GSMA

The Mobile Economy Middle East and North Africa 2025

GSMA

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Executive summary

The mobile industry continues to play a significant role in digital transformation across the Middle East and North Africa (MENA), with advanced networks supporting new applications for consumers and businesses. In MENA, 308 million people are connected to the mobile internet. Approximately 67% of users access the internet via 4G networks, while the adoption of 5G is increasing, though rates differ between countries. The expansion of coverage and the transition to 4G and 5G are influencing technological development and economic growth, as reflected by the mobile sector's economic contribution.

In 2024, mobile technologies contributed $350 billion to MENA's GDP, equivalent to 5.7% of GDP. This contribution stems from productivity improvements associated with mobile services and the impact of the wider mobile ecosystem. Despite these advances, a notable portion of the population is still unconnected, primarily due to the usage gap.[1] Reducing this gap is important for addressing the digital divide and supporting broader access to applications in sectors such as finance, health and education.

In 2024, mobile technologies contributed $350 billion to MENA's GDP, equivalent to 5.7% of GDP

1. The usage gap refers to people covered by a mobile broadband network but who do not yet subscribe to a mobile internet service.

Key priorities for the digital ecosystem in MENA

5G monetisation

Mobile operators have invested heavily in building out 5G networks. These investments are now translating into new monetisation opportunities, albeit at varying speeds across different countries. While 5G leaders in the MENA region are diversifying across sectors, other operators are ensuring 5G coverage in markets where 5G has just begun to roll out.

There is growing interest among operators in the region in 5G fixed wireless access (FWA) services and satellite connectivity. These technologies promise enhanced coverage and connectivity, which has led to significant attention and investment in their development and deployment. 5G FWA has emerged as the most tangible opportunity in the near term, while 5G-Advanced will bring the potential to tap into new revenue streams across enterprise segments. The Gulf Cooperation Council (GCC) countries, such as Saudi Arabia, the UAE, Qatar and Kuwait are leaders in 5G deployment and innovation globally and are progressing towards 5G-Advanced technologies.

AI and cybersecurity

AI is playing a pivotal role in digital transformation. As the use of AI applications increases, operators are recognising the essential need to secure network infrastructure and protect customers from both existing and emerging cybersecurity threats. Cybersecurity has become a top priority due to heightened risks, particularly those related to IoT and mobile device vulnerabilities. As a result, operators are adopting measures to protect systems, such as implementing AI-driven cybersecurity solutions. At the same time, regional programmes are supporting the harmonisation of cyber policies. Operators in the MENA region have established partnerships with technology vendors to introduce AI-based fraud protection, incident response capabilities, managed security services and infrastructure modernisation initiatives.

Addressing the usage gap

Almost 340 million individuals in MENA have access to mobile internet but do not use it, underscoring a significant usage gap. Mobile internet penetration is notably greater in high-income GCC countries (71% of the population) compared to low- and middle-income countries across the region (43%). Key barriers to mobile internet adoption include affordability, digital literacy and the availability of locally relevant content. Smartphone affordability is an ongoing challenge; the median cost of an entry-level device is 18% of monthly GDP per capita, increasing to 44% for the poorest 20% of individuals in the region. In addition, although 4G-enabled devices are widespread, 30% of users continue to rely on 3G or feature phones, highlighting the persistent obstacles to digital advancement. Accelerating the transition to 4G and 5G networks is essential to realise socioeconomic benefits. Operators are working together with other stakeholders to make smartphones more affordable, ensure relevant content is available in local languages and support the transition of smartphones to advanced technologies such as 4G and 5G.

Importance of harmonised mobile spectrum

Spectrum harmonisation is essential for successful mobile networks. As spectrum is a scarce resource, ensuring the timely availability of prime bands should be a priority. Mid-bands (1–8 GHz) deliver city-wide capacity, and sufficient capacity is important for minimising network densification, keeping down both costs and carbon emissions. Reusing 4G bands and extending the 3.5 GHz range – which represents the birthplace of 5G – are important steps as countries look to expand mid-band capacity, but adding new bands, such as the 6 GHz band, is also crucial.

Technology-neutral spectrum licences

Licensing spectrum on a technology-neutral basis allows mobile operators to efficiently use spectrum for a variety of technologies and services. Mobile operators are then able to ‘gracefully refarm’ bands so that they are used for several technologies simultaneously, including 4G and 5G. This facilitates the introduction of newer technologies in line with increasing mobile broadband demand while also continuing to support legacy users.

The Mobile Economy Middle East & North Africa

Mobile's contribution to GDP

2024 **$350bn**

→ **5.7%** of GDP

2030 **$470bn**

→ **6.3%** of GDP

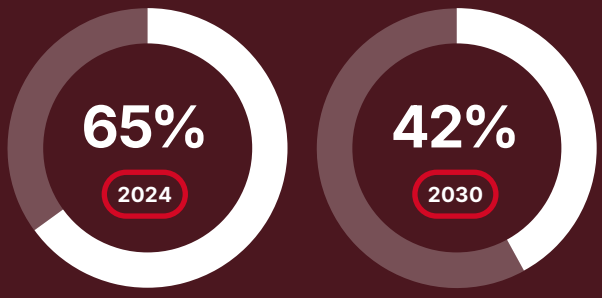
Employment

2024 **700,000**

jobs directly supported by the mobile ecosystem

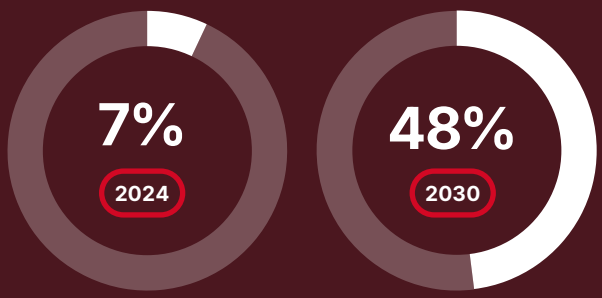
Plus 700,000 indirect jobs

4G (percentage of connections)



Excluding licensed cellular IoT

5G (percentage of connections)



Excluding licensed cellular IoT

Public funding

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

2024 **$25bn**

Operator revenues and investment

Revenues

2024 **$73bn**

2030 **$90bn**

Investment

Operator capex for the period 2024–2030

$102bn

2024 — 2030

Mobile internet users

2024 **308m**

→ **46%** of the population

2030 **378m**

→ **52%** of the population

01

The economic impact of mobile

1.1
Macroeconomic outlook

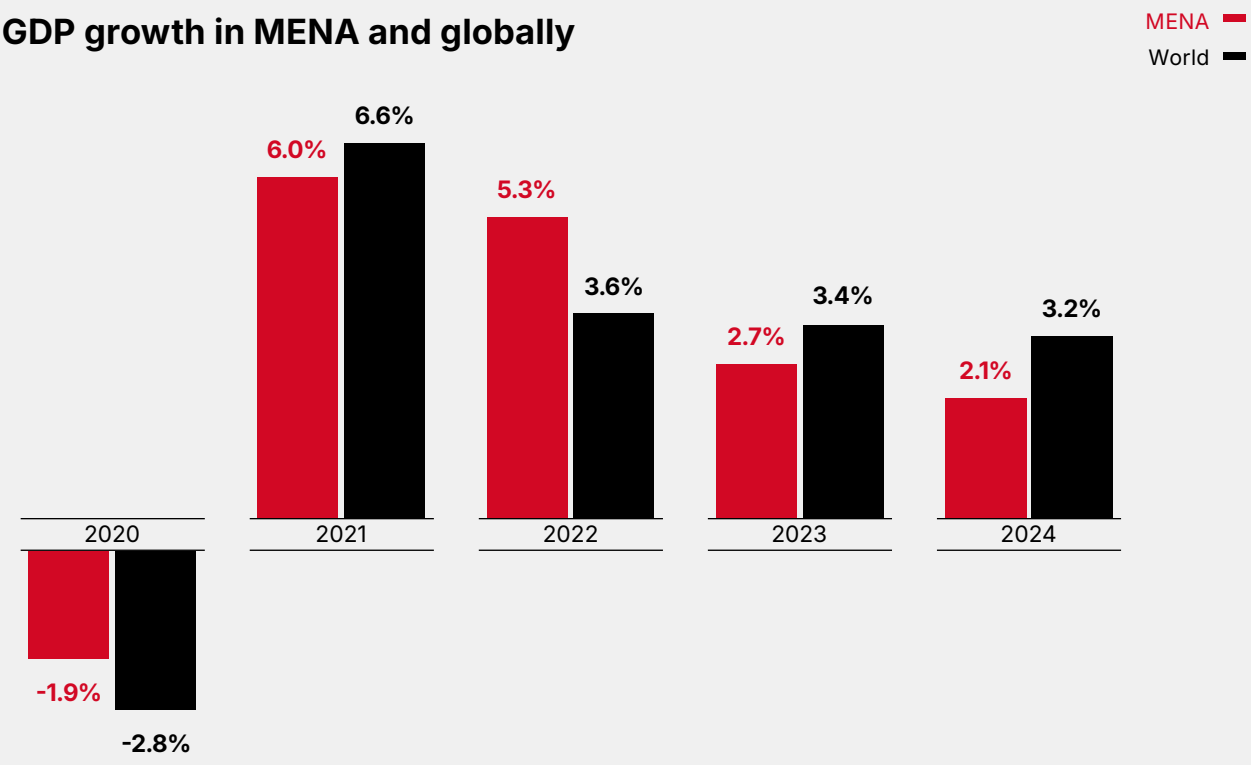
Economic growth in the Middle East and North Africa (MENA) has slowed in the last two years amid global uncertainties related to geopolitical tensions, trade restrictions and climate shocks, which have added to the escalation of conflicts in the region and extended oil production cuts.[2] In 2024, GDP growth in the region was 2.1%, below the global average of 3.2%. The countries in the region with the highest GDP growth in 2024 were Djibouti (6.5%), Mauritania (4.6%), Somalia (4.0%) and the UAE (3.8%).

Sustained economic growth will require structural reforms, which will involve investing in digitalisation and strengthening institutions. MENA's population is one of the youngest in the world, with more than 55% of people under the age of 30, which means that economic growth can be accelerated through investment in education and job creation. However, the region ranks the lowest globally in terms of female labour participation, highlighting the need for policies to increase socioeconomic inclusion and resilience.

