, 120,300 individuals in Canada and around the world participated in virtual Telus Wise workshops and events to improve their digital skills and awareness of online safety. This brought the total cumulative number of participants to more than 800,000 since the programme launched in 2013.
T-Mobile – Project 10Million	In 2020, T-Mobile launched Project 10Million to support eligible K-12 students with subsidized data plans and devices. Since then, the operator has connected millions of students through the initiative and related programmes.
Verizon – Verizon Innovate Learning	In February 2025, Verizon announced that its Verizon Innovative Learning initiative had reached more than 8.5 million students, bringing Verizon closer to its goal of empowering 10 million by 2030. The initiative empowers teachers and students with new ways of learning through a technology-integrated curriculum. Participating schools receive devices, including tablets and laptops, as well as a Verizon data plan for up to four years for every student and teacher. Schools also receive a subsidy for a full-time technology coach to help teachers effectively integrate technology into learning.

Source: GSMA Intelligence, operators

04

Mobile industry enablers



4.1

Preparing for growth through effective spectrum policy

North America has been a leader in 5G development, powered by the 2.5 and 3.5 GHz bands and early assignment of 600 MHz. These spectrum bands have been critical to providing sufficient city-wide capacity alongside wide-area coverage.

That leadership has translated into strong adoption. 5G became the dominant mobile technology in terms of market share in North America in 2024. Moreover, it is forecast to account for 90% of mobile subscriptions in the region by the end of the decade, at a time when the earliest 6G adoption will begin.

New applications such as AR and AI are already emerging, but widespread adoption will depend on the capacity and quality of 6G networks. This makes a new spectrum outlook essential. Mid-band spectrum will be particularly important, with

200–400 MHz channels needed. These will support growth of today's data-hungry applications such as video and gaming, provide tailored capacity for new applications such as AR, and allow for future potential uses including holographic messaging.

The region is starting to prepare for this future, highlighted by the robust spectrum legislation passed in the US to commercialise 800 MHz of spectrum within the 1.3a–10.5 GHz frequency range. The move will bring the US on a par with the world's connectivity leaders in terms of spectrum assignment. Continued leadership in mobile connectivity will require all countries in the region to establish decisive spectrum plans for the 2030s across the main spectrum categories below.

Low-band spectrum

Low-band spectrum helps deliver widespread and affordable connectivity. It is therefore an important building block for digital equality. Increased sub-1 GHz spectrum is essential to developing coverage in sparsely populated areas and supporting coverage deep indoors in urban areas.

In the US and Canada, the 600 MHz band is already used for mobile (band n71) with 2×35 MHz, and is being used to enhance rural broadband, leading to high availability of 5G.

Mid-band spectrum

Mid-band spectrum is used to provide city-wide capacity. It is heavily used not just for consumer mobile but for enterprise connectivity too. Access to more exclusively licensed spectrum, operating at harmonised, full-power limits, is crucial in North America. Licensed spectrum provides certainty, incentivises investment and gives the predictability needed for mobile operators to continue as leaders in the development of 5G.

Mid-band availability and its pipeline are improving in North America. The US has made significant moves in 3.5 GHz, though part of this band is shared use under CBRS with power limitations. However, the new legislation promises a significant increase in future mid-band spectrum. Canada has enabled tranches of 3.5 GHz spectrum, up to 3.9 GHz, for mobile, having initially assigned only a small portion. All countries in the region should ensure that at least 100 MHz per operator is assigned today in core mid-bands such as 3.5 GHz for 5G, while planning for 6G will need to look at 200–400 MHz channels.

High-band spectrum

mmWave frequencies help realise the full potential of 5G by enabling fast download speeds, huge capacity and the lowest latencies. The US has been a pioneer in mmWave spectrum assignments. There are plans

to make additional mmWave spectrum available to operators, unlocking potential and sustaining US leadership in this area.

Satellite: supplementing mobile connectivity

D2D satellite connectivity can provide a broader coverage layer to help mobile reach further into sparsely populated or inaccessible locations such as deserts, oceans, mountains or national parks. D2D can provide a valuable supplementary technology for the mobile industry, offer new business for the satellite and mobile sectors, improve resilience and extend services for end users. However, satellite beams have a larger footprint than terrestrial cells, which limits the amount of data that can be delivered in any area.

