GSMA

The Mobile Economy Europe 2026

GSMA

The GSMA is a global organisation unifying the mobile ecosystem to discover, develop and deliver innovation foundational to positive business environments and societal change. Our vision is to unlock the full power of connectivity so that people, industry and society thrive. Representing mobile operators and organisations across the mobile ecosystem and adjacent industries, the GSMA delivers for its members across three broad pillars: Connectivity for Good, Industry Services and Solutions, and Outreach. This activity includes advancing policy, tackling today's biggest societal challenges, underpinning the technology and interoperability that make mobile work, and providing the world's largest platform to convene the mobile ecosystem at the MWC and M360 series of events.

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GSMA Intelligence is the definitive source of global mobile operator data, analysis and forecasts, and publisher of authoritative industry reports and research. Our data covers every operator group, network and MVNO in every country worldwide – from Afghanistan to Zimbabwe. It is the most accurate and complete set of industry metrics available, comprising tens of millions of individual data points, updated daily.

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Our team of analysts and experts produce regular thought-leading research reports across a range of industry topics.

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Executive summary

Unlocking Europe's potential

Europe is at a crucial moment. As the region looks to boost competitiveness and strengthen resilience in an uncertain global environment, the quality of its digital infrastructure will be a key determinant of success. While mobile networks already underpin much of Europe's economic and social activity, the region has yet to unlock mobile's full potential to spur innovation, economic growth and welfare. Doing so will ultimately depend on creating the right conditions for sustained investment and faster innovation, ensuring Europe not only competes but prospers in the years ahead.

Operators in the European Union (EU) support nearly 600 million mobile connections, including 370 million unique mobile internet users – equivalent to more than 80% of the region's population. Users rely on mobile networks for a growing range of services, with operators spending almost €20 billion in mobile capex in 2025 alone to meet this demand. European operators also continue to invest significantly in decarbonising their networks, underpinning the region's global leadership in the GSMA Intelligence Green Network Index.

The efforts of operators and their partners translate into a significant economic impact. In 2025, mobile technologies contributed €1.1 trillion of economic value in the EU. The greatest benefits came from the productivity effects of mobile (€820 billion), followed by the direct contribution of the mobile ecosystem (€200 billion). Mobile operators and the wider mobile ecosystem provided direct employment to 1.3 million people, and made a direct fiscal contribution of €110 billion through taxes.[1]

€1.1tn

In 2025, mobile technologies contributed €1.1 trillion of economic value in the EU

1.3m

The mobile ecosystem provided direct employment to 1.3 million people in the EU in 2025

1. Unless otherwise stated, figures for Europe in this report refer to EU27 countries only

Key trends shaping the mobile ecosystem

The investment gap

GSMA Intelligence forecasts that mobile operators will invest €270 billion to maintain the business-as-usual technology upgrade and replacement cycle in Europe between 2026 and 2036.[2] That sum would be sufficient to ensure the ongoing operation of networks and the replacement cycle associated with network modernisation, as well as densification to improve quality, coverage and performance.

However, that would not be enough to restore Europe as a global mobile connectivity leader. To achieve that ambition, approximately €200 billion in additional investment is required, taking the total investment to approximately €475 billion for the next 10 years. This would bring Europe's annual mobile capex per connection to around €70, in line with levels in leading mobile markets.

Security and resilience

While the mobile industry has long been committed to developing and deploying robust security measures to protect its assets, customers and services, attacks continue directly on mobile networks and services. To address these threats, operators are making significant cybersecurity investments in increasing automation, improving industry collaboration and deploying telecoms-specific tools.

A strong security posture depends on resilience and recovery. Investments in reliable power supply and physical security are key to developing improved resilience. Operators are also taking steps to add more diverse transmission routes and geographically distributed (redundant) network functions to reduce single points of failure.

Sovereign AI

Digital sovereignty has been a key topic in Europe for several years. However, the debate has gathered significant momentum over the last 12 months against a backdrop of growing geopolitical uncertainty. Much of the conversation has centred on the importance of sovereignty in the cloud and AI markets. Recent developments include the EU establishing its cloud sovereignty framework[3] and non-European technology companies launching new products to meet rising demand for sovereign solutions.

Operators are well positioned to tap into growing demand for sovereign cloud and AI services. Their strengths extend across multiple areas, including deep expertise in operating critical national infrastructure and extensive experience operating in regulated environments. Many operators are also leading providers of enterprise ICT services in their local markets, further bolstering their credentials to compete in this space.

2. Mobile investment needs in Europe, GSMA, 2026. Note that the report refers to Europe as the EU27 plus the UK, Switzerland and Norway.
3. Cloud Sovereignty Framework – Version 1.2.1, European Commission, 2025

Key policies for innovation and growth

The European regulatory framework for telecoms requires urgent extensive reform. Without significant and rapid change, Europe will be unable to deliver the best-in-class networks on which its competitiveness, security and resilience ambitions depend. The policy framework for assessing horizontal mergers also needs to evolve. Current EU Merger Guidelines are too narrowly focused on short-term static effects, particularly price impacts, and do not give due consideration to the longer term impacts of horizontal mergers on innovation, investment and technological capability building.

In addition, recent regulatory proposals, namely the EU's Digital Networks Act (DNA) and the updated Cybersecurity Act (CSA2), must be revised if the EU is to meet its objectives for high-performance connectivity and greater competitiveness.

Rather than simplifying the regulatory framework, the DNA and CSA2 deliver increased complexity. The DNA fails to modernise the Open Internet rules to reflect evolving network capabilities and service models and does not introduce consistent rules across the digital ecosystem, creating uncertainty that may hinder innovation. Meanwhile, the revised Cybersecurity Act places disproportionate demands on operators, creating significant financial and operational burdens, as well as disrupting the quality and availability of services, at a time when Europe is already facing an investment gap.

Without significant and rapid change, Europe will be unable to deliver the best-in-class networks on which its competitiveness, security and resilience ambitions depend

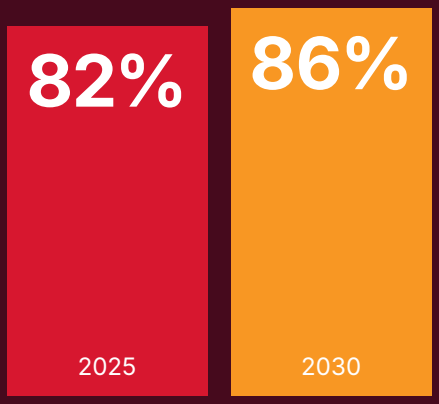
The Mobile Economy Europe

State of mobile internet connectivity

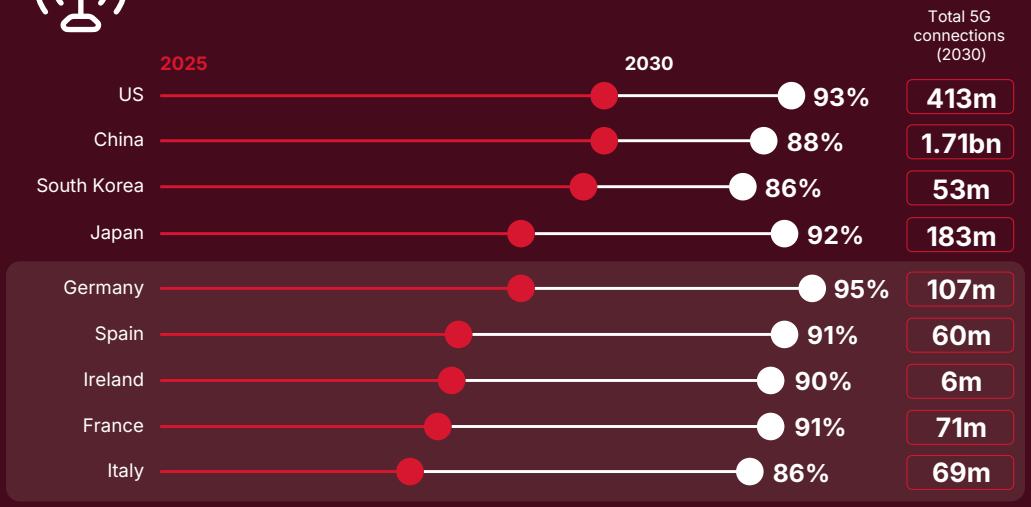
By 2030, 86% of people in the EU will subscribe to mobile internet services

Equivalent to more than

380m people



5G as a share of total connections



2030

88%

By 2030, 88% of all mobile connections in the EU (equivalent to almost 530 million connections) are forecast to be on 5G, up from 43% at the end of 2025

Operator revenues and investment

Revenues

2025 **€127bn**

2030 **€135bn**

Investment

Capex for the period 2025–2030

€106bn

GSMA Open Gateway API deployments in the region

21 operators

across

11 EU countries

Correct as of April 2026

01

The economic impact of the mobile industry

1.1
Macroeconomic outlook

At 1.4%, economic growth in the EU remained subdued in 2025, continuing to lag behind the global average of 3.1%. While there has been a gradual improvement during 2024/2025, Europe's growth trajectory remains significantly below the global benchmark.

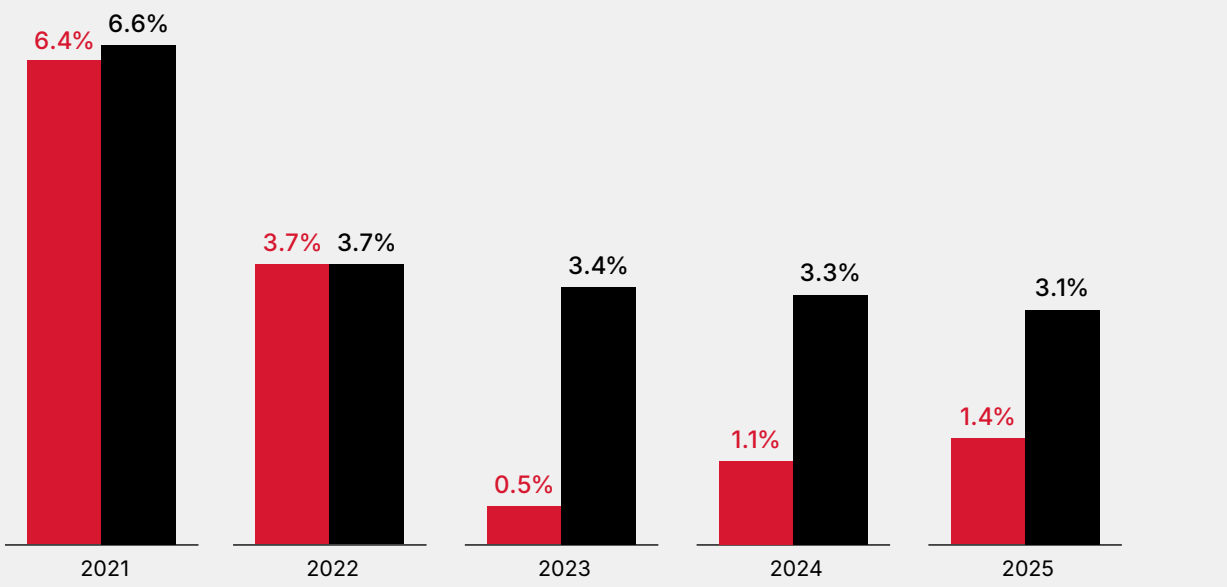
Recent growth has been supported primarily by private consumption, underpinned by easing inflation and resilient labour markets. However, tighter financial conditions, elevated interest rates and weaker external demand have weighed on investment and industrial activity. In particular, manufacturing output has remained subdued, reflecting both cyclical weakness and ongoing structural adjustments in key sectors.