In the next few years, growth in MENA is expected to be strengthened by a gradual recovery in oil production, declining inflation in most countries and the use of comparative advantage in manufacturing, renewable energy and tourism.[3] In this context, the mobile sector can play a transformative role by delivering fast and reliable connectivity that supports the digital economy and promotes diversification across industries.[4] 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 MENA and globally



Source: GSMA Intelligence, using WEO-IMF April 2025 data

2. For more details see Regional Economic Outlook: Middle East and Central Asia, IMF, May 2025.
3. For more details see, Middle East and North Africa, OECD
4. 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

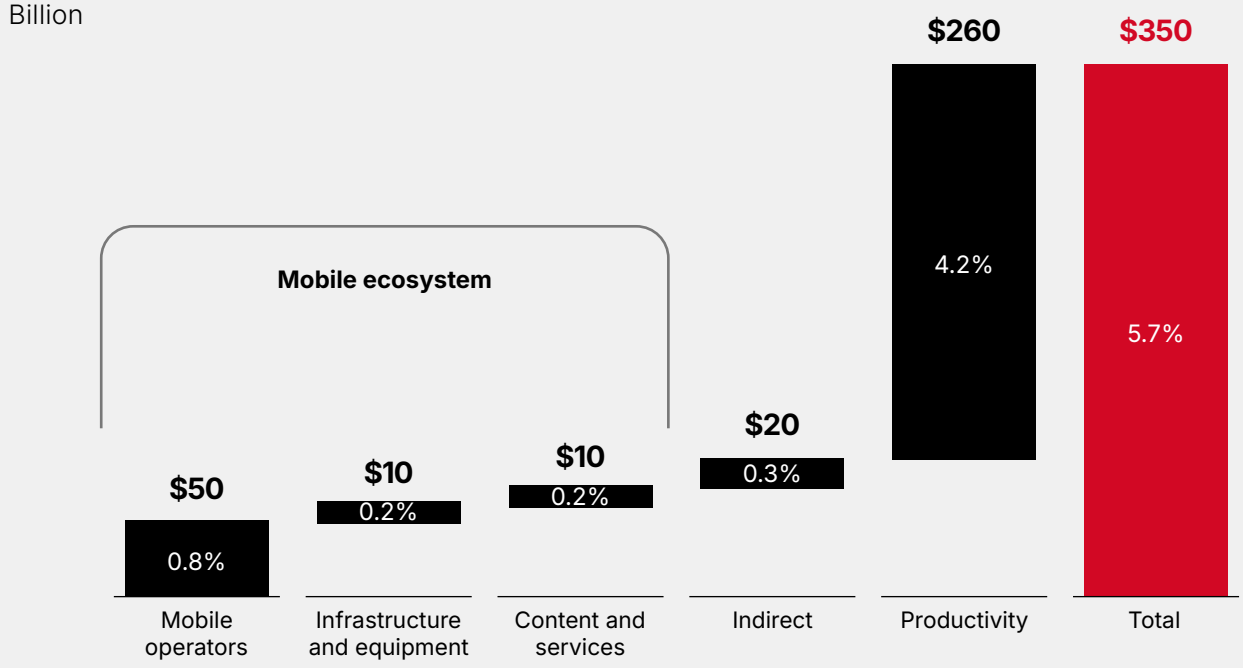
Mobile technologies contributed $350 billion of economic value to the MENA economy in 2024

In 2024, mobile technologies and services generated 5.7% of GDP across MENA – a contribution that amounted to $350 billion of economic value added. The greatest benefits came from productivity effects reaching $260 billion, followed by the direct contribution of the mobile ecosystem, which generated $70 billion.

The impacts of mobile technologies include connectivity and digital transformation. The former refers to the use of mobile technologies, while the latter involves the integration by enterprises of advanced mobile technologies such as 5G, IoT, and AI. The mobile ecosystem is formed of 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, the content and services category encompasses content, mobile application and service providers, distributors and retailers, and mobile cloud services.

Figure 2

MENA: total economic contribution of the mobile ecosystem, 2024



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

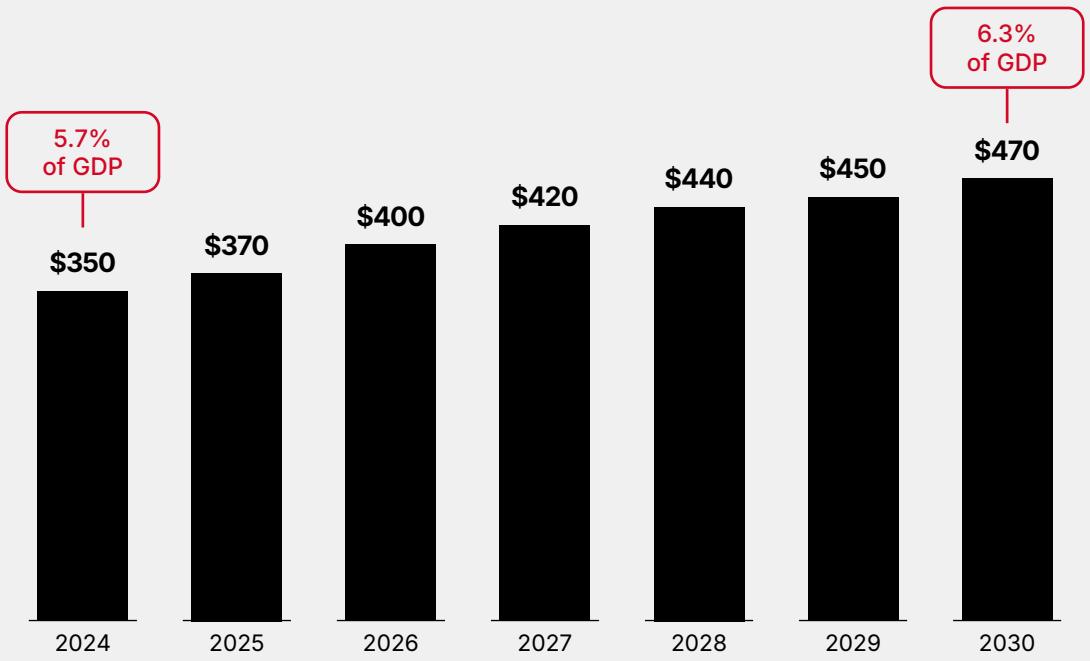
Mobile technologies will contribute $470 billion by 2030 in MENA

By 2030, mobile's contribution in MENA is expected to reach approximately $470 billion, or 6.3% 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 is expected to grow at a CAGR[5] of 5.1%, higher than the expected growth in regional GDP at a CAGR of 3.8% for 2024–2030.[6] This highlights the importance of mobile and digital technologies to boost economic growth in the region.

Figure 3

MENA: forecast of the economic impact of mobile

Billion



Source: GSMA Intelligence

5. Compound annual growth rate (CAGR) measures the mean annualised growth rate for compounding values over a given time period.
6. Source: IMF Data Mapper

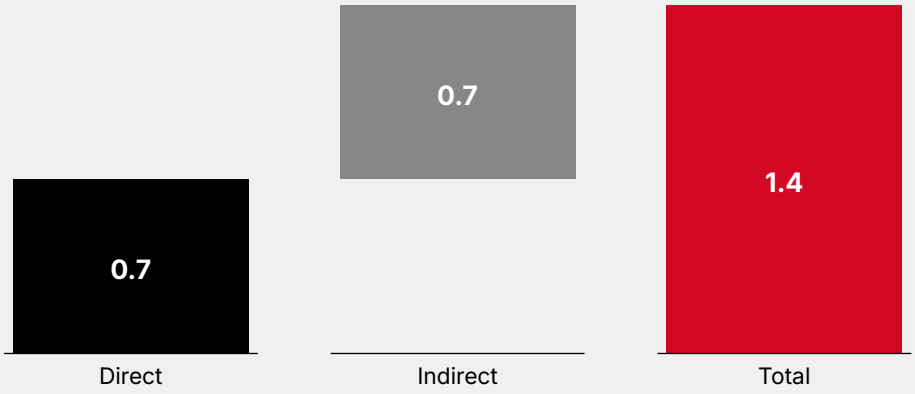
The mobile ecosystem in MENA supported 1.4 million jobs in 2024

Mobile operators and the wider mobile ecosystem provided direct employment to approximately 700,000 people in MENA in 2024. In addition, economic activity in the ecosystem generated another 700,000 jobs in other sectors, meaning around 1.4 million jobs were directly or indirectly supported.

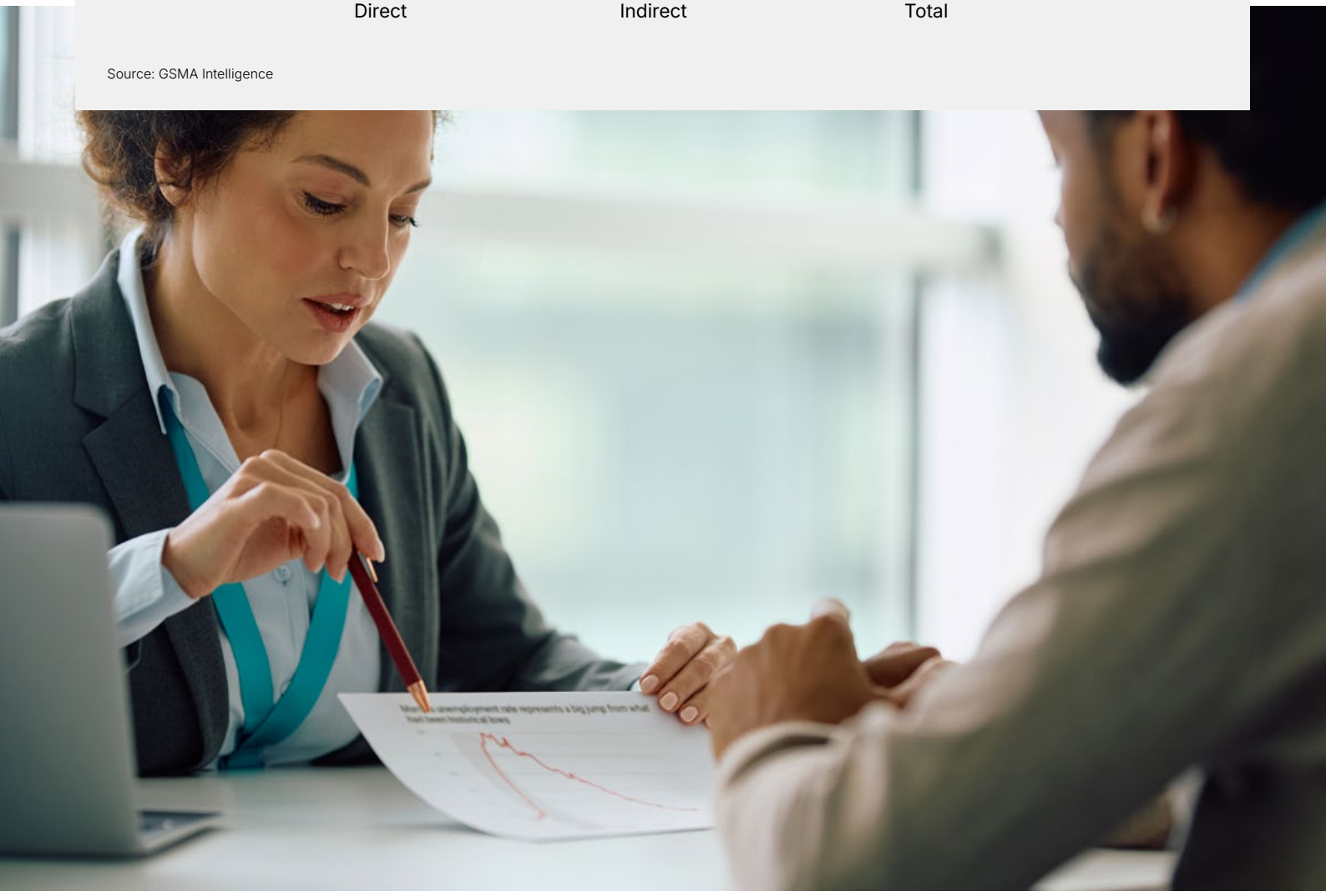
Figure 4

MENA: employment impact of mobile, 2024

Jobs (million)