D2D operations are currently available in two spectrum categories: frequency bands used by mobile services, and bands already allocated to the mobile satellite service. D2D is a new and rapidly evolving technology. With the right regulation, it has the potential to offer improved services.

Governments can allow mobile operators to deploy D2D services in partnership with satellite operators, while any approach to D2D introduction should be based on regulatory and technical conditions that ensure coexistence with mobile terrestrial networks. Canada⁸ and the US are among a few countries that have developed D2D policy frameworks. The US has already started regulating D2D through the FCC Supplementary Coverage from Space (SCS) regulations.⁹ These specify, among other things, that D2D in IMT bands should be secondary (on a no interference/no protection basis) and delivered through the terrestrial licence holder. These two elements represent best practice in D2D regulation.

The international framework to facilitate the development of D2D services in mobile bands will be established by the World Radiocommunication Conference 2027 (WRC-27), but North America has already taken a lead in solid local regulation.

WRC: a pathway to the future of connectivity

The ITU's World Radiocommunication Conference 2023 (WRC-23) opened the doors to a new era of connectivity and laid the spectrum foundations for mobile to progress into 5G-Advanced and 6G. In the mid-bands, WRC-23 took action to meet mobile data growth by identifying additional spectrum for mobile. However, the US and Canada did not join the 6 GHz group at the time (although 6 GHz is one of the possible bands for future mobile under the new US legislation). Discussions on new mobile spectrum at WRC-27 are therefore crucial.

WRC-27 will discuss further spectrum bands, including 4.4–4.8, 7.125–8.4 and 14.8–15.35 GHz. Governments that align national spectrum use with internationally harmonised band plans will achieve the greatest benefits for consumers and avoid interference along their borders. The 4.5 and 7 GHz bands are the subject of particular interest from major markets.

Mobile evolution in the 2030s promises an era of meaningful universal connectivity, ensuring everyone is connected everywhere. One element of this is ensuring affordability is maximised with the right capacity placed in long-term spectrum roadmaps, in harmonised bands secured at WRC.

8. Decision on a Policy, Licensing and Technical Framework for Supplemental Mobile Coverage by Satellite, Government of Canada, 2025

9. Single Network Future: Supplemental Coverage From Space; Space Innovation, Federal Register

4.2

Enabling new opportunities for the mobile industry through deregulation

Excessive regulation can stifle innovation and deter investment, even when implemented with good intentions. For example, complex permitting processes at federal, state and local levels can slow infrastructure rollout, especially in underserved areas, and contribute to higher deployment costs. Additionally, regulatory delays in repurposing and auctioning key spectrum bands for 5G, such as mid-band frequencies, can restrict operators' capacity to expand high-performance 5G networks and therefore reduce a country's competitiveness compared to its peers with more agile spectrum policies. Given the rapid evolution of telecoms and digital services more broadly, alongside growing geopolitical complexities, achieving an optimal regulatory framework has become a critical priority for policymakers globally.

In the US, the FCC has undertaken an initiative to review and remove rules considered outdated in relation to 5G technology and related innovation.¹⁰ In March 2025, the agency issued a public notice requesting identification of any rule, regulation or guidance document within its regulatory framework that could be eliminated to reduce unnecessary regulatory requirements and support advancement in the digital ecosystem. As part of that plan, the FCC opened a new docket titled "In Re: Delete, Delete, Delete", which forms part of a broader effort by the US administration to cut red tape and improve efficiency across government. Authorities in other regions have taken similar steps recently – for example, the EU simplification agenda under the proposed Digital Networks Act. Such developments exemplify governmental efforts to reduce regulatory burdens, enhance productivity and strengthen competitiveness.

Achieving an optimal regulatory framework has become a critical priority for policymakers globally.

The FCC's "Delete, Delete, Delete" initiative represents a notable opportunity for the mobile industry. By reducing federal regulatory burdens, mobile operators can benefit from lower compliance costs and greater resource flexibility. This deregulation could further support innovation by enabling industry participants to explore new technologies and services without being restricted by obsolete or ineffective regulations. Additionally, a less regulated environment can lower entry barriers, encourage increased competition in the telecoms sector, and contribute to a more dynamic digital ecosystem. Collectively, these developments can provide consumers with enhanced services, access to emerging technologies and the possibility of reduced prices.