Europe faces persistent structural challenges constraining stronger growth. Productivity gains remain modest, and investment in innovation and infrastructure has lagged behind other major economies. At the same time, geopolitical uncertainty and ongoing adjustments in energy markets continue to weigh on the economic outlook, reinforcing a pattern of subdued and uneven expansion.

Technology investments will be key to strengthening economic growth in Europe, with digitalisation reshaping how value is created, traded and captured across economies. Europe's advanced technological base and high levels of human capital position it well to benefit from the ongoing digital transformation. However, realising this potential will depend on sustained investment in advanced connectivity, cloud infrastructure and transformative technologies, alongside policies that support innovation and promote a more integrated and resilient connectivity ecosystem.

Figure 1

Real GDP growth in the EU and globally



Source: GSMA Intelligence using WEO-IMF October 2025 data

1.2
Mobile's contribution to the economy

Mobile technologies contributed €1.1 trillion of economic value in 2025

In 2025, mobile technologies and services generated 6.1 % of GDP across the EU – a contribution that amounted to €1.1 trillion of economic value added. The greatest benefits came from the productivity effects reaching €820 billion, followed by the direct contribution of the mobile ecosystem generating €200 billion.

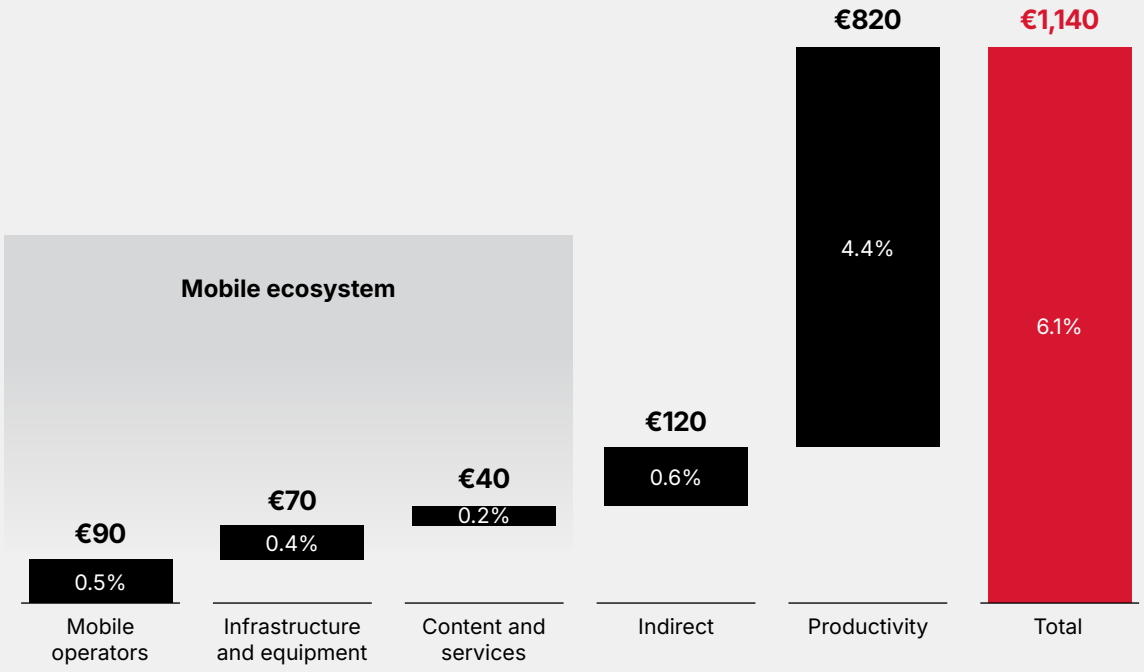
The impacts of mobile technologies include connectivity and digital transformation. The former refers to the use of mobile technologies. The latter involves the integration by enterprises of advanced mobile technologies such as 5G, IoT and AI.

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

Figure 2

EU: total economic contribution of mobile, 2025

Billion, % GDP 2025



Source: GSMA Intelligence

Mobile's economic contribution will reach €1.6 trillion by 2030

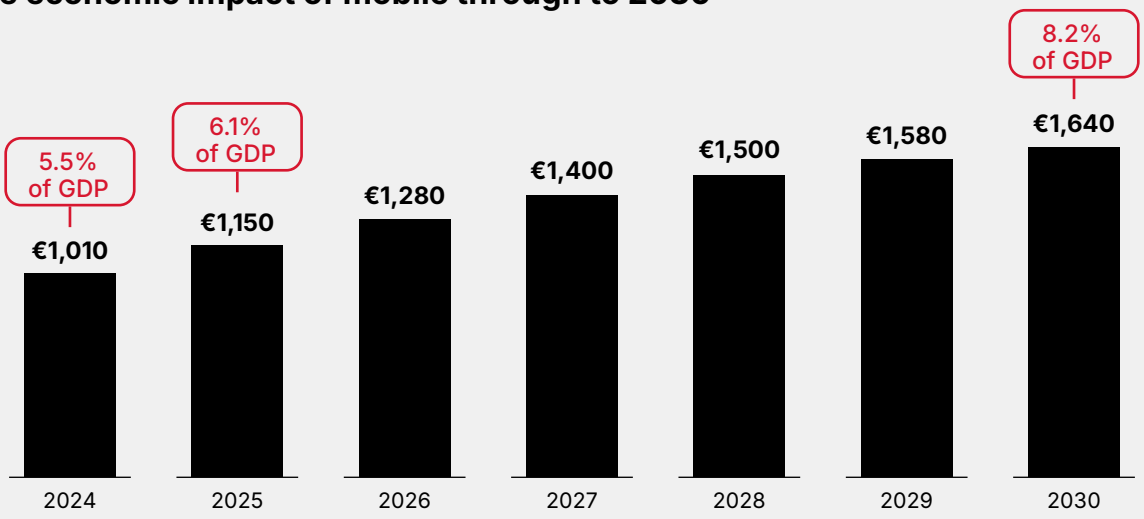
By 2030, mobile's contribution to EU economies will reach €1.6 trillion, driven by the improvements in productivity and efficiency brought about by the continued expansion of mobile services and the growing adoption of digital technologies, including 5G, IoT and AI. By 2030, mobile's contribution is expected to have grown at a CAGR of 7.4% for the period 2025–2030, five times the overall regional GDP growth (CAGR of 1.4%).

The region's relatively modest growth outlook reflects a combination of structural and cyclical factors, including subdued productivity growth, weak investment dynamics and tighter financial conditions in recent years. In addition, elevated energy costs and ongoing geopolitical uncertainty have weighed on industrial activity and business confidence, constraining the pace of economic expansion. In this context, mobile technologies play an increasingly important role in supporting economic resilience and competitiveness. By enabling digitalisation across industries, they help firms improve efficiency, optimise costs and adapt to a more challenging economic environment, while also supporting innovation and productivity gains in the medium term.

Figure 3

EU: the economic impact of mobile through to 2030

Billion



Source: GSMA Intelligence

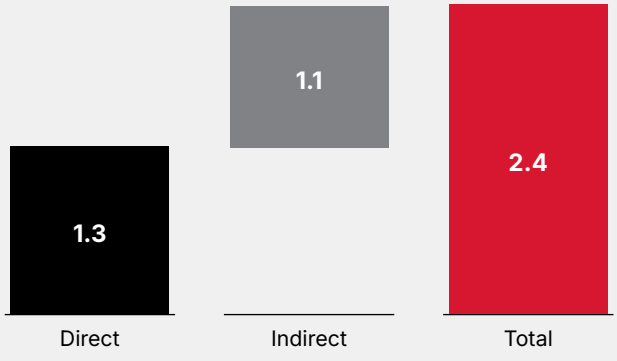
The mobile ecosystem supported more than 2 million jobs in the EU in 2025

Mobile operators and the wider mobile ecosystem provided direct employment to 1.3 million people in the EU in 2025. In addition, economic activity in the ecosystem generated 1.1 million jobs in other sectors, meaning that around 2.4 million jobs were directly or indirectly supported. This represents an increase of 400,000 jobs compared to 2024.

Figure 4

EU: employment impact of mobile, 2025

Jobs (millions)



Source: GSMA Intelligence

The fiscal contribution of the mobile ecosystem reached €110 billion in the EU in 2025

Taxes constitute the major share of government revenues around the world. In 2025, tax revenue in the EU reached €5 trillion, or 26% of regional GDP, similar to the previous year.[4]

The mobile sector in the EU made a substantial contribution to the funding of the public sector, with €110 billion raised through taxes on the sector in 2025. A large contribution was driven by services VAT, sales taxes and excise duties (€40 billion). The fiscal contribution of the mobile ecosystem represented 2.2% of total tax revenue.

Mobile operators also make a significant contribution to public finances through spectrum fees.[5] The cost of spectrum has almost tripled in the past 10 years (as a proportion of revenue, from 3% in 2014 to 8% in 2024).[6] That step change has been largely driven by non-market factors, such as high reserve prices, annual fees and auction designs that have limited the amount of spectrum available and therefore artificially increased spectrum costs.

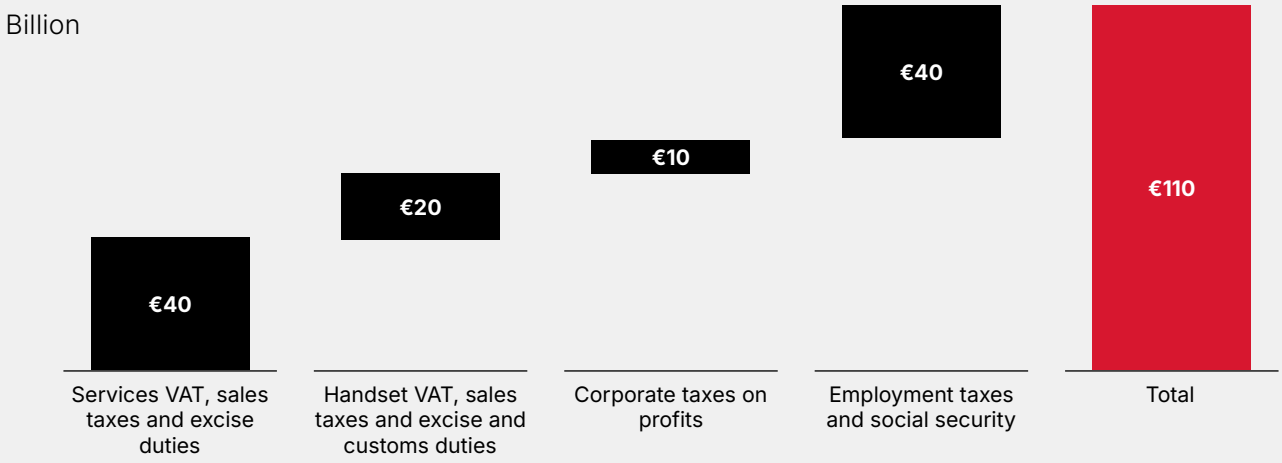
Spectrum pricing also affects fiscal contributions indirectly through corporate taxation. Since spectrum fees increase operators' cost base and reduce taxable profits over time, excessively high reserve prices or annual licence fees can lower future corporate tax receipts. While spectrum auctions generate important short-term revenues for governments, poorly designed pricing can weaken long-term investment, slow digital infrastructure expansion and ultimately reduce the broader tax base that mobile connectivity helps create.

Furthermore, the mobile sector plays an important role in strengthening public finances across Europe by supporting the digitalisation of tax administration and improving efficiency. Across European economies, governments have made significant progress expanding digital public services, with mobile connectivity serving as a key access channel for individuals and businesses. Mobile-enabled platforms facilitate tax filing, payments and interactions with public authorities, helping to streamline administrative processes and reduce compliance costs.