Source: GSMA Intelligence



The fiscal contribution of the mobile ecosystem in MENA reached $25 billion in 2024

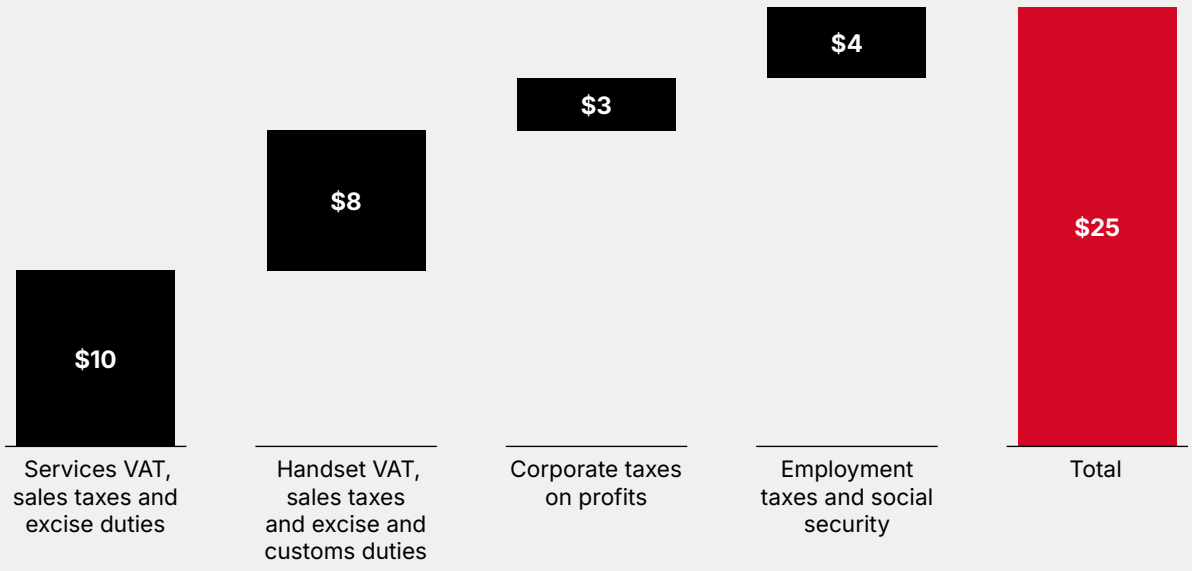
Total tax revenue in MENA reached $510 billion in 2024 – an increase of 3% compared to the previous year.[7] In 2024, the mobile sector in MENA made a substantial contribution to the funding of the public sector, with more than $25 billion raised through taxes. A large contribution was driven by services VAT, sales taxes and excise duties ($10 billion). The fiscal contribution of the mobile ecosystem represented 5% of the total tax revenue in the region.

Beyond its direct contribution, the mobile sector can enable a 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 filling and payment. High compliance costs are a significant barrier discouraging individuals and small and 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

MENA: fiscal contribution of mobile, 2024

Billion



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

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

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

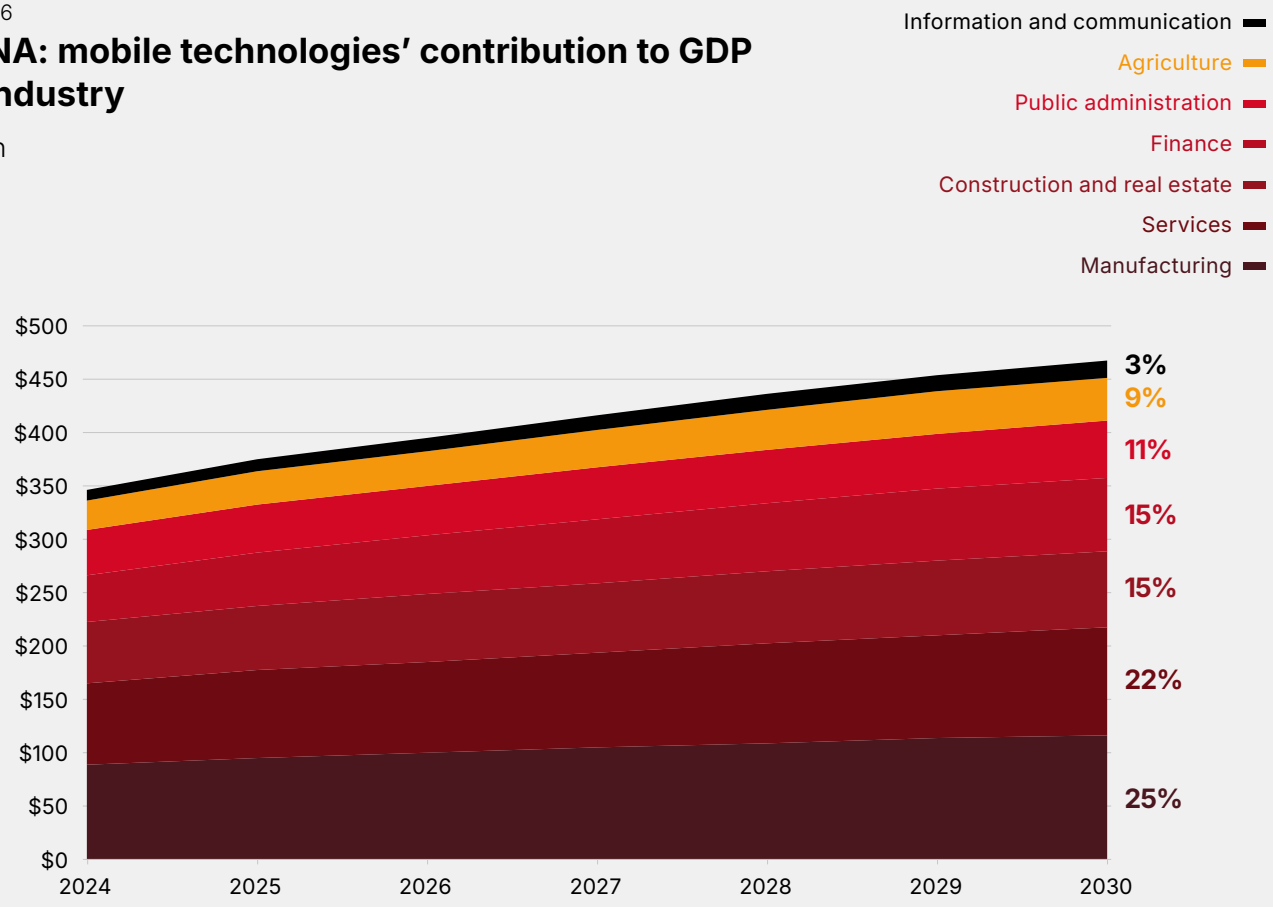
Mobile technologies and the ensuing digital transformation are expected to benefit the MENA economy by $470 billion by 2030. In 2024, the countries with the highest 5G and IoT adoption in the region were the UAE, Kuwait and Qatar; however, most countries outside of the Gulf Cooperation Council (GCC) are at incipient levels of adoption, limiting the digital transformation of the economy. By 2030, 5G use is expected to increase across most countries in the region and with it the use of advanced digital technologies.

Mobile technologies are expected to drive growth across all sectors of the MENA economy, though 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. Between 2024 and 2030, 25% of the growth generated by mobile-enabled technologies is expected to originate from the manufacturing sector.