By August 2025, the FCC had removed 71 provisions – covering 98 rules and requirements, 12 pages and more than 5,000 words – from its rule books, effective October 2025.¹¹ Some of the deleted regulations have implications for mobile operators and the broader mobile industry, especially in terms of infrastructure deployment and regulatory streamlining. For example, the emphasis that the repeals are part of a broader push to accelerate infrastructure deployment and promote network modernisation aligns with mobile industry goals, especially for 5G and small cell rollouts.

While the implementation of this deregulatory initiative remains in its early stages, the general sentiment within the mobile industry is broadly supportive. CTIA, representing major operators such as Verizon, AT&T and T-Mobile, has highlighted key areas where deregulation is needed to accelerate 5G deployment. These include removing local and federal barriers that delay the installation of small cells; streamlining permitting and environmental review processes for tower construction; simplifying commercial wireless spectrum licensing and usage to enable more efficient use of spectrum; and eliminating rules that no longer reflect current technologies or market conditions.

10. "FCC Chairman Carr Launches Massive Deregulation Initiative", FCC, March 2025

11. "FCC Repeals 98 Antiquated Rules and Regulations", Broadband Breakfast, August 2025

4.3

Sustaining leadership in mobile investment

North America makes a significant contribution to global mobile investment

A recent CTIA study revealed that US operators have made a \$734 billion cumulative investment in mobile network infrastructure over the life of the mobile industry.¹² Nearly a third of this investment (\$219 billion) has been made since 2018, underlining the level of investment by operators in 5G networks. To put the figures into perspective, US operators account for more than 20% of total worldwide investment in mobile infrastructure, despite representing less than 5% of the global population.

These figures are only for investment in mobile infrastructure. When CTIA broadened its analysis to include spectrum licences and other business operations, total capital spending by the US mobile

industry reached an estimated \$773 billion between 2011 and 2022, representing more investment than any other US industry over the same timeframe.¹³

Operators in Canada have also been at the forefront of global mobile network investment, having invested more than \$50 billion in mobile capex since 2010. This includes a \$4 billion investment in 2024, as operators continued to deploy 5G networks across the country. Canada's three largest mobile operators – Bell, Rogers and Telus – invested significantly in infrastructure beyond mobile. The combined total capex figures for the three operators surpassed \$7 billion in 2024 – almost double their investment in mobile infrastructure alone.

Policymakers must maintain the investment-friendly environment

Continued investment by operators in digital infrastructure requires appropriate incentives and supportive policies. CTIA's analysis identified four areas that regulators should prioritise:

- Ensure sufficient licensed spectrum is available to the market
- Streamline permitting and deployment rules to accelerate rollout
- Maintain tax incentives that encourage long-term infrastructure spending
- Preserve a consistent, nationwide regulatory framework to avoid fragmentation.

These recommendations align with the GSMA's own research on factors that impact network investment.¹⁴ This concluded that there are four key policy areas to support a successful mobile sector: fiscal burden reduction, fairness of the regulatory framework, flexibility to operate and facilitation by government (see Figure 13). Through implementing specific policy actions in each of these areas, policymakers can not only help build a thriving mobile sector but also ensure countries reap the broader economic and societal benefits that mobile technologies bring.

The GSMA paper on energising mobile network investment identified the US as a global leader in fostering a growing mobile market, noting that the country enjoys some of the highest levels of 5G penetration worldwide, together with a mobile industry that contributes around 5% of GDP and \$1.6 trillion in GDP. This success has been underpinned by a supportive policy environment, which must be sustained to ensure long-term competitiveness.

12. 2025 Annual Survey Highlights, CTIA, 2025

13. More information on this topic can be found in the forthcoming CTIA report on capex investment in the US.

14. Energising mobile network investment: A guide to supportive policies, GSMA, 2024

Figure 13

Policy recommendations supporting a successful mobile sector



Fiscal burden reduction

- Reform of mobile taxation policy
- Reduction in import duties
- Review of universal service fees



Fairness of regulatory framework

- Minimising regulatory interventions
- Minimising regulatory asymmetry
- Reducing regulatory compliance costs



Flexibility to operate

- Licensing reforms
- Convenient network deployment rules
- Spectrum management best practices