In contrast to many developing regions, tax systems in Europe are relatively mature, with high levels of compliance and institutional capacity. However, challenges remain in adapting tax frameworks to an increasingly digital and cross-border economy. In this context, mobile technologies support the continued modernisation of tax systems by enabling real-time reporting, digital invoicing and improved data integration across jurisdictions. These developments help reduce tax gaps, particularly in VAT, and strengthen revenue collection efficiency. Over time, the expansion of the digital economy will continue to broaden the tax base and support stable and predictable revenue mobilisation, reinforcing fiscal sustainability in the region.

Figure 5

The EU mobile sector's fiscal contribution, 2025



Source: GSMA Intelligence

4. IMF Fiscal Policies: World Revenue Longitudinal Database
5. Note: spectrum fees are not included in the fiscal contribution calculation in Figure 5.
6. These costs exclude the very high costs paid for 3G licences in the 2.1 GHz frequency band, particularly in Germany. For further details, see Spectrum Pricing and Renewals in Europe, GSMA, 2025.

The contribution of 5G and its ecosystem

As 5G networks expand and complementary technologies such as AI continue to mature, the scale of impact will be shaped not only by infrastructure availability but also investment in digital skills, innovation capacity and the integration of advanced technologies into production processes.

The economic value of digital transformation will come from two main channels:

- external value creation – the creation of new revenue streams and business models that expand markets and stimulate additional demand
- internal value enhancement – measurable gains in productivity, cost efficiency and operational performance within firms.

The balance between these channels will vary across sectors, reflecting differences in digital readiness, capital intensity and the ability to adopt and scale advanced technologies.

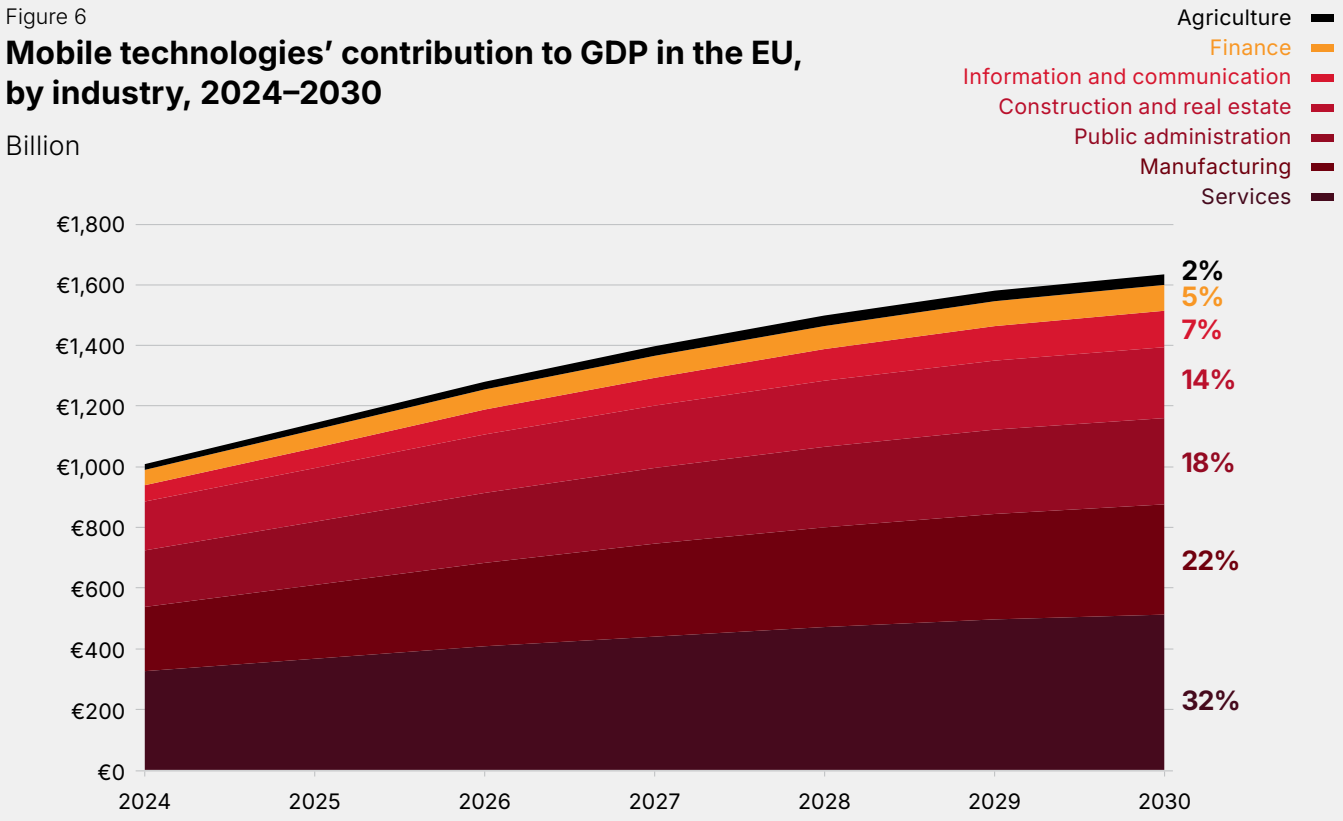
Between 2025 and 2030, services and manufacturing in the EU are projected to account for more than half the incremental economic impact attributable to mobile-enabled technologies. This reflects their central role in the region's economic structure and their relatively higher capacity to adopt 5G-enabled solutions, including automation, advanced analytics and connected devices.

The contribution from public administration remains substantial, reflecting the continued importance of digital government and e-services in enhancing efficiency and service delivery across the EU. Meanwhile, the information and communication sector is expected to account for 7% of the benefits, underscoring the growing importance of digital industries and their important role in the diffusion of advanced technologies beyond core sectors.

Overall, the distribution of impact points to a broad-based digital transformation, where 5G and its ecosystem support productivity gains across both traditional and digitally intensive sectors, reinforcing Europe's transition towards a more innovation-driven and competitive economy.

Figure 6

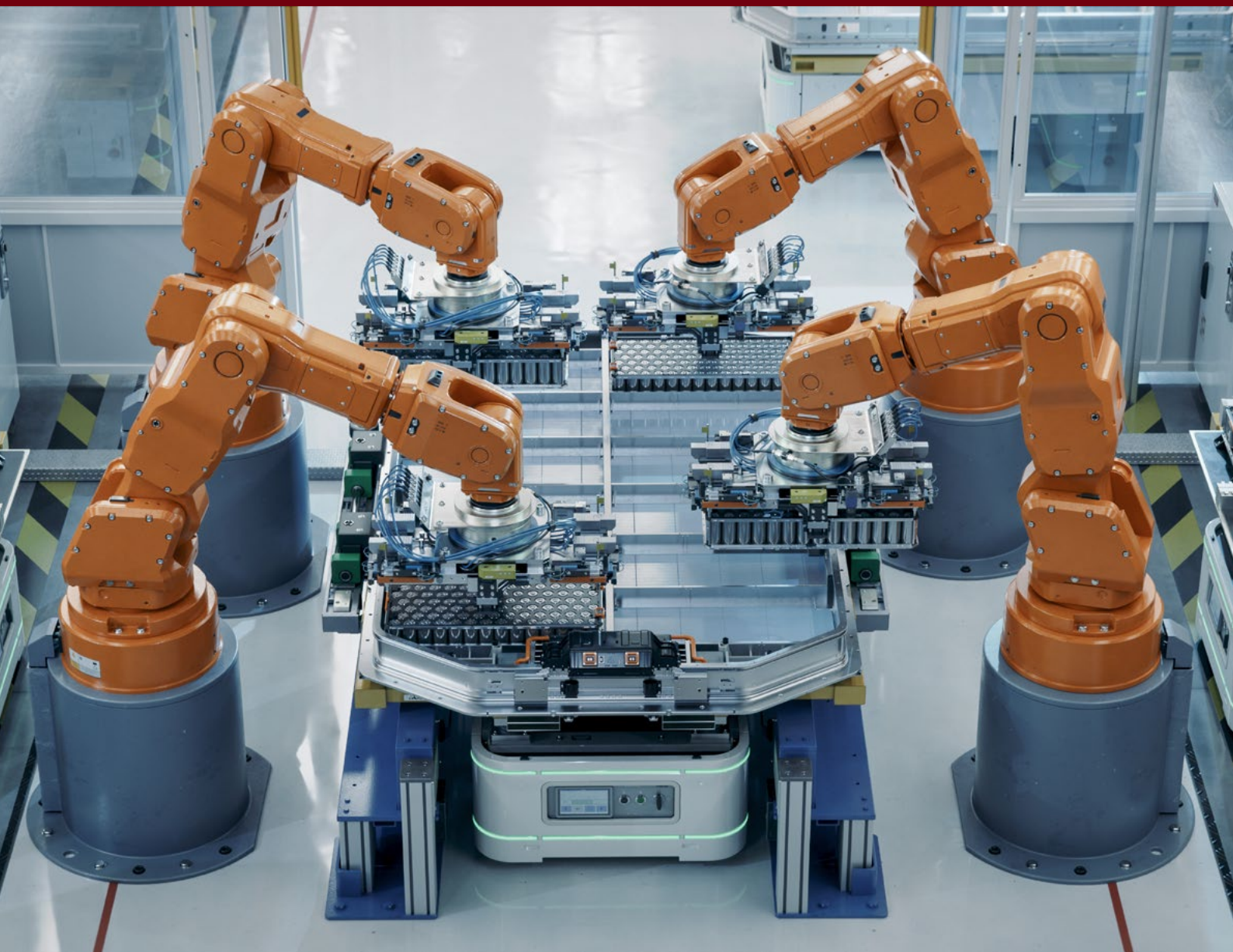
Mobile technologies' contribution to GDP in the EU, by industry, 2024–2030



Source: GSMA Intelligence

02

Trends shaping the mobile industry



2.1
Europe lags behind global leaders on investment

The EU recognises the importance of mobile connectivity for its global competitiveness. Established in 2022, the EU's Digital Decade targets for 2030 include a goal of 5G coverage for 100% of the population. In 2023, WIK Consult published a study analysing the likely cost of achieving the Digital Decade targets. The study estimated a total investment need of around €200 billion. Mobile operators would need to invest at least €60 billion between 2021 and 2030 in 5G to achieve the related Digital Decade goals, with an additional €115 billion on fixed networks.[7]

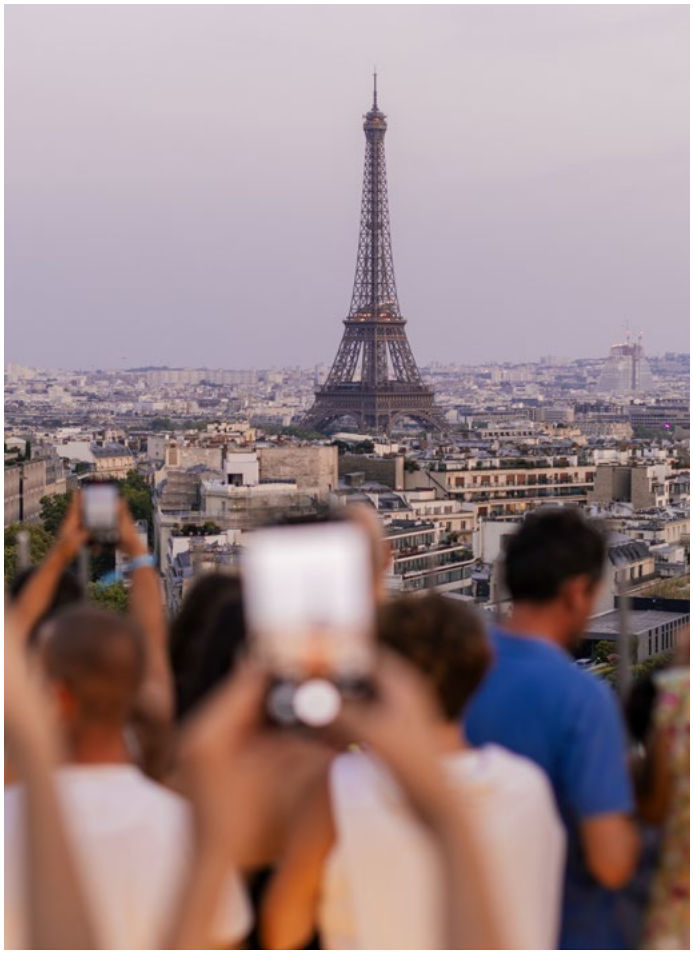
However, mobile operators in the region have already invested €141 billion since 2021 without having yet met the Digital Decade targets. As GSMA Intelligence research shows,[8] most European countries still trail significantly behind global 5G leaders.