Figure 6

MENA: mobile technologies' contribution to GDP by industry

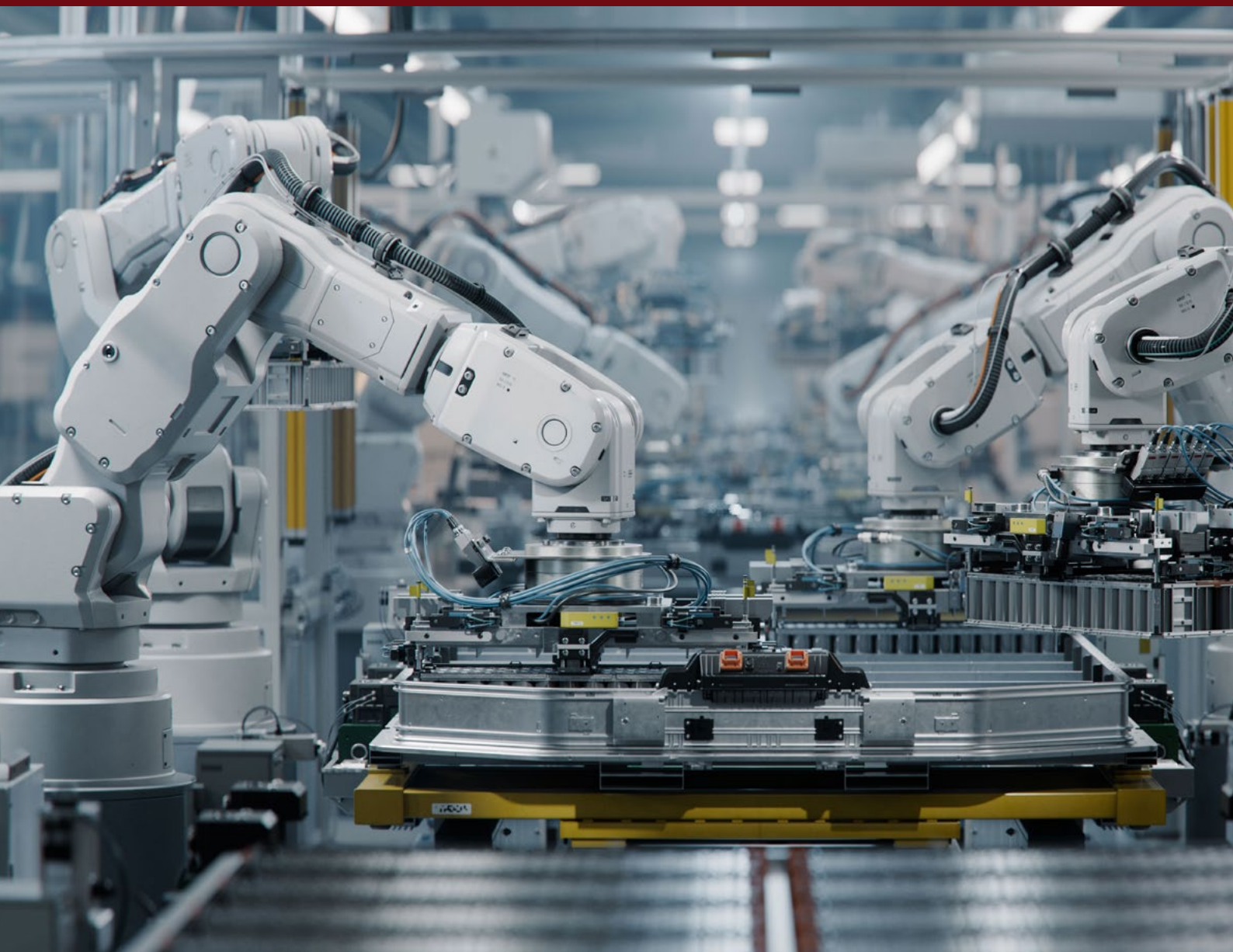
Billion



Source: GSMA Intelligence

02

Trends shaping the mobile industry



2.1
5G monetisation

The 5G landscape in MENA presents a mixed picture. The GCC states such as Saudi Arabia, the UAE, Qatar and Kuwait remain among the global leaders in 5G deployment, network readiness and innovation. These countries are now progressing toward 5G-Advanced, a next-generation evolution of 5G that enhances performance, enables reduced capability (RedCap) devices and supports advanced applications such as network slicing and edge computing. Several operators, including Zain Kuwait and e& UAE, have already conducted 5G-Advanced trials, exploring new spectrum bands such as 6 GHz and 600 MHz to boost capacity and improve indoor and rural coverage.

In contrast, other parts of the region, particularly North Africa and the Levant, are still in the early stages of 5G rollout. The slower momentum in these markets reflects challenges around spectrum assignment, technology-neutral licensing and infrastructure investment. But progress is visible.

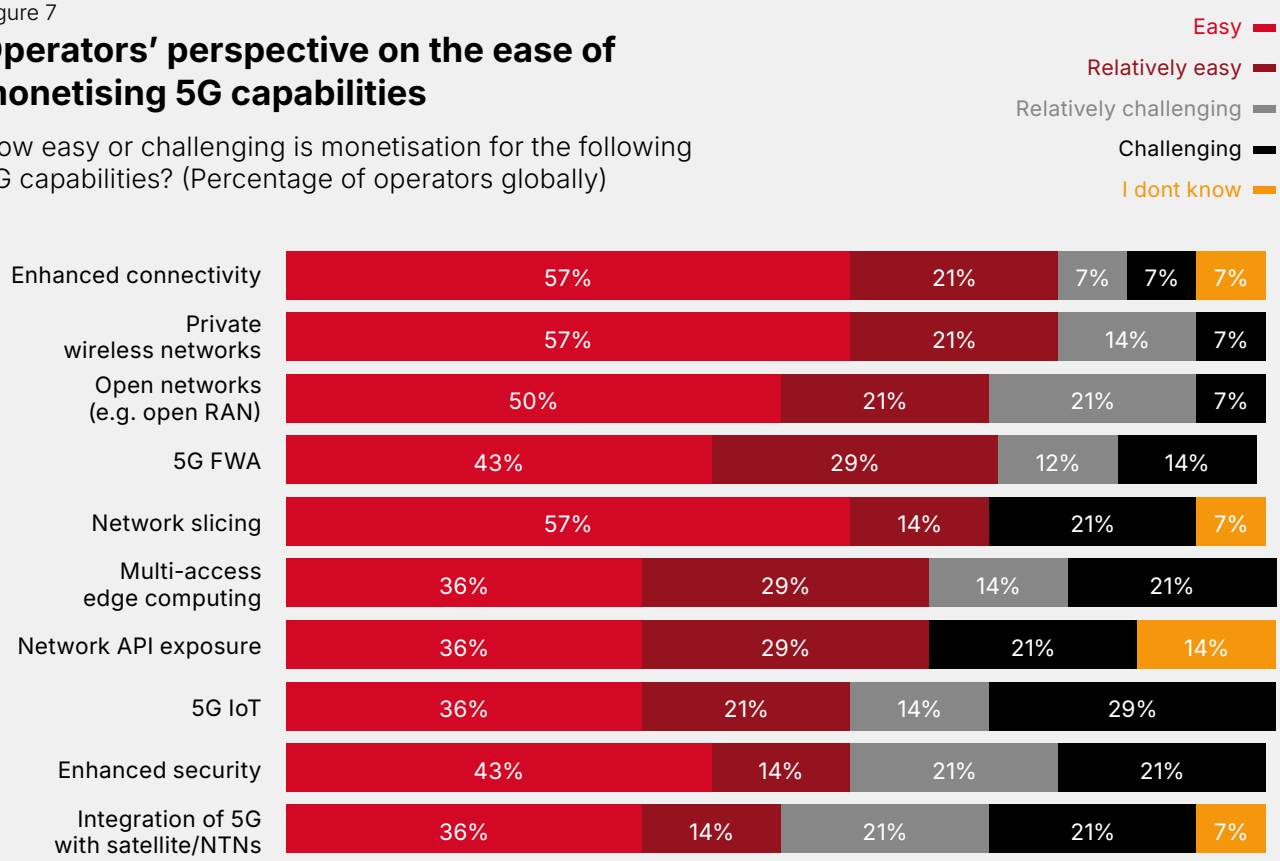
For example, Telecom Egypt has signed a four-year agreement to provide fibre connectivity to Vodafone Egypt's mobile sites and partnered with Nokia to deploy 5G RAN equipment across several cities. Meanwhile, Tunisia's Ministry of Communication Technologies has initiated the tender process for 5G operating licences, signalling that North Africa's 5G expansion phase is now underway.

As network deployment matures, operators are shifting their focus from coverage to monetisation, developing new consumer, enterprise and cross-industry use cases that leverage 5G's high capacity, low latency and flexibility. In particular, there is growing momentum for fixed wireless access (FWA), enterprise digital transformation, IoT, satellite integration and service innovation enabled by 5G-Advanced. These investments are now translating into monetisation opportunities for operators, though at varying speeds across different segments.

Figure 7

Operators' perspective on the ease of monetising 5G capabilities

How easy or challenging is monetisation for the following 5G capabilities? (Percentage of operators globally)



Note: Totals may not add up due to rounding.
Source: GSMA Intelligence Operators in Focus: Enterprise Opportunity Survey 2025

Renewed interest in 5G FWA

FWA has emerged as one of the most immediate and scalable avenues for 5G monetisation. In markets where fibre coverage remains uneven, particularly outside major urban areas, 5G FWA provides operators with a capital-efficient way to deliver high-speed broadband. Governments across the region are also encouraging FWA adoption to bridge connectivity gaps and accelerate digital inclusion. 5G FWA is benefiting from several key market developments. These include government mandates and/or incentives promoting the use of FWA to reach rural areas (thus addressing coverage gaps); the sunsetting of legacy broadband technologies (notably xDSL); the rapid rise in the number and diversity of 5G FWA devices (indoors and outdoors); and the entry of new broadband players leveraging 5G FWA to compete against established fixed broadband providers.

Globally, 5G FWA will have the second-highest level of net additions of all fixed broadband technologies between 2023 and 2030, after FTTP/B. However, the speed of 5G FWA growth will vary significantly by country. Household penetration of 5G FWA will surpass 10% by 2030 in several markets, including Saudi Arabia, where 5G FWA penetration will reach 16.5%. However, in most other countries, 5G FWA penetration will be below 10% by 2030, with several in the low single-digit figures.

Operators are also expanding their FWA offerings into differentiated service tiers. For instance, Zain has introduced four 5G FWA service plans, ranging from entry-level to premium, targeting various household segments and performance requirements. These packages are being enhanced through 5G-Advanced, which enables better spectrum efficiency, energy savings and higher upload and download speeds. Operators are increasingly bundling FWA with entertainment, gaming and smart home services, helping to drive growth.

Enterprise opportunity with digital transformation

Operators in MENA are intensifying their focus on the enterprise segment, positioning 5G as a catalyst for digital transformation across industries. The enterprise market offers significant potential for diversification beyond connectivity, encompassing private 5G networks, edge computing, IoT and data-analytics solutions.