Facilitation by government

- Promoting a digital economy
- Incentivising investment
- Supporting collaboration and innovation

Source: GSMA

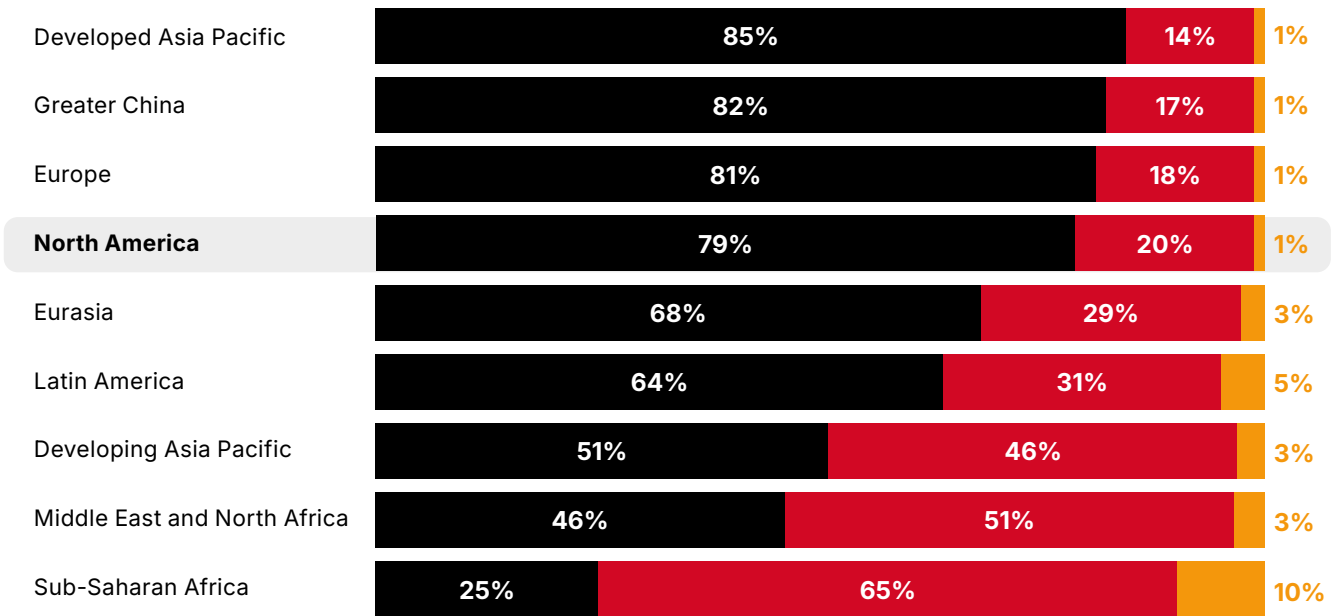


Industry data

Mobile internet connectivity by region, 2024