The investment required to 2035

Taking a longer term view, GSMA Intelligence projects that mobile operators will invest €270 billion to maintain the business-as-usual technology upgrade and replacement cycle in Europe over the next decade.[9] That sum would be sufficient to ensure the ongoing operation of networks and the replacement cycle associated with network modernisation, as well as densification to improve quality, coverage and performance.

However, GSMA Intelligence analysis shows that would not be enough to restore Europe as a global mobile connectivity leader. To achieve that ambition, approximately €200 billion in additional investment is required, taking the total investment to about €475 billion for the next 10 years (see Figure 7). This would bring Europe's annual mobile capex per connection to around €70, in line with the levels observed in leading mobile markets.

About half of that additional €200 billion will be needed to provide 5G coverage across Europe's transport routes (road, rail and waterways). The other €100 billion is required to extend 5G standalone coverage to the entire population, build greater resilience and enable Europe to take full advantage of AI.

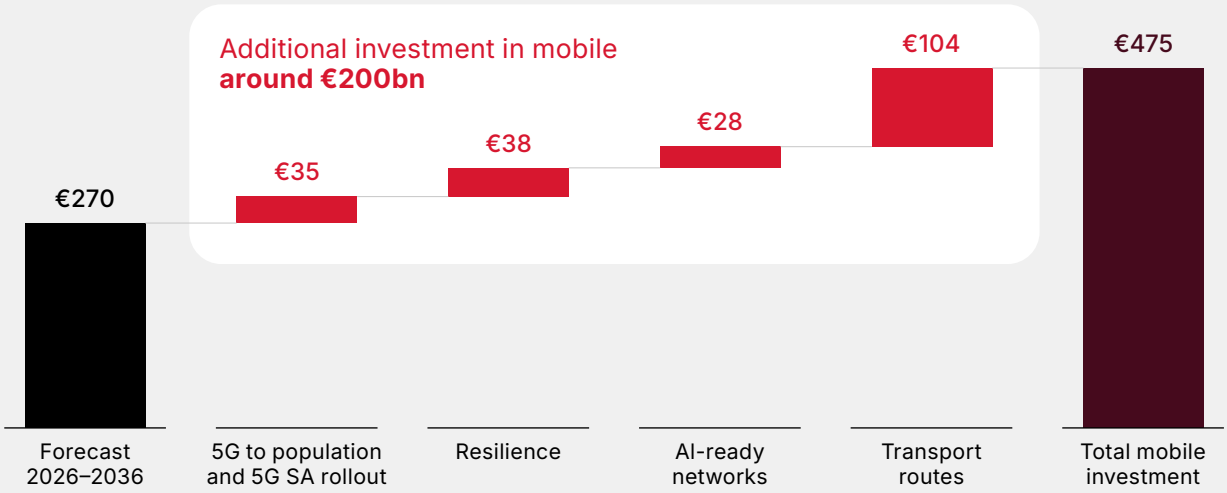


7. Investment and funding needs for the Digital Decade connectivity targets, WIK Consult, 2023
8. The State of 5G 2026, GSMA Intelligence, 2026
9. In section 2.1, Europe refers to the EU 27 countries plus the UK, Switzerland and Norway.

Figure 7

The investment Europe needs to make to become a leader in mobile connectivity (2026–2036)

Billion



Source: GSMA Intelligence

- **Extending 5G coverage to populated areas –** GSMA Intelligence estimates mobile operators will need to invest €35 billion to extend 5G coverage to all populated areas. This includes the cost of upgrading radio access networks to provide extra capacity, where this is constrained, as well as building out 5G standalone core networks. The modelling includes the role of satellite as a backhaul technology in remote and rural areas.
- **Mobile network resilience –** Improving the resilience of critical mobile infrastructure will cost €38 billion, according to GSMA Intelligence analysis. That accounts for the cost of extending base-station battery life, satellite backhaul, engine-powered/solar generators and further increasing cybersecurity.[10]
- **AI-ready networks –** To enable their networks to take full advantage of AI, mobile operators will need to invest €28 billion.[11] However, this capital spend will help reduce operating costs through network automation and autonomy, resulting in greater resource optimisation and energy efficiency. It could also enable operators to unlock new revenue streams, mostly in the B2B segment.
- **5G coverage for transport routes –** The European Commission has set a target for all transport corridors to be covered by 5G. GSMA Intelligence estimates mobile operators will need to invest up to €104 billion in their radio access networks to meet that goal. It is therefore paramount that coverage requirements for transport routes (waterways, roads and railways)[12] remain focused on main routes, and that technical implementation where such requirements apply can be done by the mobile operators in the most efficient way, particularly in terms of technology and frequency bands used.

Europe's mobile operators will need to invest €475 billion between 2026 and 2036 to enable the region to keep pace with other advanced economies, such as those in North America and East Asia. As things stand, Europe's operators cannot build a business case to justify that level of investment, highlighting the need for regulatory reform (outlined in Chapter 4).

10. Via hardware and software management (firewalls, encryption and regular patching), active threat-monitoring systems (traps for attackers, vulnerability scans and malware detection). cloud-native and virtualised infrastructures, training programmes for specialised workforce and participation in threat intelligence sharing platforms to coordinate responses.
11. Key use cases for AI in telecoms include network maintenance, AI-RAN deployment, energy-saving initiatives and network performance optimisation. Within product sales and marketing, use cases cover customer sales, application development and solution provisioning. In customer care, relevant AI applications include chatbots, spam filtering and tools aimed at improving the overall user experience. Across corporate functions, use cases encompass employee development, operational support (e.g. finance and IT) and energy-efficiency measures. In data centres, key applications focus on OSS/BSS and energy-saving initiatives. AI use cases include research and development (R&D), smart infrastructure and additional emerging use cases.
12. Drawing on national data on transport routes that includes motorway, trunk, primary and secondary roads, rivers and canals and all railways except those in urban areas (such as subways), as they are usually covered already.

New rules on in-market consolidation are needed to unlock operator investment

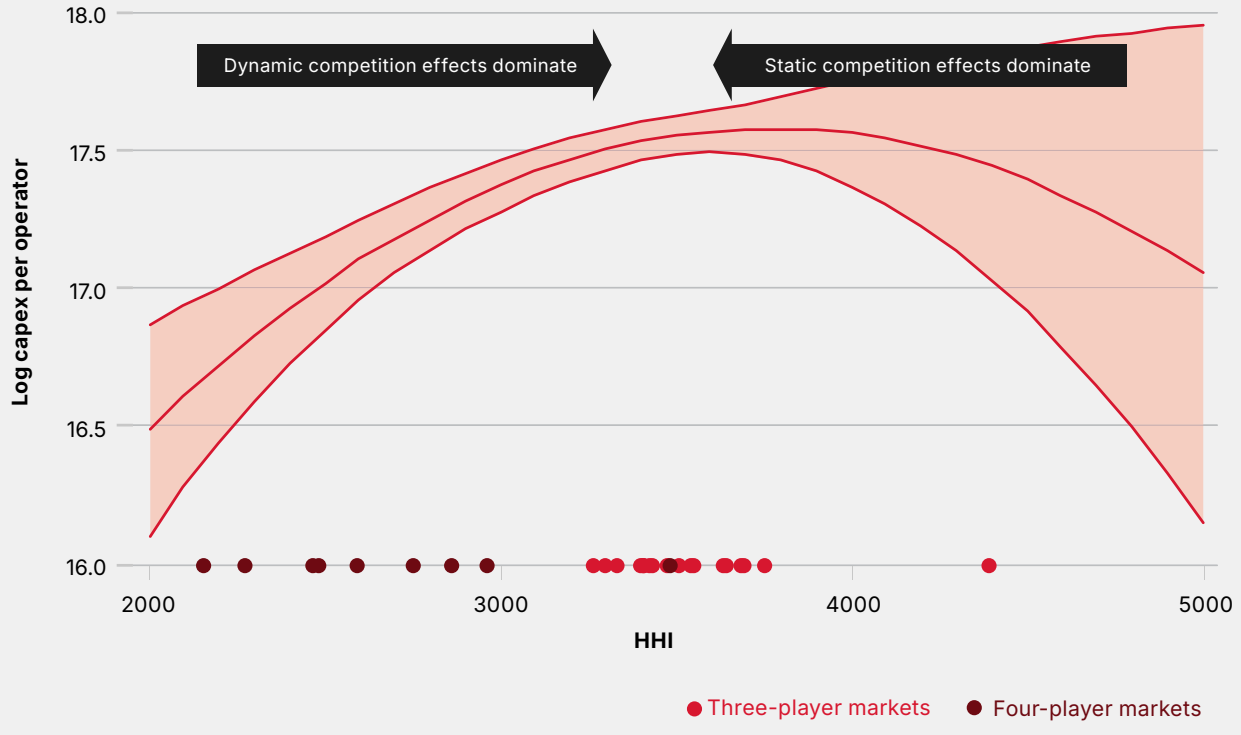
In almost all European markets today, an increase in market concentration would increase investment per operator. According to GSMA Intelligence's empirical analysis of trends in European mobile markets over the past 10 years, there is a strong and statistically significant link between an increase in operator scale and an increase in investment per operator.

As shown in Figure 8, investment per operator has been significantly higher in markets where there are three mobile network operators than in four-player markets. The horizontal axis shows the market's score on the Herfindahl-Hirschman Index (HHI), which is widely used to measure market concentration and determine market competitiveness.

The analysis suggests a non-linear "inverted-U" relationship between average scale and operator investment, with investment increasing with market concentration until reaching an optimal point where investment is maximised (consistent with economic theory).

Figure 8

Relationship between investment per operator and HHI score of market (2011–2021)



Source: GSMA Intelligence

In addition, total capex per connection in Europe has been significantly higher in three-player markets than in four-player markets, as shown in Figure 9. However, this has been trending downwards in both sets of markets.