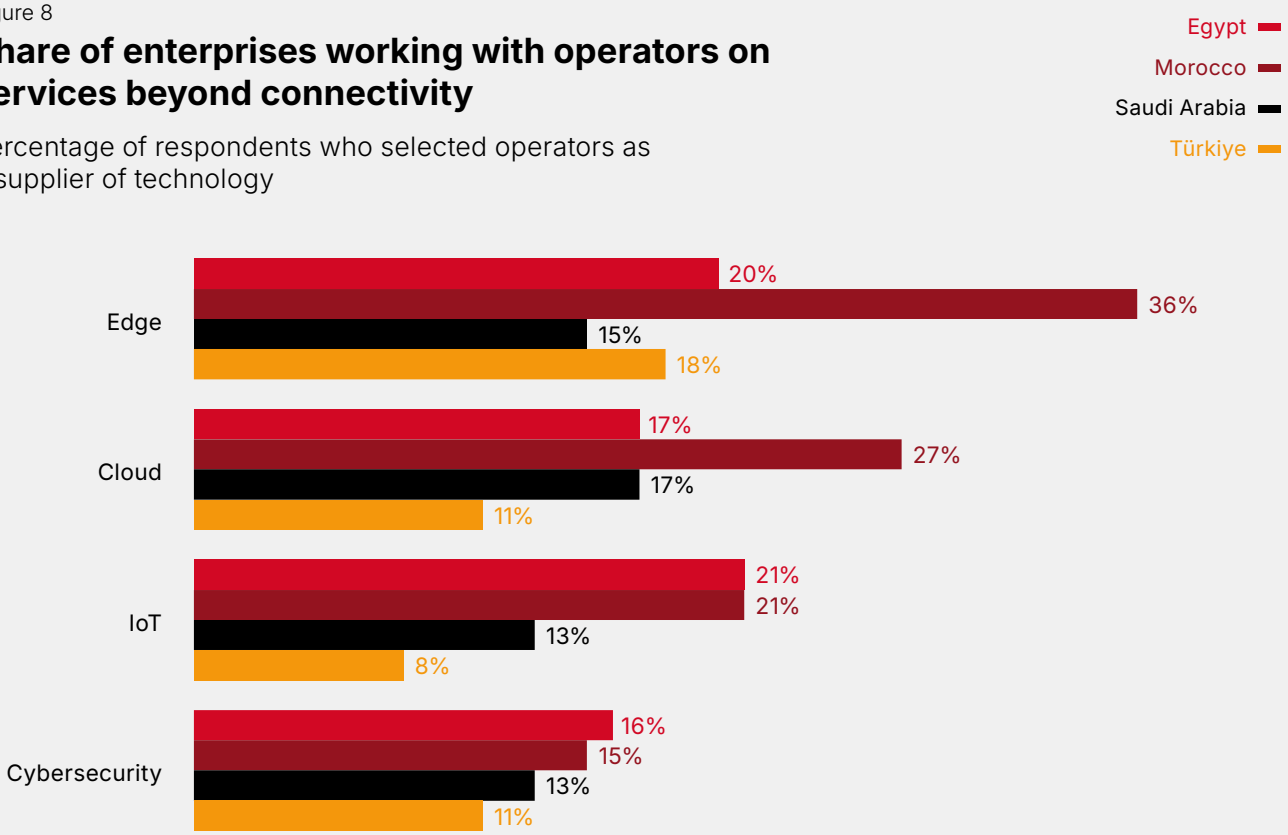
The GSMA Intelligence Digital Transformation Survey 2024[8] found that most enterprises prefer fixed networks, especially in the public sector and manufacturing. In contrast, sectors needing device mobility favour mobile networks. As per the survey, Saudi Arabia is among the few markets globally where enterprises rate 5G as the most important network technology, underscoring the success of national 5G strategies and government-led digital transformation agendas. This reflects the extensive 5G deployments of operators in the country and their efforts to promote the benefits of the technology to local enterprises. The high score for 5G in the other three surveyed MENA countries (Egypt, Morocco and Türkiye) is a promising sign for operators, given that 5G was not available in those three countries at the time of the survey.

While operators are the main suppliers of mobile and fixed connectivity services to enterprises, their business beyond connectivity is, as expected, at a much lower level. A growing share of enterprises across the surveyed MENA markets (17%) are already working with operators on services beyond connectivity, which is higher than the average of 10% across the 21 surveyed countries. This provides a solid foundation for future growth. Operators such as e& are setting ambitious targets to accelerate this shift, as it aims to derive 40% of total revenues from digital solutions by 2030, up from roughly 27% in 2023. e&'s strategic acquisitions, such as GlassHouse in Türkiye, and partnerships with AWS, Huawei and Cloudera are strengthening its position in cloud, AI and cybersecurity services.

Figure 8

Share of enterprises working with operators on services beyond connectivity

Percentage of respondents who selected operators as a supplier of technology



Source: GSMA Intelligence Global Digital Transformation Survey 2024

8. Between June and August 2024, GSMA Intelligence surveyed nearly 4,200 enterprises across 21 countries and 10 verticals to gain insight into their digital transformation. The survey included more than 100 enterprises from each of Egypt, Morocco, Saudi Arabia and Türkiye.

IoT growth gathers steam

IoT continues to gain momentum in MENA, having become a major lever for 5G monetisation and complementing enterprise connectivity offerings. Around 86% of operators in the region now offer IoT services, and this is still expanding. For example, Du operates an LTE Cat 1 IoT network in the UAE, while e& has partnered with Vodafone IoT to broaden its IoT service offerings across the region.

The increasing availability of 5G RedCap devices under 5G-Advanced is expected to further accelerate IoT adoption by enabling cost-effective connections for sensors, wearables and industrial devices. The integration of edge computing and AI analytics will enhance IoT's value proposition, allowing operators to monetise data insights and managed platforms in addition to connectivity.

Satellites are extending coverage and enabling hybrid 5G models

Satellite connectivity is appearing as another key enabler of 5G monetisation in MENA. The region's challenging geography – spanning vast deserts and remote industrial sites – makes non-terrestrial networks (NTNs) an essential complement to terrestrial infrastructure. Interest in satellite connectivity across MENA is also being driven by the prospect of servicing maritime assets and providing coverage in the wake of natural disasters. For example, satellite operator Inmarsat recently partnered with energy and chemicals company Aramco to trial a solution combining 5G and satellites to connect offshore workers in the Gulf.

A number of partnerships are now bridging the gap between mobile and satellite operators. Arabsat and ZainTech have launched a collaboration to develop satellite-enabled IoT, drone and cloud services, while Thuraya and Yahsat are working on hybrid 5G–satellite use cases across the transportation, oil and gas and emergency-response sectors. The integration of low-Earth orbit (LEO) constellations is also improving latency and capacity, paving the way for direct-to-device (D2D) satellite services and resilient enterprise connectivity. Governments are helping to facilitate this as well. For example, in October 2025, Türkiye's Information and Communication Technologies Authority authorised Connecta, a subsidiary of Plan-S (which is a manufacturer and operator of LEO satellites), to provide satellite-based IoT communication services in Türkiye.

For operators, satellite integration offers new revenue streams through premium coverage plans, back-up connectivity and IoT applications that operate seamlessly across terrestrial and satellite links. These services are particularly relevant for industries with distributed or mobile assets, such as logistics, construction and energy.

2.2
AI and cybersecurity

AI serves as the cornerstone of digital transformation strategies across MENA. According to GSMA Intelligence research, AI deployments by operators in the region primarily target internal operational efficiencies, with a growing number of operators now pursuing new revenue-generating opportunities.

The early adoption phase has been driven by practical business cases, particularly in customer care, where AI has demonstrated clear cost-saving potential. AI-enabled chatbots and virtual assistants are increasingly used to automate repetitive tasks such as password resets, billing inquiries and order tracking. The availability of off-the-shelf AI tools from global vendors has accelerated implementation in these domains.

As the pace of digitalisation intensifies, cybersecurity has become a national and commercial priority across MENA. Governments are increasingly designating telecoms networks and data infrastructure as critical national assets, compelling operators to strengthen both technical defences and organisational resilience.

Safeguarding the digital ecosystem

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 major consequences, including data breaches, financial losses, reputational damage and widespread operational disruptions.

A GSMA Intelligence survey on telecoms security in North Africa underscores the heightened risk environment. Operators see the threat to network security as significant: nearly half of the operators surveyed view IoT-related threats as very high, while three quarters rate mobile device vulnerabilities as high or very high. In contrast, the perceived risk for cloud data centres was lower, partly due to shared-responsibility models with hyperscaler providers.[9] Against this backdrop, operators have implemented both technical and non-technical measures to improve their security. For example, with threat-detection solutions, operators have implemented various security controls for employees, including security training, staff screening and enhanced administrator controls. Meanwhile, operators are also helping in the development of cybersecurity skills and awareness among customers.

Simultaneously, network APIs have begun to gain traction in the MENA region. To date, security protection and fraud mitigation remain the primary applications for which mobile operators and their partners have deployed APIs. For instance, STC has introduced One-Time Password SMS APIs in Saudi Arabia, while Du and e& have implemented SIM Swap APIs in the UAE. Numerous operators across the region – including Batelco, Du, e&, Omantel, Ooredoo, STC, Turkcell, Turk Telecom and Zain – have joined the GSMA Open Gateway initiative, which seeks to promote the adoption of standardised network APIs throughout the mobile industry.

Operators recognise the critical need to secure their network infrastructure and safeguard customers against both existing and emerging cybersecurity threats

9. Telco security landscape and strategies: Northern Africa, GSMA Intelligence, 2024

Sectoral vulnerabilities

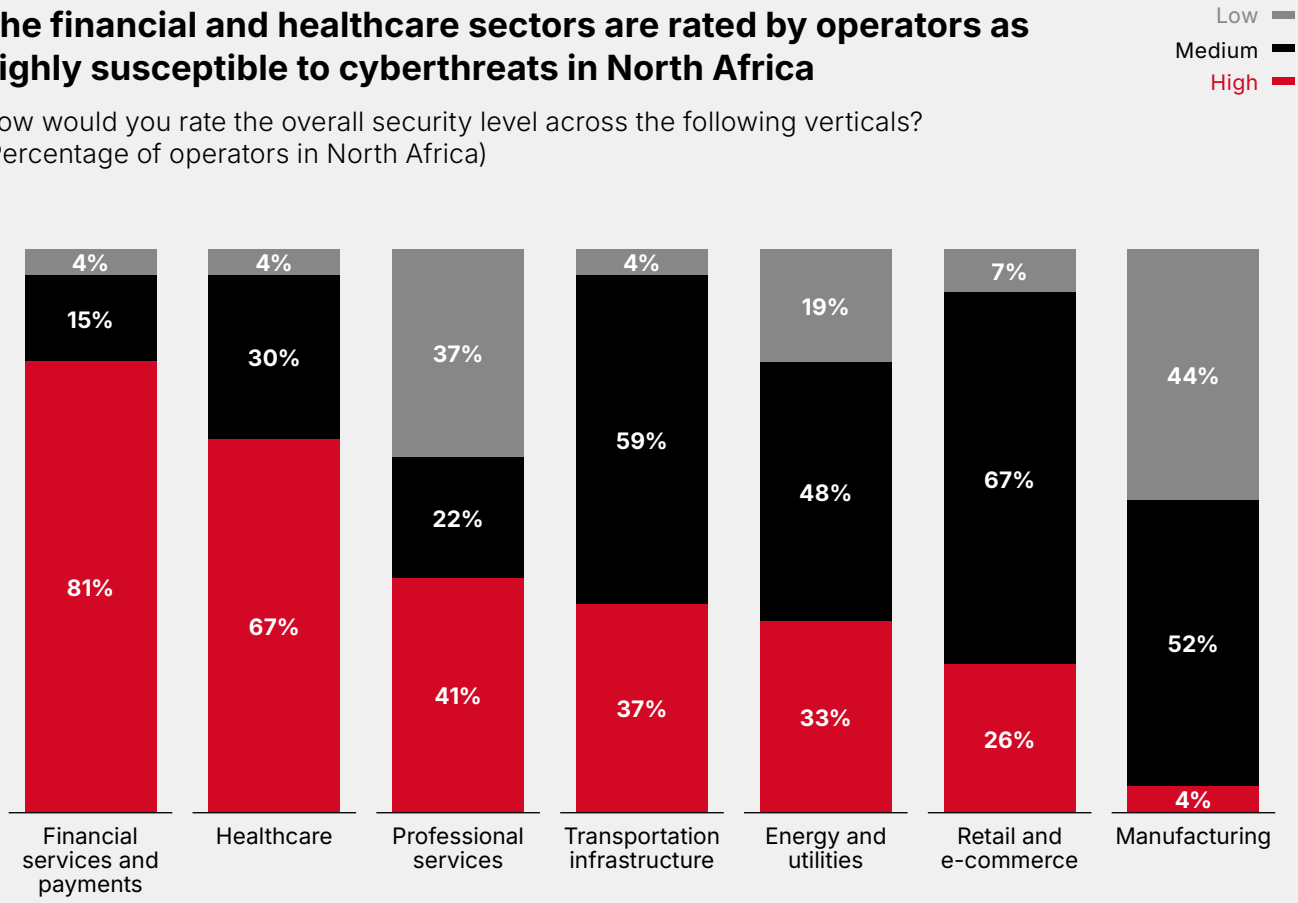
The financial and healthcare sectors remain among the most vulnerable to cyberattacks in the MENA region. Around 80% of surveyed operators in North Africa acknowledged the heightened risks in these verticals. Despite this awareness, the effectiveness of cybersecurity tools and services provided by operators in MENA is rated below global benchmarks, highlighting a need for continued innovation, cross-sector collaboration and investment in resilience.