Percentage of population

- Mobile internet subscribers
- Usage gap
- Coverage gap

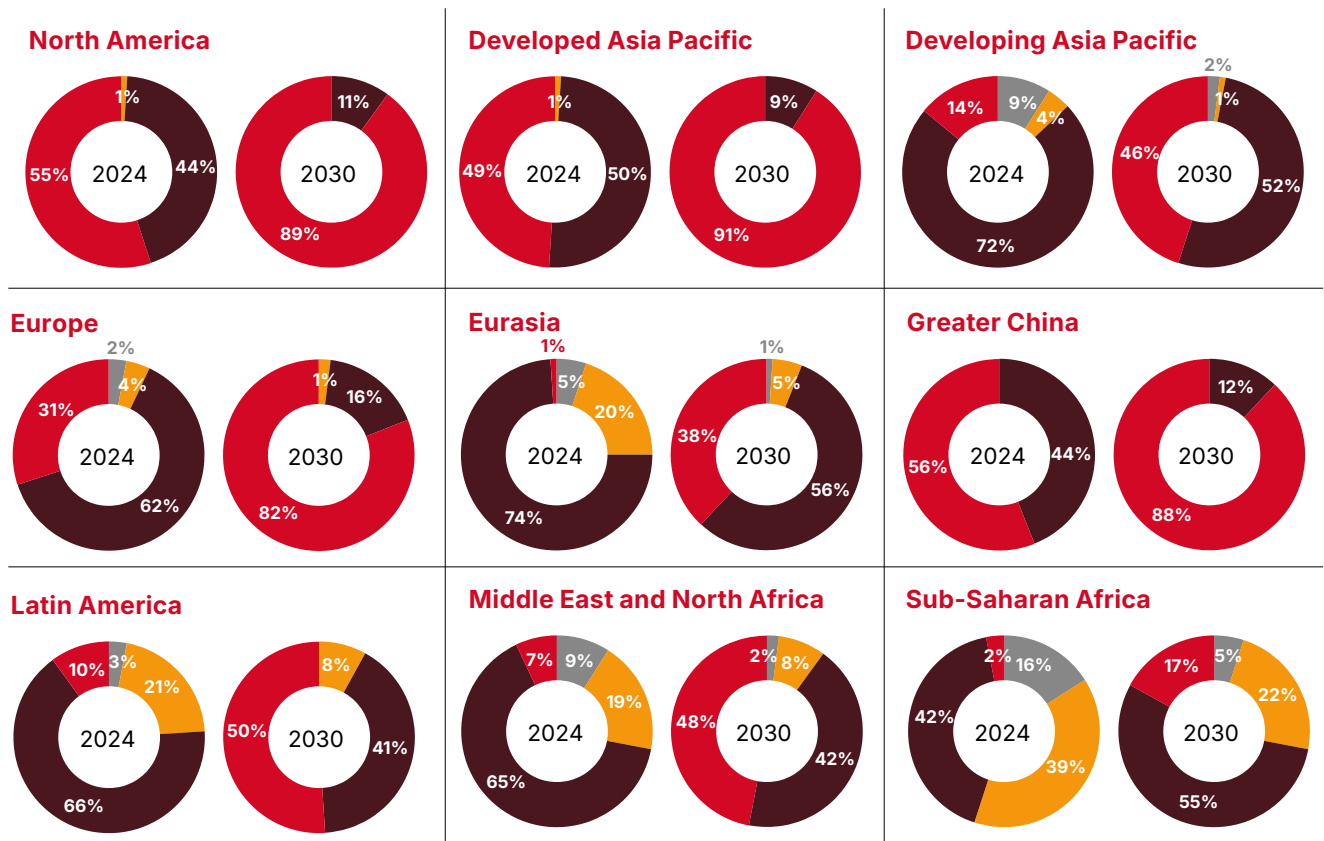


Source: GSMA Intelligence

Mobile technology mix by region

Percentage of total connections (excluding licensed cellular IoT)