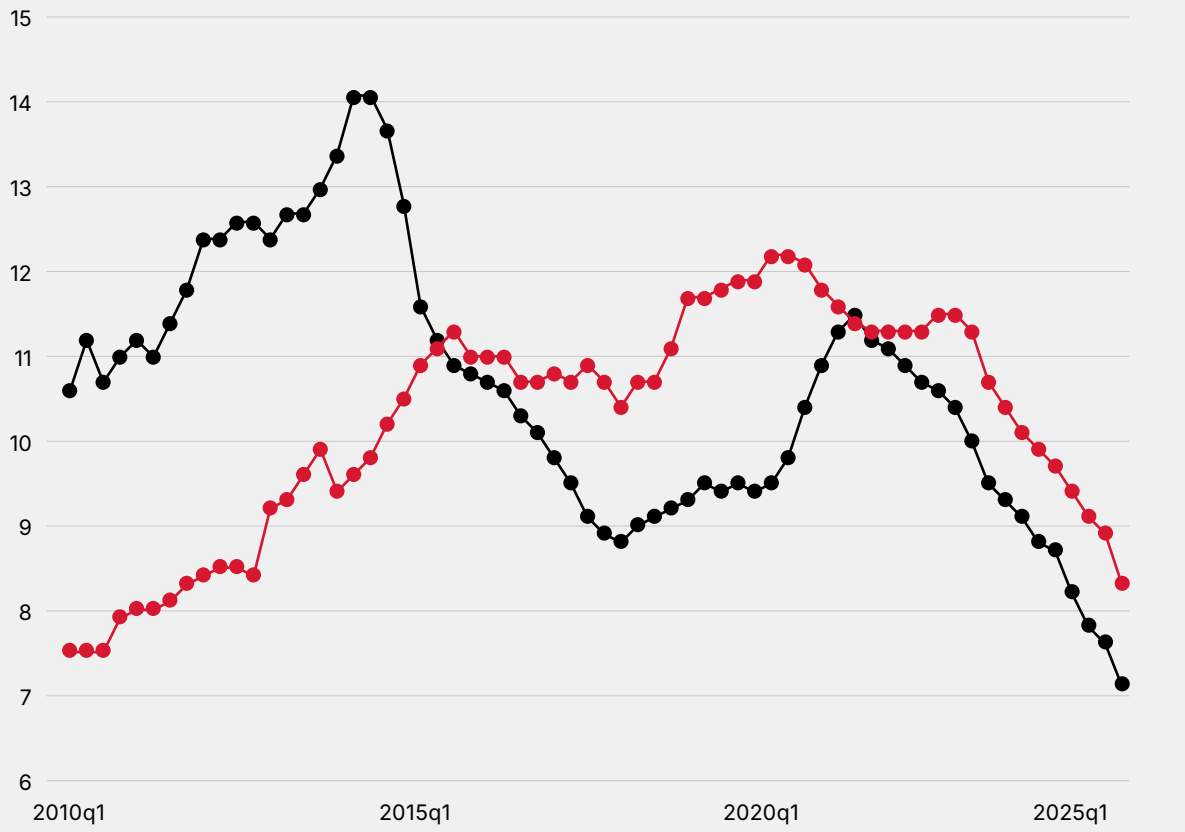
Econometric evidence suggests investment by individual operators is higher in markets with more scale, though the total aggregate investment is unchanged. However, greater investments per operator will bring the quality and strength of European networks and services closer to those experienced by digital leaders.

From 2015, four-player markets in Europe experienced lower investment as a proportion of revenues and per connection, and did not improve service quality as much as in three-player European markets, according to a study published in the Journal of Information Policy.[13]

Figure 9

Total country capex per connection for three- and four-player markets in Europe

Constant 2015 prices ($)



Source: GSMA Intelligence

13. The Dynamic Effects of Competition on Investment: The Case of the European Mobile Communications Industry, Journal of Information Policy, 2023

2.2
Cybersecurity and resilience come to the fore

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. To give a sense of scale, Deutsche Telekom reported 70 million attacks per day on its 'honeypot' systems.[14]

These attacks come at a time of increasing fragmentation in cybersecurity regulation. This now spans mandatory product security laws (e.g. the EU's Cyber Resilience Act), sector-specific obligations, certification schemes (e.g. EU Cybersecurity Act), standards agencies and cross-border data governance.[15] For mobile operators, the fragmentation results in overlapping or contradictory obligations from multiple authorities, duplicated reporting requirements and administrative burdens that deliver limited security benefit.

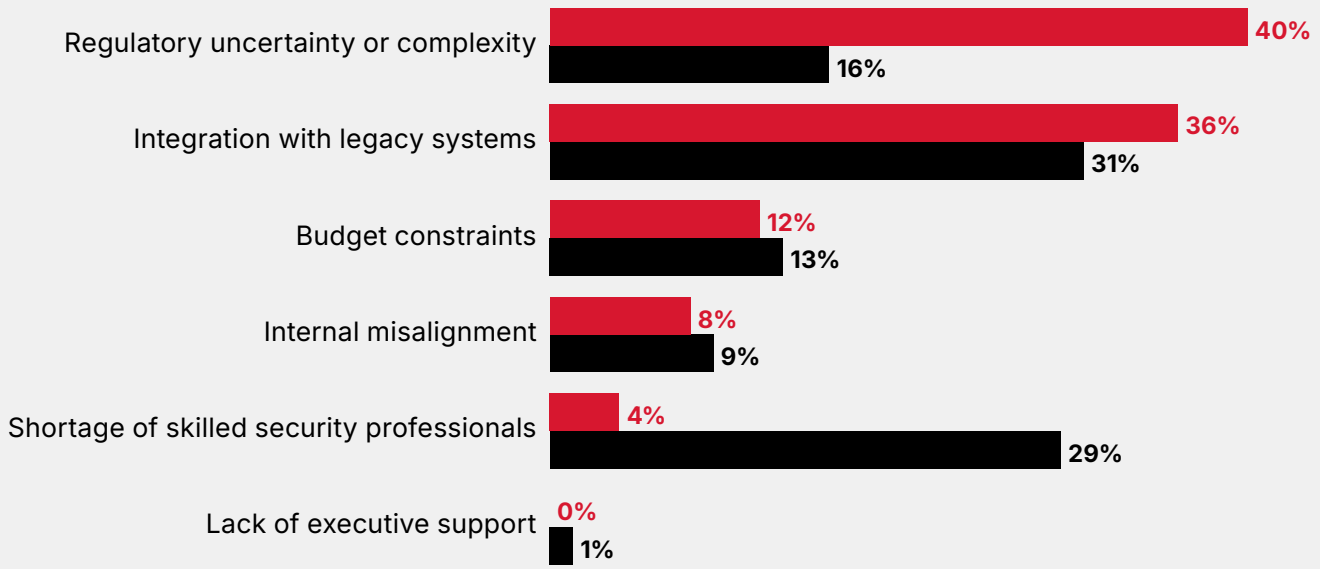
The burden caused by this fragmentation is particularly apparent in Europe, where 40% of operators say regulatory uncertainty or complexity is the biggest challenge they face when making cybersecurity investments, compared to just 16% in other regions (see Figure 10). These challenges are only likely to grow if the EU enacts Cybersecurity Act 2 (CSA2) in its current form, as highlighted in Section 4.4.

GSMA Intelligence's survey also highlights operators' concerns about integrating new security tools with legacy systems, highlighting the operational strain caused by "tool sprawl" within increasingly complex security environments. Budget constraints and internal misalignment were also raised as barriers to security investment. To address these challenges, operators have focused their cybersecurity investments on increasing automation, improving collaboration and deploying telecoms-specific tools, as highlighted in Figure 11.

Figure 10

What is the biggest challenge your organisation faces when deploying the security tools it requires?

N = 100[16]



Source: GSMA Intelligence Operators in Focus Security Survey, July 2025

14. Deutsche Telekom CR Report 2024
15. GSMA Mobile Telecommunications Security Landscape 2026, GSMA, 2026
16. Europe includes selected EU and non-EU countries.

Figure 11

Operators detail their cybersecurity plans: selected examples

Deutsche Telekom	Deutsche Telekom Group anchors its cybersecurity and network security activities in a Cyber Defence Centre and a global network of cyber defence and security operations centres (SOCs) that monitor the Group's systems (excluding T-Mobile US) as well as business-customer environments 24×7. Security specialists use AI to analyse around 1 billion security-relevant data points from about 3,000 sources each day, enabling real-time attack detection and mitigation. In 2024, Deutsche Telekom's 'honeypot' recorded around 70 million attacks per day. The operator has also expanded capacity by launching a central SOC in Bonn, with more than 250 cybersecurity experts, that works with centres in 13 other countries. Its network-security investments include Magenta Security on Net – a network-based mobile-security product line intended to protect SIM-connected devices without additional software and to support SASE-style security functions through the mobile network and roaming.[17]
Elisa	Elisa operates a hybrid cybersecurity and service operations centre (cSOC). The operator says this model helps it diagnose the root cause of large-scale incidents more quickly by making it easier to determine whether an incident stems from a misconfiguration or a cybersecurity attack.[18] Unlike a traditional network operations centre, Elisa's cSOC monitors services from the customer perspective rather than focusing primarily on network alarms. The operator aims to resolve problems automatically without the need for human engineers to step in, helping it deal with a growing volume of attacks. Elisa prevented a total of 309,700 denial-of-service attacks and blocked 1.4 million scam text messages in 2024.[19]
Post Luxembourg	Post Luxembourg and Ericsson are long-term cybersecurity partners. The operator deployed the Ericsson Threat Intrusion and Detection System, before announcing an extended partnership to integrate the Ericsson Security Manager platform into its cybersecurity toolkit in June 2025.[20] The move underlines the need for operators to leverage advanced automation and telecoms-specific threat detection, rather than relying solely on generic solutions for enterprise IT environments which do not provide adequate protection for network functions.
Telefónica	Telefónica's early engagement in quantum technologies puts it in a strong position to realise opportunities and prepare for security risks. The operator has established a dedicated centre of excellence for quantum technologies. It is also advancing QKD, having deployed it operationally within the EuroQCI network and used it to secure communication between two hospital groups' healthcare centres in Madrid. Additionally, Telefónica is working alongside partners to deploy quantum technologies, such as working with Qrypt and Quside to implement quantum entropy, along with post-quantum cryptography, in security-critical IoT and cloud environments.

17. https://www.telesec.de/en/about-telekom-security
18. "Elisa praises placing cybersecurity at heart of operations", Light Reading, March 2026
19. https://elisa.com/corporate/sustainability/trust-center/
20. "Post Luxembourg selects cybersecurity platform Ericsson Security Manager to elevate mobile network security", Ericsson, June 2025

A strong security posture depends on resilience and recovery

In a world shaped by rising security threats, extreme weather and geopolitical uncertainty, mobile networks must be able to withstand significant disruption. As highlighted in Figure 12, investments in improved power backup systems, smarter automation tools and stronger physical security are key elements of operators' resilience strategies. Operators are also taking steps to add more diverse transmission routes and geographically distributed network functions to reduce single points of failure.

In parallel, satellite connectivity is becoming an increasingly important part of operators' resilience plans. This can be seen in recent developments around satellite backhaul,[21] as well as the new partnerships formed between operators and satellite providers to introduce direct-to-device (D2D) smartphone connectivity, which offers a backup option when terrestrial-based networks are unavailable. The value of this connectivity has become particularly clear in Ukraine, where blackouts caused by attacks on power generation facilities have disrupted communications. The country's largest mobile operator, Kyivstar, launched its D2D service in November 2025, reaching more than 5 million users by March 2026.