In response, operators are adopting AI-powered cybersecurity solutions, using machine learning (ML) for anomaly detection, behavioural analytics and automated threat response. Regional initiatives such as the Arab Cybersecurity Union and GCC Digital Security programmes are also driving harmonisation of cyber policies and standards across markets, fostering a more unified and resilient security landscape.

Figure 9

The financial and healthcare sectors are rated by operators as highly susceptible to cyberthreats in North Africa

How would you rate the overall security level across the following verticals?
(Percentage of operators in North Africa)



Source: GSMA Intelligence

Collaborations strengthening AI and cybersecurity capabilities

The growing sophistication of cyberthreats has underscored the importance of public–private collaboration and strategic partnerships between operators, technology vendors and government entities.

A number of partnerships prove how regional operators are combining AI innovation with enhanced cybersecurity frameworks (see Table 1).

Table 1:

Examples of operator collaborations to enhance digital security

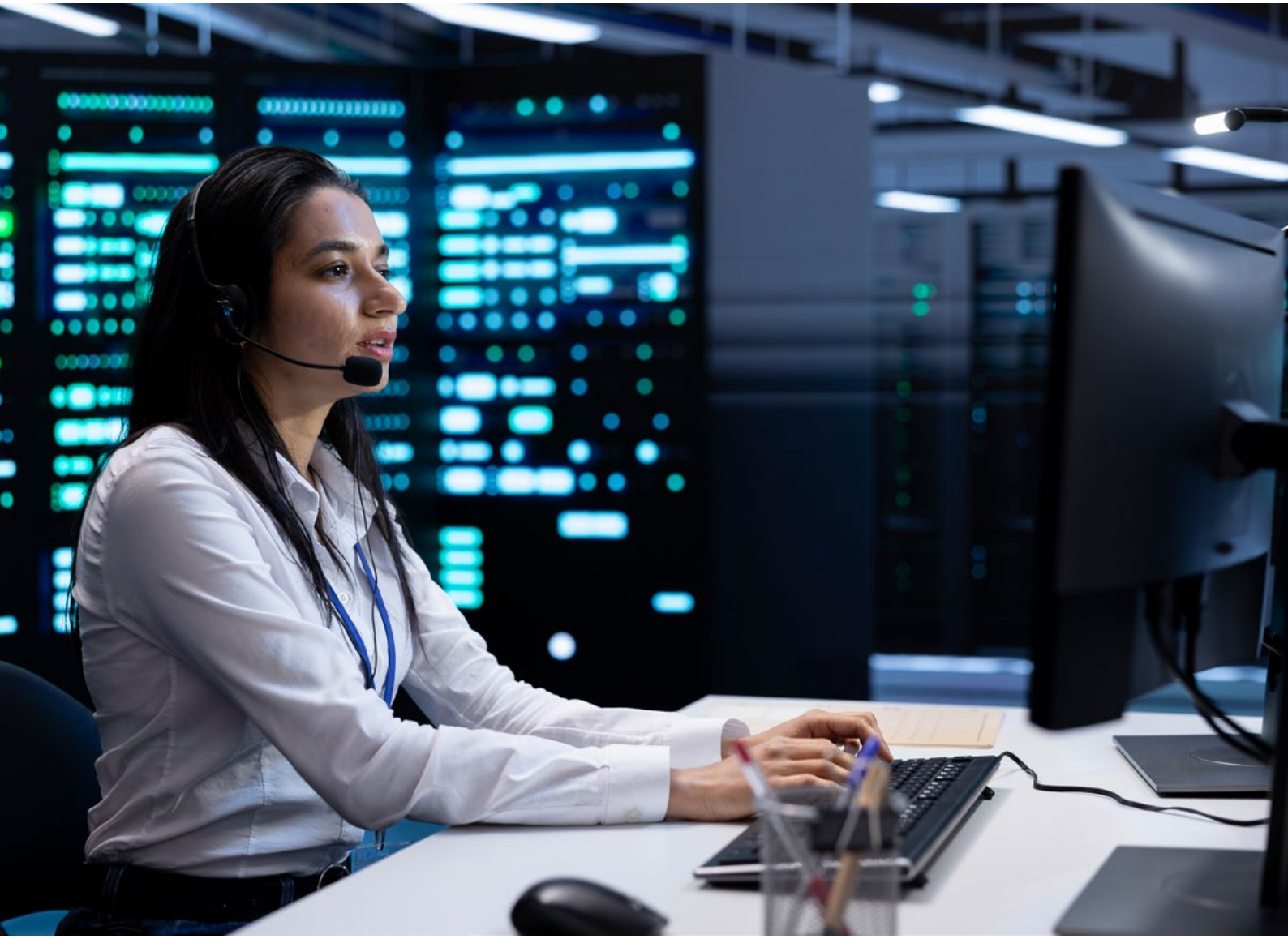
Operator and partner	Type of security	Description
e& and Mavenir (UAE)	AI-powered fraud protection (voice network security)	The operator has partnered with Mavenir to deploy an AI-powered spam, scam and fraud protection solution across its voice network using Mavenir's CallShield platform. The solution leverages AI/ML to detect anomalies and block threats in real time, enhancing the operator's voice core network security and safeguarding subscribers from fraudulent activities.
Ooredoo and Qatar Airways (Qatar)	AI, cloud and cybersecurity integration	Ooredoo has partnered with Qatar Airways to enhance AI, cloud and cybersecurity capabilities in Qatar. The collaboration will facilitate the creation of a national AI hub, delivering state-of-the-art infrastructure, advanced tools and robust data-security frameworks.
Tunisie Telecom and Microsoft (Tunisia)	AI and cybersecurity infrastructure modernisation	Tunisie Telecom renewed its contract with Microsoft for an additional three years to boost the latest advancements in AI and cybersecurity services. Under the deal, the operator will enhance its IT infrastructure, modernise systems and ensure the security of its information systems, aligning with the company's corporate social responsibility strategy.
Zain and Kaspersky (Kuwait and regional)	Cybersecurity cooperation (incident response and threat intelligence)	Zain and Kasperky have signed a memorandum of understanding (MoU) concerning joint projects using Kaspersky's cybersecurity products, services and training. Projects will encompass incident response, security operations, threat intelligence, proactive monitoring via managed detection and response services, rapid response to cyber incidents, and resilience exercises and simulations.
e& Egypt and BroadNet Technologies (Egypt)	A2P SMS security and AI-based traffic filtering	e& Egypt partnered with BroadNet Technologies to deliver application-to-person (A2P) services through SMS firewall technology. The partnership focuses on using AI/ML to enhance message delivery success by eliminating message leakage while enhancing security. BroadNet's advanced technology offers real-time monitoring, fraud detection and detailed traffic analytics.
Ooredoo and Tech Mahindra (Qatar)	MSS for enterprises	Ooredoo has partnered with Tech Mahindra to enhance its managed security services (MSS) for B2B customers. Since Tech Mahindra took over Ooredoo's MSS platform in April 2024, the partnership has successfully scaled up and managed the cybersecurity needs of business clients.

Source: News articles and company announcements

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, such as 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 the 3rd Generation Partnership Project (3GPP), the European Union Agency for Cybersecurity (ENISA) and the National Institute of Standards and Technology (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.



2.3
Addressing the usage gap

There continue to be significant disparities in connectivity in MENA, both between and within countries. As of 2024, around 310 million individuals in the region subscribed to mobile internet. To improve coverage and network quality, operators are increasingly innovating with satellite connectivity. In recent years, partnerships between satellite providers and telecoms operators have gained momentum, driven by the goal of delivering coverage to areas where mobile networks are limited or non-existent. This is particularly relevant in countries with large rural populations and challenging geographies, such as mountainous regions and deserts, where terrestrial infrastructure deployment remains complex and costly.