- 2G
- 3G
- 4G
- 5G

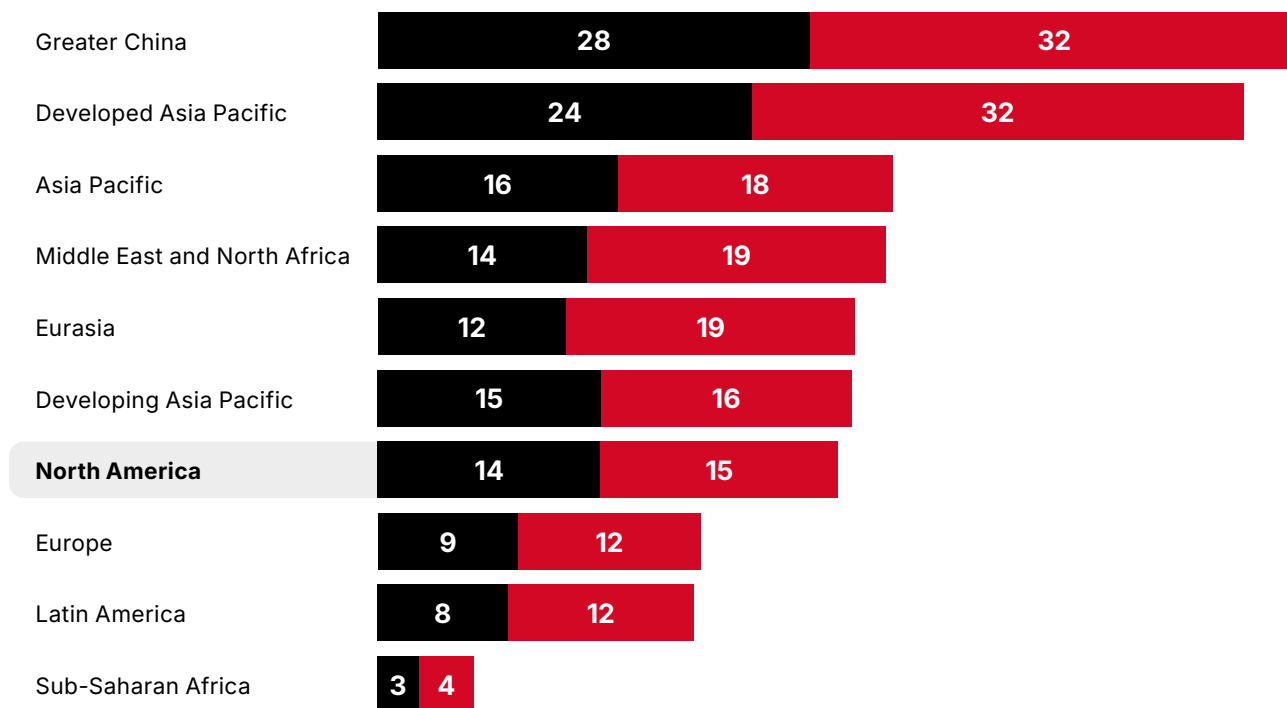


Source: GSMA Intelligence

Average mobile data traffic per connection by region¹⁵

● 2024
● 2025–2030 increase

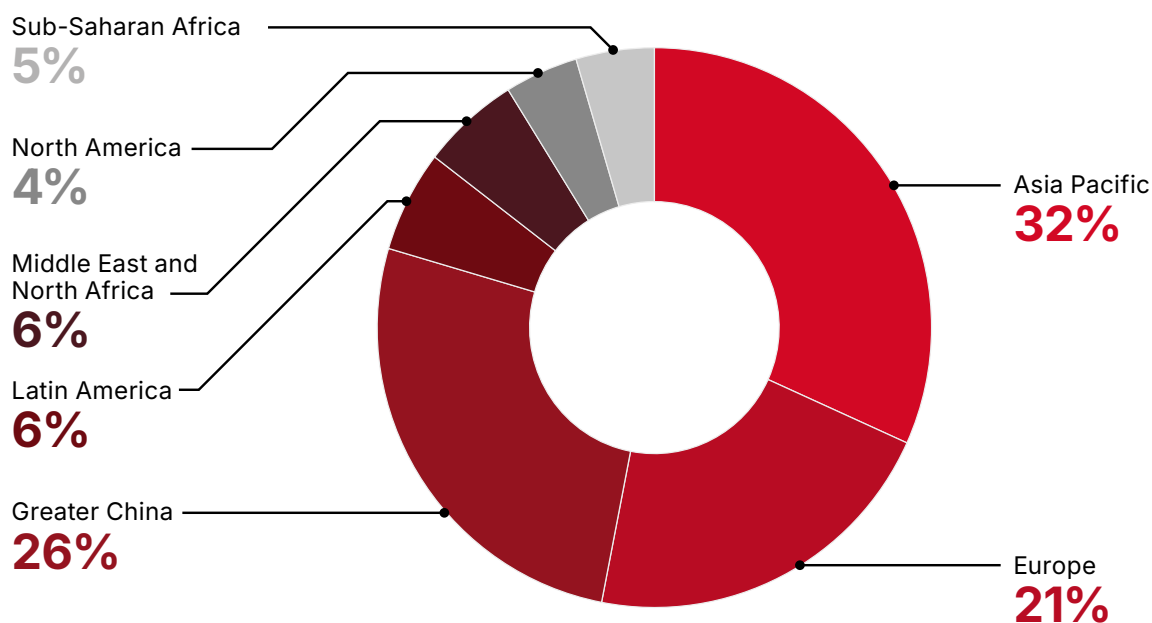
GB per month



Source: GSMA Intelligence

Participation in the GSMA Open Gateway initiative by region

Percentage of total participating operators based on total mobile connections



Data correct as of June 2025
Source: GSMA Intelligence

15. GSMA Intelligence has recently updated its methodology for calculating mobile data traffic. Numbers for some regions have subsequently changed compared to previous reports in The Mobile Economy series.

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