21. See for example "Vodafone and Amazon Leo sign agreement to extend mobile coverage across Europe and Africa", Vodafone, March 2026

Figure 12

Operators outline their strategies to strengthen network resilience

Eir	In 2025, Storm Éowyn was the most powerful and severe storm to hit Ireland since Hurricane Debbie in 1961. Donegal was one of the worst hit places. Significant damage was caused to telecoms infrastructure, though the impact was mitigated by operators' investments in network resilience. For example, Eir has invested more than €51 million in Donegal's telecoms infrastructure in recent years. Donegal has been part of a nationwide plan that has seen more than 160,000 poles replaced across the country in the past four years to strengthen its network and reduce outages during extreme weather. Donegal's exchange and mobile network has also benefited from a climate resilience plan that has seen the company invest in backup power, with all 1,250 exchange sites now equipped with backup power, over 250 critical sites with static generators, and mobile generators at 60+ locations. Additionally, more than 60% of mobile sites have battery backup.[22]
Orange	Orange plans to invest €50 million over the next five years in redundancy and backup systems for networks.[23] It is also investing in robust design and strong repair capabilities to ensure systems can recover quickly and continue operating under stress. It has partnered with AXA Climate to conduct vulnerability assessments and identify markets vulnerable to weather-related issues.
Telenor	Telenor has been able to improve the resilience of its networks thanks to the use of dual-homing, whereby base stations are connected via two independent fibres or radio links. This redundancy helps mobile sites maintain service even when one connection fails. The operator has also invested in physical security to protect its most critical sites. This includes investment in reinforced buildings, anonymous facades, backup power and 24×7 surveillance.[24]
Vodafone	Vodafone unveiled its Enhanced Power initiative in November 2025. The primary objective is to enhance the resilience of more than 10,000 critical mobile infrastructure sites that support emergency services across Europe. It is being rolled out throughout Vodafone's European markets over the next two years, starting with Portugal. The initiative is based on both existing temporary backup systems and the use of AI to predict, control and conserve backup time as long as possible.[25]

Source: GSMA Intelligence, operator press releases

22. "Eir says 99% of faults in Donegal have now been rectified", Highland Radio, February 2025
23. "Pushing boundaries of resilience: the greatest challenge of networks", Orange, January 2026
24. "Building robust Nordic networks for a resilient society", Telenor, 2025
25. "Vodafone to boost resilience and extend power backup time at 10,000 plus mobile sites serving emergency services", Vodafone, November 2025

2.3
Operators explore new opportunities in sovereign AI

Digital sovereignty has been a key topic in Europe for several years. However, the debate has gathered momentum over the last 12 months against a backdrop of growing geopolitical uncertainty. Much of the conversation has centred on the importance of sovereignty in the cloud and AI markets. Recent developments include the EU outlining its cloud sovereignty framework[26] and preparation towards a Cloud and AI Development Act (an industrial policy initiative embedding sovereignty objectives), as part of a wider Tech Sovereignty Package. In parallel, non-European technology companies are launching new products to meet rising demand for sovereign solutions.[27]

Operators are well positioned to tap into growing demand for sovereign cloud and AI services. Their strengths extend across multiple areas, including:

- deep expertise in operating critical national infrastructure
- extensive experience operating in regulated environments
- long-standing relationships with governments and enterprise customers
- skilled local workforces
- their position as leading domestic providers of ICT services in many European markets.

Defining digital sovereignty

EU Member States signed the Declaration for European Digital Sovereignty in Berlin on 18 November 2025. Known as the Berlin Declaration, it defines sovereignty as the ability of member states to act autonomously and freely choose their own solutions, while reaping the benefits of collaboration with global partners, when possible. This marks an important distinction from other definitions of sovereignty which focus solely on the idea of self-sufficiency. The Berlin Declaration acknowledges that such definitions are unlikely to be attainable; instead, the EU should focus on ensuring optionality and reducing strategic dependencies. Achieving these outcomes will be vital to advancing its top priorities, including developing a resilient economy, fostering innovation and bolstering competitiveness.

26. Cloud Sovereignty Framework – Version 1.2.1, European Commission, 2025
27. See for example "Opening the AWS Sovereign Cloud", AWS, January 2026

Operators are emerging as key players in Europe's sovereign technology debate

The growing role of operators is highlighted by their investments in sovereign AI factories – specialised data centres designed to handle large-scale AI workloads. For example, Deutsche Telekom and Nvidia spent €1 billion building an AI factory in Munich, while Iliad Group has outlined plans to invest €3 billion in AI-dedicated infrastructure over the next few years. The investment premise is based on selling GPU as a service (GPUaaS) paired with a service and connectivity layer. This is likely to appeal most to enterprises in highly regulated sectors (e.g. healthcare and financial services), tech start-ups, research institutions and other public-sector organisations. The facilities can also support an operator's own workloads, as highlighted by Telenor's recent sovereign AI factory deployment.

The opening of operator-led sovereign AI factories addresses demand for data sovereignty by ensuring that data not only stays within the EU but is governed by local laws and protected from access by non-EU authorities. Operator ownership of these facilities also ensures operational sovereignty, ensuring decisions related to service availability and access are controlled by local companies.

Bolstering Europe's technical sovereignty is also a core part of the rationale for building AI factories. Deutsche Telekom's Industrial AI Cloud is the basis for the "Deutschland stack",[28] which Deutsche Telekom is providing together with SAP. This partnership sees Deutsche Telekom's subsidiary T-Systems provide the infrastructure and platform layers, while SAP provides business and AI applications. In addition, operators are supporting the development of domestic LLM capabilities through their AI factory sites. Fastweb+Vodafone, for example, provides its AI factory customers with access to the operator's proprietary LLM natively trained in Italian in compliance with the requirements of the AI Act.

These examples highlight the potential for greater technical sovereignty in Europe. That said, the role of Nvidia in each of the AI factory deployments underlines the region's reliance on non-European hardware in vital layers of the AI tech stack. Developing such capabilities in Europe would require decades of investment, emphasising the importance of managing strategic dependencies.

Figure 13

Europe is home to a growing number of operator-led sovereign AI data centres

Operator solution	AI factory location	Key partners	Capacity
Deutsche Telekom's Industrial AI Cloud	Munich, Germany	Nvidia, Polarise, SAP, Siemens	Almost 10,000 Nvidia Blackwell GPUs; up to 0.5 exaflops
Fastweb+Vodafone's NeXXt AI Factory	Bergamo, Italy	Nvidia, Cineca, Instituto Italiano di Intelligenza Artificiale	248 Nvidia H100 GPUs (31 DGX H100 systems)
Scaleway private AI compute cluster[29]	Paris, France	Nvidia, InfraVia Capital	Almost 5,000 GPUs

Source: GSMA Intelligence

28. This is a national initiative by the German government to create a sovereign tech toolkit with open standards to digitise government IT independently of foreign providers and ensure interoperability between the federal, state and local governments.
29. Scaleway is Iliad Group's cloud services subsidiary.

AI inference is driving renewed conversations about the network edge

In addition to AI factories, operators can support sovereign AI workloads by deploying network edge data centres. Telefónica is one of the most advanced European operators in this area. By the end of 2026, it aims to have opened 17 edge data centres across Spain as part of a plan to repurpose old telephone exchanges to support its own operations and offer sovereign services to enterprise customers. It has already begun marketing services in five of the edge nodes, touting opportunities to support AI workloads in areas including Industry 4.0, logistics, retail, ports and digital twins.

Telefónica's network edge deployments are happening alongside efforts to develop interoperable, European edge infrastructure. For example, Telefónica, Deutsche Telekom, Orange, TIM and Vodafone recently demonstrated the European Edge Continuum – the first federated edge cloud connecting the networks of Europe's five largest operators. In addition, the European Commission has unveiled EURO-3C – a €75 million project to develop Europe's first large-scale federated telco-edge-cloud infrastructure, supported by Horizon Europe. The initiative extends beyond telecoms operators to include cloud service providers, software developers, equipment manufacturers, research institutions and a broad network of integration specialists.

Renewed interest in the network edge underlines the need to accelerate infrastructure build-outs to support future AI workloads. While the initial wave of AI compute has been dominated by training AI models, there is a growing need to support workloads that put these models into production (often referred to as AI inference). This will be delivered through a mix of centralised data centres and edge deployments spanning on-device, on-premise and network edge locations.

03

Mobile industry impact

3.1
European countries lead the way on the Green Network Index

While there are several indicators and metrics in telecoms, the industry has historically lacked a global, comprehensive metric to measure environmental sustainability. In response, GSMA Intelligence developed the Green Network Index (GNI), which provides a single figure to measure the overall environmental sustainability for telecoms networks. It is based on nine variables spanning energy and carbon efficiency, renewable energy use and network performance/availability. The full list of metrics is shown in Figure 14.

Figure 14
GNI components, metrics and units

Component	Metric	Units
Energy and carbon efficiency	Network energy efficiency	kWh/GB
	Network carbon intensity energy	Kilograms of CO_2 per TB
	Power usage effectiveness	Number over 1.0
Renewable energy	Renewable energy factor	Percentage
	Renewable production factor	Percentage
Performance and availability	Power availability	Percentage
	Active download speed	Mbps
	Coverage	Percentage of population
	Round-trip latency	Milliseconds

Source: GSMA Intelligence

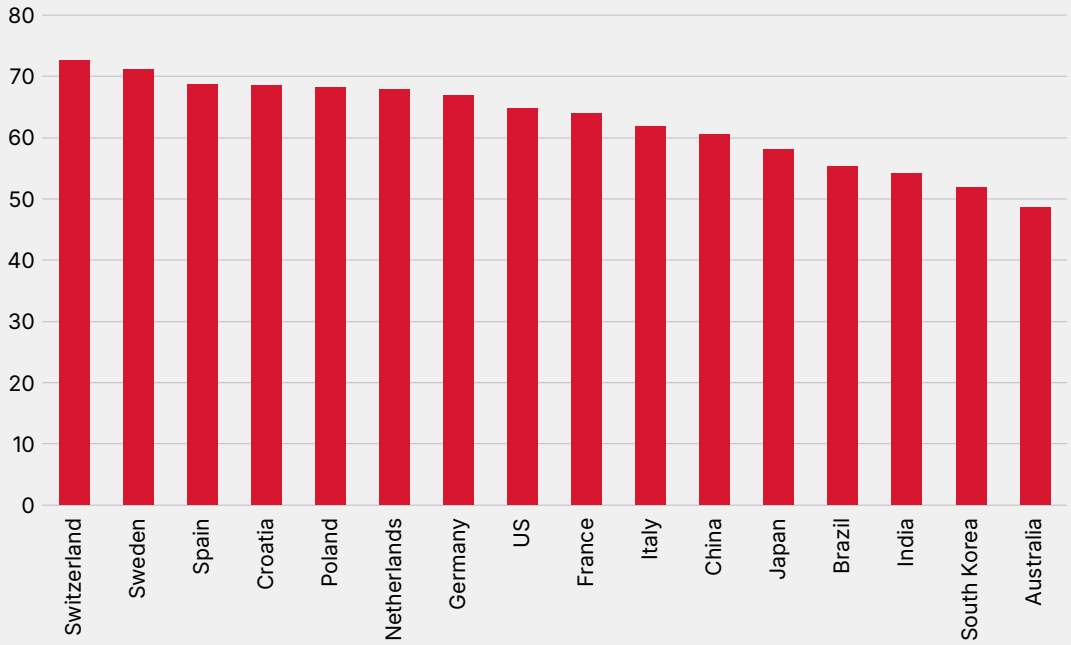
GNI country scores vary widely, reflecting the different stages of infrastructure maturity, energy transition progress and network optimisation. Switzerland performs strongly, topping the overall GNI total score leaderboard with 73. It combines high renewable energy adoption, strong efficiency and robust performance indicators, suggesting a market where sustainability considerations are fully embedded into network operation. Sweden and Spain also perform strongly, with scores of 71 and 69, respectively. These countries share similar traits: advanced efficiency programmes, near-universal coverage, high availability of grid electricity and comparatively low carbon intensity.

Aggregating results at the regional level provides additional context, showing clusters of strength and points of structural divergence. Europe and North America lead, with averages of 65 and 64 respectively.[30] These regions demonstrate the advantages of mature policy environments, long-term investment in network upgrades and relatively advanced renewables integration. Europe in particular shows a balanced sustainability profile, combining high efficiency, solid renewable use and near-perfect network availability.