However, nearly 340 million people (51% of the population) do not use mobile internet despite having access to it. This persistent usage gap underscores ongoing adoption barriers, including affordability constraints, particularly for smartphones, as well as a lack of digital skills and limited locally available content. Disparities in mobile internet usage closely mirror income patterns: mobile internet adoption in high-income countries of MENA such as the GCC states stands at 71%, compared to only 43% in low- and middle-income countries across the region.[10]

10. The State of Mobile Internet Connectivity 2025: Trends in Mobile Internet Connectivity, GSMA, 2025

Smartphone adoption and trends

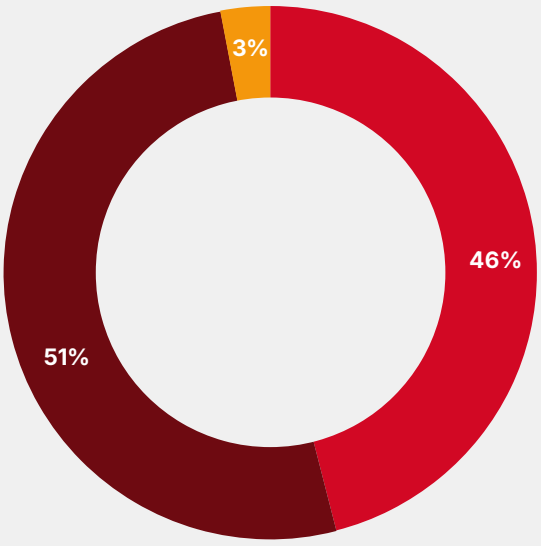
Smartphone access and ownership remain central to reducing the usage gap. According to GSMA Intelligence, the median cost of an entry-level smartphone in MENA is equivalent to 18% of monthly GDP per capita, rising to 44% for the poorest 20%, a price point that discourages many potential users from owning a new phone or from upgrading their smartphone. To address this, operators are building partnerships across MENA to introduce instalment plans, offering refurbished device schemes and financing options, such as the below examples:

- **Orange Middle East & Africa** expanded its 'Re' circular economy programme in 2024. Under the scheme it collected 284,000 used phones across five markets, including Egypt and Jordan, for refurbishment and resale at lower prices. The initiative focuses on collection, repair, refurbishment and recycling to lower smartphone costs and cut electronic waste.[11]
- **Zain KSA** and **Salam Mobile** extended their strategic partnership through to 2030 to enhance digital inclusion and expand service availability. By leveraging Zain KSA's 5G infrastructure and hosting capabilities, the collaboration supports Salam Mobile's ambition to improve and expand mobile services across Saudi Arabia, aligning with Saudi Arabia's Vision 2030.[12]

Figure 10

MENA: mobile internet connectivity, 2024

Percentage of population

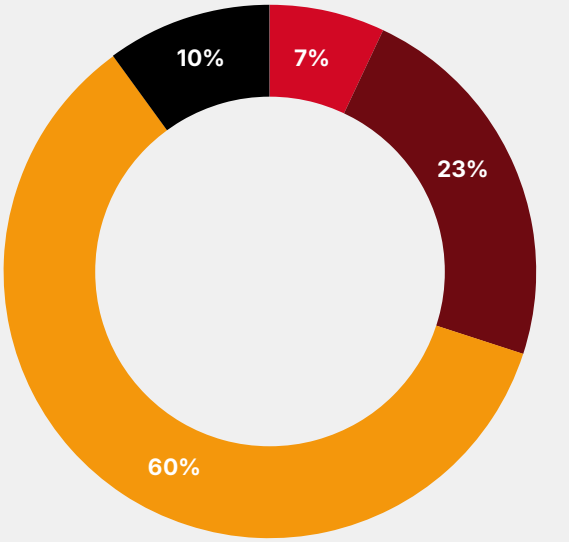


Source: GSMA Intelligence

11. "Orange Collected 284,000 Used Phones in Africa and Middle East in 2024", We Are Tech Africa, July 2025
12. "Enhancing its services via the mobile virtual network (MVNO)", Zain, October 2024

Figure 11

MENA: share of devices used by mobile internet subscribers, 2024



Source: GSMA Intelligence

Transitioning users from 3G to 4G and, increasingly, 5G offers significant socioeconomic benefits

The transition to 4G and 5G smartphones

Among mobile internet users in MENA, 4G smartphones dominate, reflecting strong network rollout and consumer migration toward higher-speed connections. However, 30% of users continue to rely on 3G or feature phones, underscoring the affordability and awareness barriers that hinder digital progression. Transitioning users from 3G to 4G and, increasingly, 5G offers significant socioeconomic benefits. 4G connectivity enhances access to services such as education, e-commerce and digital financial services, while 5G presents a transformative opportunity for industrial digitalisation, smart cities and public services, particularly in the GCC states that are leading early deployment.

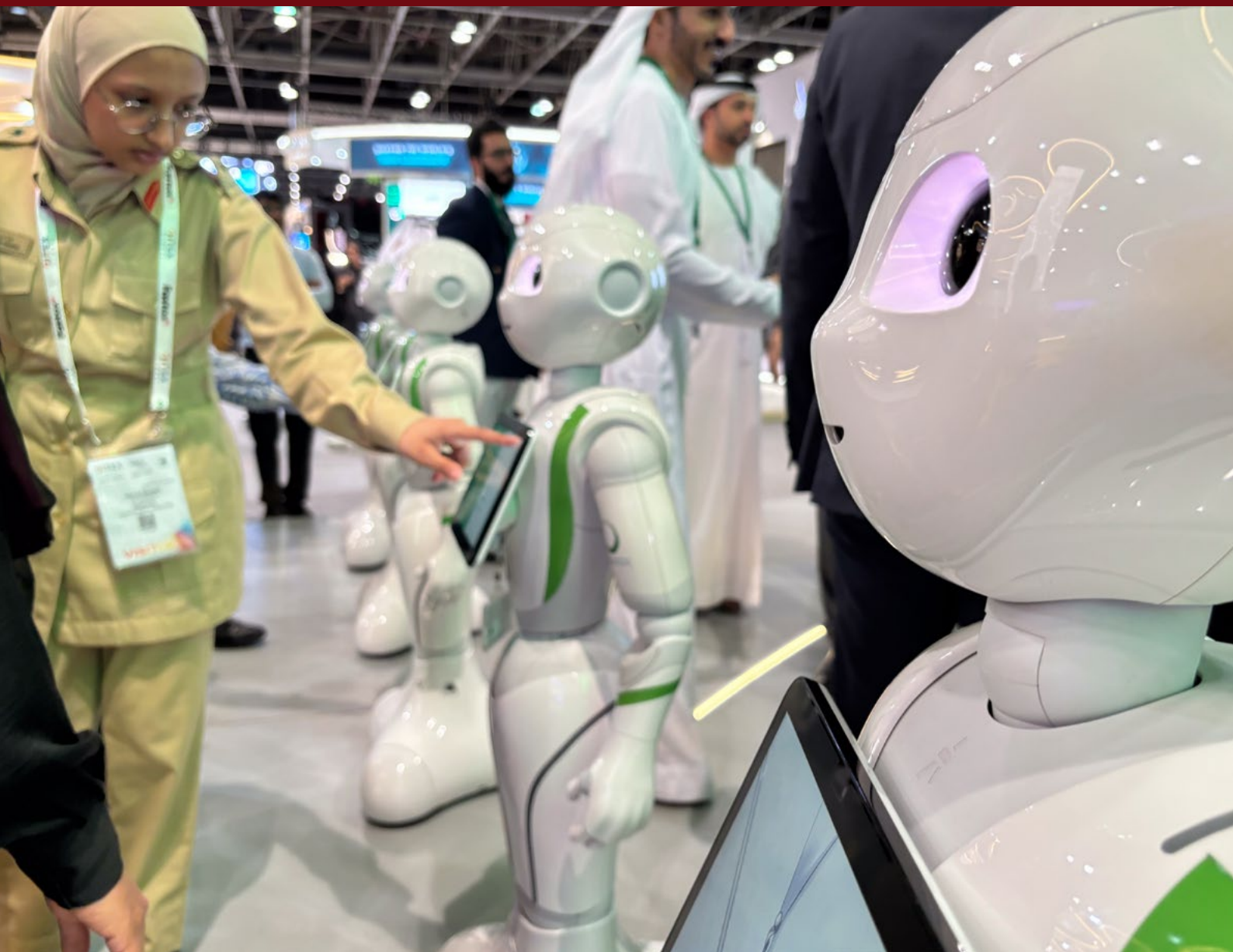
Operators and device vendors are collaborating to accelerate the transition to 4G and 5G. For instance, at MWC Barcelona 2025, Turkcell announced a partnership with Samsung to boost the adoption of 5G-compatible smartphones. The collaboration includes the delivery of 100,000 5G smartphones produced exclusively for the operator, preloaded with its digital applications. Both companies will also collaborate on R&D and testing initiatives to advance 5G deployment.

By 2030, most MENA countries are projected to have initiated at least partial 2G/3G network closures, with complete phase-outs expected among the GCC states, according to GSMA Intelligence data. For instance, Qatar's telecoms regulator has set operators a deadline of December 2025 to retire 3G services. In addition, the regulator has banned the import of handsets unable to support newer-generation mobile networks, to accelerate the migration of 3G to 4G/5G.

As MENA economies implement digital transformation strategies, supporting the transition to 4G and 5G networks will be important. In this context, 4G and 5G adoption is considered a necessary step for broader participation in digital growth.

03

Mobile industry impact



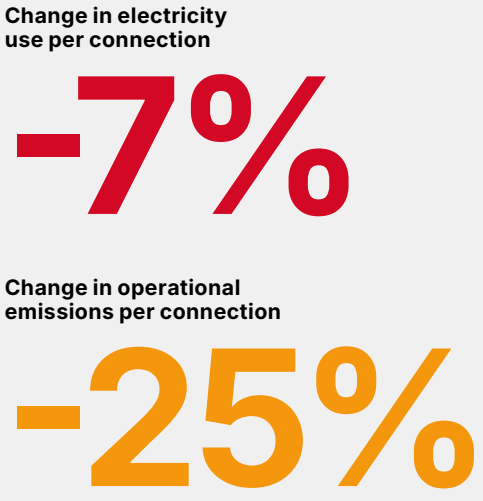
The mobile industry has been instrumental in addressing societal challenges by supporting initiatives to reduce carbon emissions and enabling the creation of solutions that enhance access and utilisation of essential services. Mobile operators in the MENA region are also participating in such projects, in addition to collaborating with governments and industry stakeholders to broaden connectivity for vulnerable groups and the wider public. The industry also contributes to digital transformation efforts and helps improve accessibility to essential services, including healthcare in remote areas and in challenging settings including climate-affected areas and in conflict zones.

3.1
Reducing climate emissions

Operators in MENA have made significant progress on climate action. Nearly half of operators (by share of connections) disclosed data to the CDP in 2024 and 42% have validated near-term science-based targets (SBTs).[13] Between 2019 and 2023, the operational emissions per connection fell by 25% in the region, while electricity use per connection dropped 7%. Turkcell had the largest reduction in emissions among operators in the region, primarily due to their renewable energy purchases.[13]

Figure 12

Change in electricity use and operational emissions in MENA, 2019–2023



Source: GSMA Mobile Net Zero report 2025

Renewable energy purchases in MENA increased strongly between 2019 and 2023, rising from less than 1% of electricity use to 22% for operators disclosing to the CDP. There is strong potential in the region to further scale up on-site solar generation. Scope 1 emissions account for a relatively high share (20%) of operational emissions in MENA compared with most other regions, partly because of a reliance on on-site diesel generators. With excellent solar resources across the region, operators are encouraged to install on-site solar and batteries to reduce Scope 1 emissions.