30. The average for Europe includes selected EU countries plus the UK, Switzerland and Norway.

Figure 15

GNI scores for select countries, 2026



Source: GSMA Intelligence[31]

Deutsche Telekom achieves climate neutrality across its own operations

In February 2026, Deutsche Telekom became the first company in the DAX 40 to achieve net-zero emissions across its own operations.[32,33] The achievement has been underpinned by progress across three key pillars:

- **Green electricity** – Deutsche Telekom has signed long-term electricity power purchase agreements (PPAs). It has also built large-scale battery storage facilities at multiple locations that contribute to grid stability and serve as a reserve for green electricity during periods of low wind and solar generation.
- **Energy efficiency** – Deutsche Telekom has invested heavily in energy efficiency, including intelligent network control and modern technology. These investments save several million euros in energy costs and significantly reduce the operator's CO_2 footprint.
- **Electromobility and building modernisation** – The ongoing conversion of the company's fleet to electric vehicles reduces operating and maintenance costs. In office buildings, flexible space utilisation, smart controls and modernised heating technology help lower costs and emissions.

Achieving climate neutrality within its own operations marks an important milestone in Deutsche Telekom's net-zero journey. Its focus now turns to reducing Scope 3 emissions from supply chains and customers, which GSMA research shows account for around three quarters of operators' overall emissions. By 2040, Deutsche Telekom aims for its entire value chain to become climate-neutral (net zero), driving a shift towards new circular business models.

31. The full GNI dataset is available at www.gsmaintelligence.com/green-index.
32. Also referred to as Scope 1 and 2 emissions.
33. The DAX 40 stock index tracks 40 of the largest German companies trading on the Frankfurt Stock Exchange.

3.2
Towercos play an important role in improving network energy performance

Tower companies (towercos) operate at the very edge of the network – where infrastructure meets real-world conditions, users and user equipment. Towercos are therefore the most exposed to environmental constraints, grid quality, climate, terrain and the availability of local infrastructure. Unlike core networks or data centres, towercos must adapt directly to whatever conditions exist around each physical site, including temperature, vandalism, security, humidity, geography and the regulatory environment. This results in strong regional differences in energy-efficiency performance.

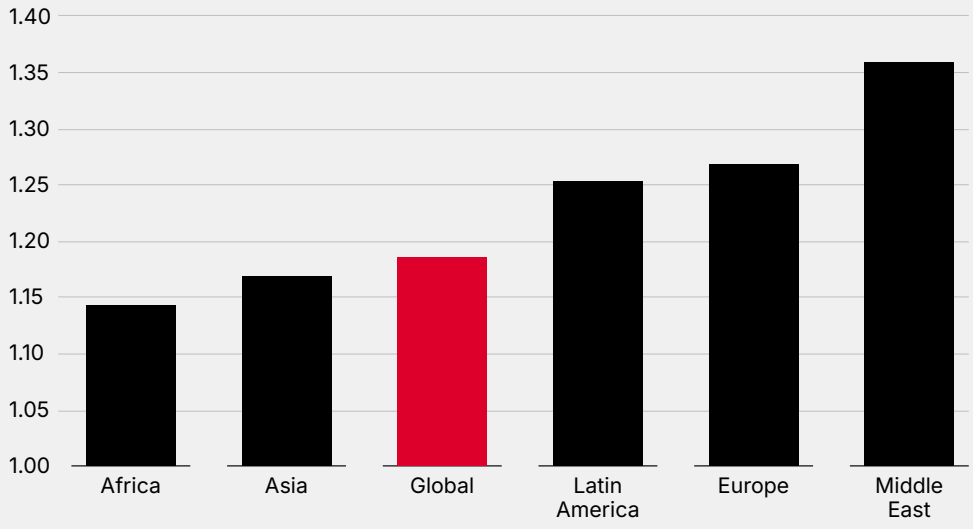
Site power usage effectiveness (PUE) is a relatively straightforward way to express these differences. A lower PUE means most of the energy is used directly by telecoms equipment. A higher PUE means much more energy is required to operate cooling, power conversion or auxiliary systems. The Middle East's high PUE level is driven by high levels of forced cooling and air conditioning, while Africa's low PUE level is likely driven by predominantly outdoor sites with no air-conditioning and simpler power systems.

While Europe is at the forefront of emissions reductions and renewable energy adoption, the region's PUE level is slightly above the global average. This is because European sites have more "infrastructure-heavy" designs, meaning more power is consumed by elements such as cooling, power conversion, backup and resilience equipment. Europe also has a relatively large base of older and retrofitted sites, which are often less efficient from a PUE perspective than newer networks.

Beyond site-level energy performance, the towerco model enables operators to co-locate their networks on shared passive infrastructure, reducing duplication and lowering the total cost of network deployment and operations. Co-location can range from simple site sharing (land or rooftop) to full passive sharing of towers, power systems and backup infrastructure. In some cases, it can extend to enhanced passive sharing, which includes shared grid connections, cooling and backhaul. This shared infrastructure model can also improve overall energy efficiency by spreading passive energy overhead across multiple tenants.

Figure 16

Site PUE levels for towercos and infrastructure providers, by region



Source: GSMA Intelligence

Note: Data based on the GSMA Intelligence Energy Efficiency Analysis and Benchmarking project in 2026 (118 networks)

3.3
Operators continue to drive impact beyond environmental sustainability

While environmental metrics often take centre stage, the social and governance dimensions of ESG are crucial in creating responsible and impactful businesses. A good example is digital inclusion, where operators play a variety of roles in expanding access to connectivity and ensuring it is used safely. This ranges from initiatives designed to make connectivity more affordable to efforts to promote digital skills and education across all parts of society. Examples of recent actions taken by operators to support these outcomes include the following:

- **Vodafone improves affordability through its social tariffs:** At the end of March 2025, five of Vodafone's eight European markets had an affordable tariff in place. In Spain, for example, it offers its conectad@s tariff to Ingreso Mínimo Vital recipients, unemployed under-30s, and low-income pensioners over the age of 65. The operator has introduced an affordable tariffs policy to ensure a consistent approach to implementing such tariffs across its European footprint. This policy supports the operator's aim that an affordable tariff is offered in every European market.
- **Telefónica bolsters employability and entrepreneurship:** Telefónica reaches more than 1.2 million people per year through its intermediate and advanced digital skills programmes, such as Conecta Empleo and 42. These initiatives strengthen employability and entrepreneurship in its local markets. Telefónica also promotes digital literacy among older age groups, people with disabilities and other vulnerable groups, through initiatives such as Reconectados in Spain and Digital mobil im Alter in Germany.
- **Telia builds digital skills across different age groups:** Telia has reached 3.6 million individuals through its digital skills initiatives since 2021, surpassing its target for 2027. The operator provides online training sessions and runs workshops in schools and at summer camps to teach young people and their parents and guardians about online safety. The operator also supports elderly people in keeping their electronic devices safe, increasing their digital skills and learning more about fraud and online safety. This is done through digital guidance events, webinars, articles and magazine content, as well as through its customer-service teams in retail stores.

In addition to digital skills programmes targeted at young people, operators provide solutions to help keep children safe online. For example, many operators now bundle parental controls and online filtering solutions with mobile and fixed broadband subscriptions. These tools are increasingly seen as essential rather than value-added services that can be upsold to customers. Operators are also supporting child online safety through developing new age-verification solutions using network APIs. This comes at a time when jurisdictions are trying to strengthen protections for children online, introducing new laws and guidelines primarily targeted at social media companies.

04

Policies for innovation and growth

The European regulatory framework for telecoms needs urgent and extensive reform. Without significant and rapid change, Europe will be unable to deliver the best-in-class networks on which its competitiveness, security and resilience ambitions depend. A new policy framework for assessing horizonal mergers is required, while recent regulatory proposals – namely, the EU's Digital Networks Act (DNA) and the updated Cybersecurity Act (CSA2) – must be revised if the EU is to meet its objectives for high-performance connectivity and greater competitiveness.

4.1
The policy framework for assessing horizontal mergers needs to evolve

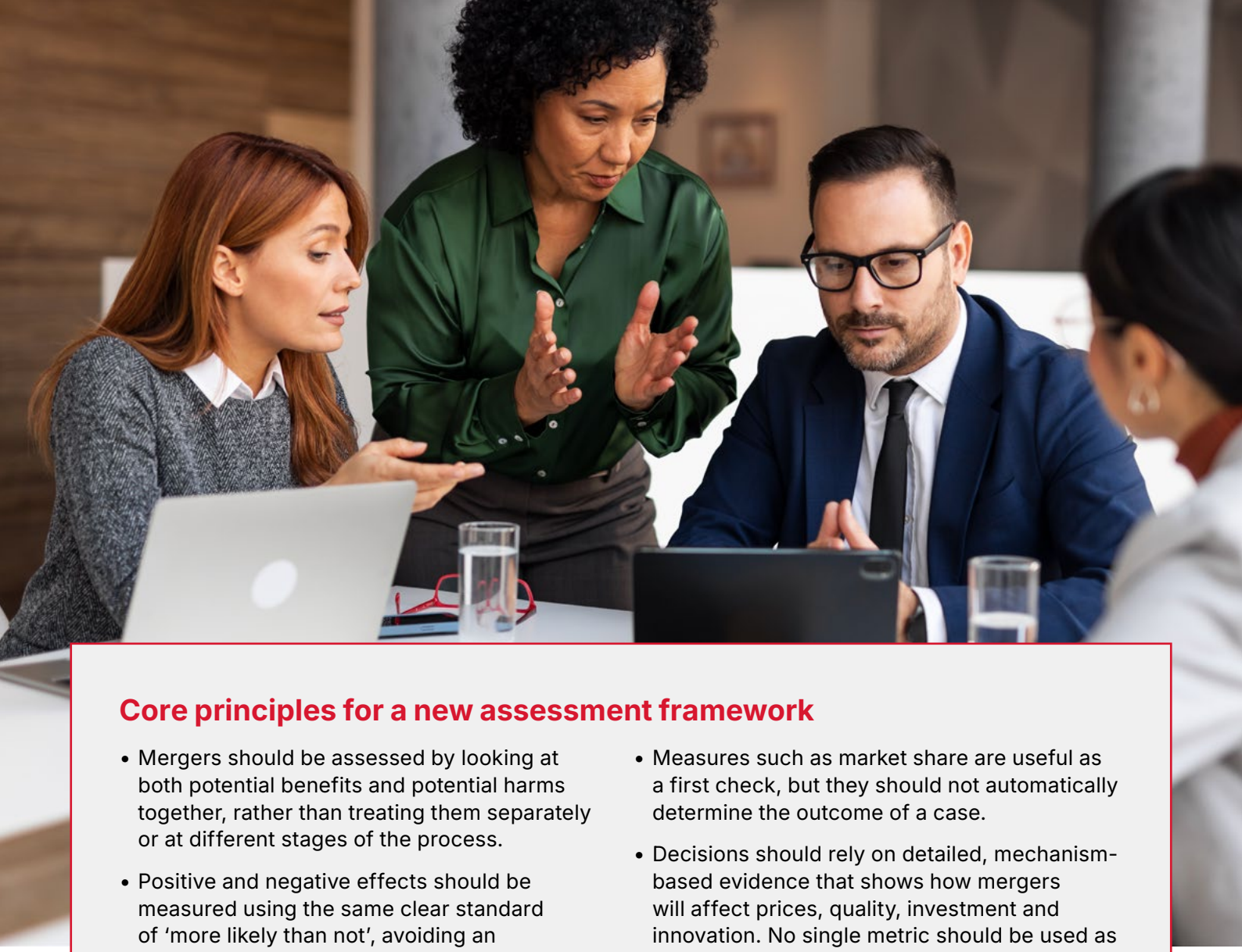
Chapter 2.1 highlights the strong and statistically significant link between increases in operator scale and higher investment per operator. Despite such evidence, Europe's merger guidelines remain narrowly focused on short-term static effects and do not give due consideration to the longer term impacts of horizontal mergers on innovation, investment and technological capability building. The need to reform policy in this area has been recognised in the European Commission's Competitiveness Compass and the 2024 Draghi report.

Recent research commissioned by the GSMA puts forward a conceptual framework to support the European Commission's review of its Horizontal and Non-Horizontal Merger Guidelines.[34] It proposes a symmetrical approach for evaluating adverse and positive effects together in the core competitive assessment. A three-step approach is proposed:

- identify the relevant dimensions of competition that drive consumer welfare in a given industry
- develop a theory of competitive effects (and not only harm) for each competitive dimension
- integrate efficiencies into the core competitive assessment.

This approach would ensure merger control is forward-looking, balanced and evidence-based, while focusing on what truly matters for consumers, including price, quality, innovation and long-term investment.

34. "A Dynamic Framework for the Assessment of Horizontal Mergers", BRG, January 2026



Core principles for a new assessment framework

- Mergers should be assessed by looking at both potential benefits and potential harms together, rather than treating them separately or at different stages of the process.
- Positive and negative effects should be measured using the same clear standard of 'more likely than not', avoiding an unrealistically high standard for recognising benefits.
- Efficiencies should be assessed through a broader and more balanced framework, tailored to sectoral characteristics and investment and innovation cycles (through analysis of the supply side and production function of each company/sector).
- Assessments should consider all dimensions of consumer welfare, including not just prices but also dynamic effects linked to quality, choice and innovation. They should also reflect the wider impact on society, rather than focusing narrowly on particular groups of consumers – the so-called out of market efficiencies.
- The assessment should explicitly describe what the market would look like without the merger and use that consistently when evaluating both potential harms and benefits.
- Measures such as market share are useful as a first check, but they should not automatically determine the outcome of a case.
- Decisions should rely on detailed, mechanism-based evidence that shows how mergers will affect prices, quality, investment and innovation. No single metric should be used as a shortcut.
- Indicators should guide the analysis but should never be treated as proof of a merger's effects on their own.
- The framework should be flexible, increasing in depth and complexity only when needed to decide whether a full competitive review is necessary.
- The framework should consider investment-oriented remedies where there are concerns about the incentives of the parties post merger, preserving the capacity, scale and incentives to compete for the benefit of consumer welfare.

4.2
The DNA proposals on spectrum are beneficial

Supporting investment through longer spectrum licence terms

The spectrum proposals set out in the draft DNA can help reset licensing practices in support of long-term connectivity objectives. The move towards indefinite-by-default or minimum 40-year licences across the EU, as detailed in Article 24, would significantly benefit the continent's digital infrastructure and economic competitiveness.

The DNA proposal on automatic renewals, set out in Article 25, is also welcome. However, the transitional provision under Article 25(5), which excludes licences expiring within seven years from the new renewal framework, risks significantly undermining the effectiveness of the reform, as it could leave more than 50% of licences outside the enhanced renewal certainty introduced by the DNA. The principles laid out in the DNA should therefore apply immediately upon adoption, in a proportionate and legally secure manner, to all existing licences.

Automatic low-cost renewals, in which renewal fees are set at zero instead of being tied to historical prices, could save up to €30 billion in spectrum costs over the next 10 years, improving the viability of further network investment.[35] This could increase network speeds by up to 23% and increase Europe's GDP by up to €75 billion by 2035.

Providing long-term spectrum roadmaps to improve certainty

Article 17 of the DNA will introduce long-term spectrum roadmaps that are designed to be updated following each World Radiocommunication Conference (WRC). Importantly, these roadmaps will carry a binding status, with the first of the roadmaps anticipated to focus on the development and deployment of 6G technology.

The GSMA's Vision 2040 study projects that mobile data usage per connection in Europe will further increase, while countries will require an average of 2–3 GHz of mid-band spectrum by 2035–2040.[36] Early clarity on future bands, including those relevant for 6G, such as upper 6 GHz, 7–8 GHz and sub-700 MHz, enables operators to plan investment, develop ecosystems and engage in international harmonisation efforts, while providing clear direction on timing and policy objectives, consequently supporting predictability for investments.

Building a pro-investment approach to EU spectrum policy

Addressing the risk of financial burden by adopting a more investment-friendly and predictable approach to EU spectrum policy is a main aspect of advancing Europe's digital connectivity objectives. This includes a harmonised approach to spectrum auctions, licensing costs, prolongation and automatic renewal of licences, and identification of future bands.

All these areas must come together as countries look to assign more spectrum across low, mid- and high bands – spectrum that is needed to keep up with data demand, increased 5G adoption and the advent of future technologies.

Following WRC-23, 6 GHz has become the harmonised future home of mid-band capacity. Equipment using 6 GHz has been trialled and, in other parts of the world, is already being added to roadmaps and assigned.

Progress is also needed on low bands to help drive digital equality. The UHF range, including the 600 MHz band, requires the Commission to put forward proposals this decade to reduce barriers to the introduction of mobile services in interested member states.

35. Spectrum Pricing and Renewals in Europe, GSMA, 2025
36. Vision 2040: Future Spectrum Needs, GSMA, 2025

4.3
The DNA proposals fall short in other areas

The DNA delivers increased complexity instead of simplification

The proposed DNA combines several legislative instruments into a single piece of regulation, without any noticeable reduction in complexity. As such, it does not achieve genuine simplification. Additionally, through the DNA, the European Commission introduces numerous pieces of secondary legislation or guidance, which will add layers of regulation on top of the DNA framework after its adoption and create legal uncertainty in the meantime. Ultimately, the DNA misses the opportunity to make a balanced framework supporting investment, resilience and competitiveness at a time when regulatory burden is heavily constraining Europe's connectivity sector.

Key policy recommendations

- Streamline duplicative and outdated rules, and rely on horizontal frameworks where available to achieve true simplification (e.g. e-privacy, consumer protection, USO)
- Avoid introducing new reporting requirements (e.g. fraud, resilience, net neutrality)

The DNA does not modernise the Open Internet regulations

Europe's Open Internet Regulation (OIR) was adopted in 2015, in a fundamentally different technological and market context to that of today. A decade later, the European Commission has chosen to copy the existing articles of the OIR into the proposed DNA. In doing so, the DNA fails to address the structural misalignment between outdated rules and current network capabilities, and risks perpetuating these shortcomings for another decade. The outdated rules leave major internet gatekeepers (with the ability to limit consumers' internet experience) largely outside the scope of the framework, reducing the DNA's impact on its core objective of preserving an open internet.

The Open Internet rules should provide greater legal certainty for innovative services based on network slicing and allow for differentiated and assured quality of service. The European Commission should provide clear and prompt guidance, pre-empting the DNA. In particular, it needs to issue a Recommendation setting out a non-exhaustive list of services that should be considered permitted "specialised services". Following that, the DNA should update the provisions around traffic management, differentiated quality of service, and services other than internet access services.

Open Internet rules must be modernised, keeping the consumer at the centre, while adapting to the evolution of networks and the growing provision of innovative and more customised services, tailored to user preferences and needs.

Key policy recommendations

- Allow greater flexibility for traffic management, differentiated quality of service and freedom of choice for B2C services
- Exclude B2B services from scope
- Provide clear and prompt guidance from the European Commission on innovative specialised services
- Extend core OIR principles to relevant actors in the value chain

The DNA fails to introduce consistent rules across the digital ecosystem

The DNA proposal recognises the structural imbalance in today's connectivity ecosystem, where EU telecoms operators are subject to significantly stricter regulatory, security and compliance obligations than other digital actors offering equivalent or competing communication services.

However, this is not translated into binding obligations on other digital players according to the principle of same service, same rules. In particular, the DNA does not introduce enforceable responsibilities regarding interconnection, traffic generation or the material influence exercised over quality of service and network performance. For example, in Article 9, Number Independent Interpersonal Communication Services (NIICS) are explicitly excluded from the scope of the General Authorisation, and the Open Internet rules are not extended to other digital players that impact traffic routing. In addition, Articles 191 and 193 propose an ecosystem conciliation mechanism that is voluntary and without binding obligations and which is therefore ineffective.[37]

Key policy recommendations

- Introduce obligations for large traffic generators to negotiate with operators, backed up by a mandatory, binding dispute resolution mechanism
- Ensure the European Commission is preferred over BEREC as the body designated to issue any guidance on dispute resolution related to interconnection and IP data transport

37. For more information on the DNA, see "GSMA Europe Position Paper on the proposed Digital Networks Act"

4.4
The revised Cybersecurity Act imposes disproportionate demands on operators

The telecoms sector is essential to economic and societal wellbeing. It is both a frontline defence for Europe and a clear target for malicious disruption. Telecoms operators ensure strong network security and resilience through comprehensive technical, operational and organisational measures, including the multi-vendor strategies that are part of the European Commission's 5G Cybersecurity Toolbox to mitigate risks and avoid supply-chain dependencies. The measures implemented by European telecoms operators are endorsed by national authorities, fulfilling national cybersecurity obligations while ensuring national competence in security matters.

GSMA Europe[38] shares the European Commission's goals of reinforcing cybersecurity in Europe and largely welcomes some of the changes to ENISA's mandate and the overall functioning of the European Cybersecurity Certification Framework (ECCF). However, GSMA Europe is inherently concerned with the proposed ICT supply chain measures (Title IV) that go far beyond what is necessary to achieve the objectives of the regulation and, rather, risk exacerbating existing challenges faced by the telecoms sector in Europe. This includes imposing unprecedented financial, operational and service-level burdens by mandating extensive technology removals, overlooking more proportionate assessment of risks, measures based on impacts on investment cycles, and operational implementation realities.

With the sector undergoing unprecedented technological transformation, emerging technical risks (e.g. from AI and quantum technology) will require European telecoms operators to undertake a fundamental shift in cybersecurity strategy, committing substantial financial resources and highly specialised technical expertise over the coming years. Against this backdrop, European telecoms operators must invest in modernising their networks and managing technical risks while also meeting obligations related to non-technical risks. Striking the right balance is essential to ensure that measures addressing non-technical concerns do not inadvertently weaken capacity to respond effectively to genuine technical and innovative challenges.

In this context, the CSA2 as proposed risks far-reaching damage to competitiveness, security and resilience, by diverting scarce resources, both in terms of investment and skilled people, away from innovation and network upgrades. The proposal prioritises a broad "rip and replace" exercise at a time when Europe must accelerate the deployment of new networks to support 6G, AI and the quantum-safe transition.

GSMA Europe therefore calls for the deletion of Title IV provisions from the text, ensuring that security remains an EU Member State prerogative, respecting national frameworks, safeguarding service continuity and supporting investment.

GSMA Europe's view

- GSMA Europe regards the draft ICT supply chain provisions as wholly disproportionate and out of step with the intended security objectives of the CSA2, and calls for the deletion of Title IV provisions of the CSA2.
- GSMA Europe calls for a clearer involvement of industry in developing certification schemes, balancing efficiency with effectiveness and reflecting current cybersecurity trends. Cybersecurity certifications should remain purely voluntary and not duplicate or conflict with international cybersecurity standards.
- GSMA Europe welcomes the expansion of ENISA's mandate but cautions against the Agency taking on a more operational role. ENISA should remain an independent, coordinating authority, supporting EU Member States in implementing EU cybersecurity law.

38. The views expressed in this section are solely those of GSMA European operator members and do not necessarily represent the views, positions or opinions of operators or other GSMA members in other regions. This section is intended to reflect the perspectives and priorities that are specific to the European telecoms landscape.

Related reading

Region in Focus: Europe, Q4 2025, GSMA Intelligence, 2026

Mobile investment needs in Europe, GSMA Intelligence, 2026

Spectrum Pricing and Renewals in Europe, GSMA, 2025

The telco threat landscape and security strategies in Europe, GSMA Intelligence, 2025

Sovereignty at MWC Barcelona 2026: the content consensus, GSMA Intelligence, 2026

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