Recent examples of operator partnerships and government initiatives driving the use of renewables in MENA include the following:

- **e&'s solution with renewable energy:** e& partnered with ZTE for renewable energy innovation to support the operator's carbon-neutrality goals and sustainable digital transformation. In addition, e& and ZTE plan to co-develop solar and energy storage systems to enable e&'s transition towards green power applications and sustainable network operations.
- **Ecuador and Israel's energy cooperation agreement:** Ecuador and Israel signed a five-year MoU to enhance cooperation in renewable energy, energy security and technology development. The collaboration aims to support projects related to energy-supply planning and management, as well as promoting clean and renewable energy sources, including the development of technologies for energy generation, distribution, storage and security.

13. Mobile Net Zero 2025, GSMA, 2025

3.2
Improving access to healthcare

Operators in MENA are increasingly using their infrastructure to support humanitarian health interventions, especially in vulnerable communities. Rising needs are being addressed with mobile-health services, collaborations with non-governmental organisations and the use of platforms for early warning and remote care.

Reliable mobile networks enable teleconsultations, data transmission and emergency messaging, all of which are crucial in health crises, particularly in rural areas or conflict zones. Notably, Hormuud Telecom in Somalia joined the GSMA Humanitarian Connectivity Charter in 2024, committing to connectivity support and stronger ties with aid organisations.

Furthermore, operators are supporting digitalisation efforts, expanding healthcare access and improving healthcare service across the region. By utilising digital infrastructure, operators are developing telehealth services, enhancing patient management systems and facilitating more inclusive healthcare experiences. Table 2 outlines recent announcements that demonstrate the growing role of operators in digital health.

Table 2:

Examples of operator initiatives to enhance healthcare in MENA

Initiative	Description
Telecom Egypt and KareXpert launch cloud-based health platform in Egypt	Telecom Egypt has partnered with KareXpert to launch a digital healthcare platform hosted on a secure national cloud. The platform integrates a hospital information management system, electronic medical records and revenue cycle management tools, providing hospitals with a unified view of clinical and administrative data.
e& and Burjeel Holdings to advance telemedicine services in Abu Dhabi	e& and Burjeel Holdings, a healthcare service provider, announced a new collaboration to advance healthcare services. Focusing on the development of a sophisticated cloud-based telemedicine application, the initiative aims to improve patient access to medical services by enabling remote medical care. It represents a transformative approach to healthcare that prioritises accessibility and efficiency across the region.
Vodafone Business' digital healthcare services in Egypt	Vodafone Egypt is supporting nationwide a digital healthcare project that includes digitalising Egypt's university hospitals. In October 2024, Vodafone Business announced its digital solutions are benefiting 314 hospitals and serving more than 6 million people in Egypt. Vodafone Egypt aims to help more than 26 million citizens, around 22% of the population, through its digital healthcare solutions over next few years.[14]

Source: News articles and company announcements

14. "Six Million Patients in Egypt Benefitting from Vodafone Business Digital Healthcare Services", Vodafone, October 2024

04

Mobile industry enablers

4.1
Policies for growth

The importance of harmonised mobile spectrum

Spectrum harmonisation is essential for successful mobile networks. As spectrum is a scarce resource, ensuring the timely availability of prime bands should be a priority. Mid-bands (1–8 GHz) deliver city-wide capacity, and sufficient capacity is important for minimising network densification, keeping down both costs and carbon emissions. The 3.5 GHz band represents the birthplace of 5G. Reusing 4G bands and extending the 3.5 GHz range are important steps as countries look to expand mid-band capacity, but adding new bands (such as the 6 GHz band) is also important.

Decisions at the World Radiocommunication Conference 2023 (WRC-23) are having a major impact on the future of mid-band spectrum. Final harmonisation of the 3.5 GHz band (3.3–3.8 GHz) – the pioneer 5G band – was achieved across Europe, the Middle East and Africa (EMEA) and the Americas. This step is allowing more countries to take advantage of economies of scale in the mobile ecosystem and benefit from higher speeds provided by wide spectrum channels in this range.

Countries now representing over 80% of the global population recognise the upper 6 GHz (6.425–7.125 GHz) band's potential to unlock high-capacity, city-wide 5G and future technologies. The identification brings together billions of people into a harmonised 6 GHz mobile footprint. It also serves as a critical developmental trigger for manufacturers of the 6 GHz equipment ecosystem.

Discussions about the future of 6 GHz should focus on maximising its value and balancing different uses. The outlook for the 6 GHz IMT ecosystem is robust and there are also no technical barriers to developing and commercialising IMT solutions. Trials by mobile operators around the world are underscoring this.

More low-band spectrum (below 1 GHz), which supports wide coverage in rural areas, is important for future expansion and advancing digital equality. Adding 600 MHz to the low-band portfolio can boost economic development and drive speeds in remote locations, lowering the digital divide between urban and rural areas. Some pioneering countries have started the development of 600 MHz, and following WRC-23 there is an opportunity for the MENA region to lead this development.

By 2030, an average of 5 GHz of high-band spectrum (mmWave) per market will also be needed to satisfy demand for different 5G use cases, including enhanced mobile broadband (eMBB), FWA and enterprise networks.

Spectrum licensing priorities

Spectrum licensing is important for mobile broadband development. The longer the duration of a licence, the greater the certainty for operators and investors to commit to large, long-term network projects. The assumption of licence renewal, or the use of indefinite licence terms, can also encourage investment. A decision not to automatically renew a licence should only be made where there is a reasonable prospect that the benefits from reassigning spectrum would exceed the costs.

For licences approaching the end of their current terms, timely renewal decisions (ideally three to five years in advance of licence expiry) would help facilitate ongoing network investments and enable planning that ensures service continuity for end users. Any subsequent fees associated with licensing renewals should not prevent reasonable returns being earned on risky investments, as this discourages technological innovation.

Fair spectrum prices

Studies have demonstrated that higher spectrum prices can slow the rollout of next-generation mobile networks and reduce the network quality experienced by consumers.[15] They can also be associated with higher retail prices in developing countries. Best practice in this area shows that regulators should aim to:

- assign spectrum to users who will be able to extract the most value from this scarce and finite resource for the benefit of society
- set reserve prices conservatively to allow the market to determine a fair price and to reduce the risk of leaving spectrum unassigned
- limit ongoing attempts to recover the cost of spectrum management after auctions.

To accelerate 5G network investment, short-term monetary gains from spectrum awards should no longer be a measure of success. Policymakers may want to consider shifts in award designs to reflect wider economic goals, such as assigning spectrum with no upfront fees in return for coverage (as has been the case in Jordan, Qatar, Tunisia and the UAE).

Furthermore, meeting onerous coverage or quality-of-service obligations can be a major driver of high spectrum cost. Spectrum prices should reflect the cost to operators. Alternatively, regulators should unbundle licences from service-level obligations to ensure these are met efficiently.

Technology-neutral spectrum licences

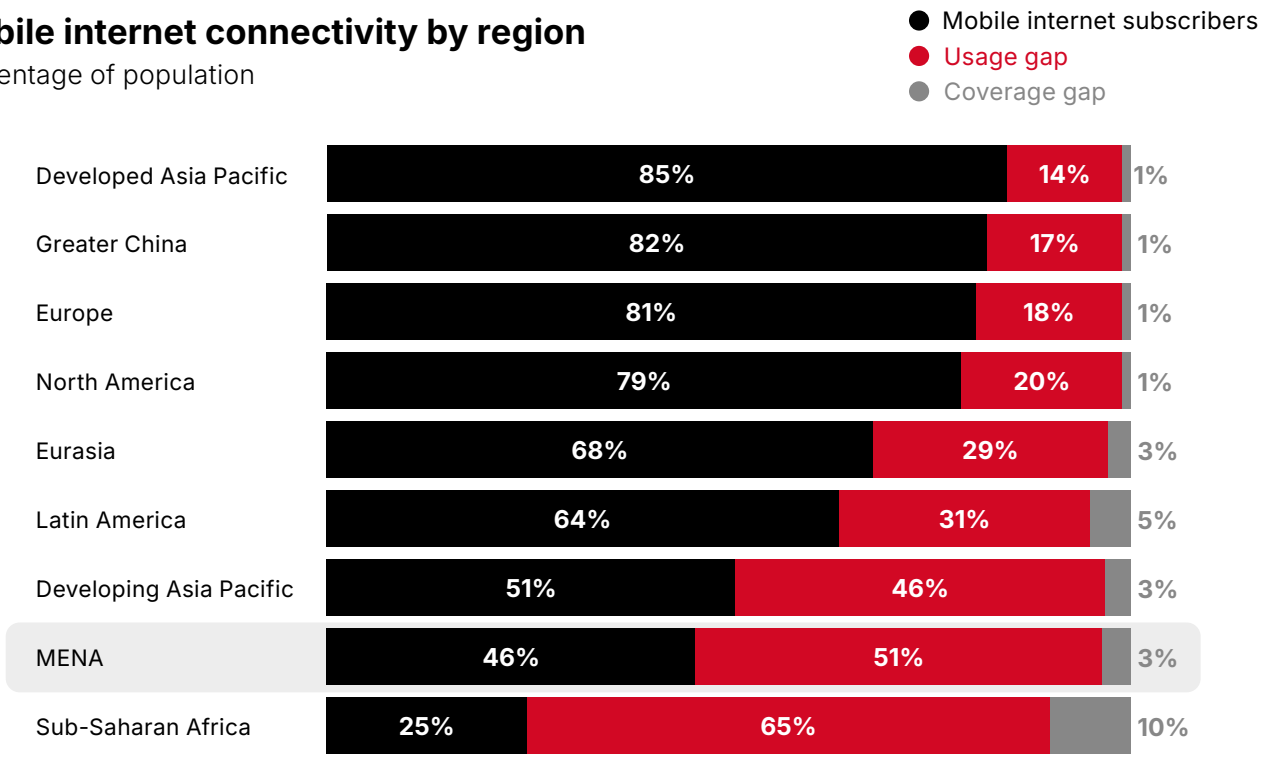
Licensing spectrum on a technology-neutral basis allows mobile operators to efficiently use spectrum for a variety of technologies and services. Mobile operators are then able to 'gracefully refarm' bands so that they are used for several technologies simultaneously, including 4G and 5G. This facilitates the introduction of newer technologies in line with increasing mobile broadband demand while also continuing to support legacy users.

15. Global Spectrum Pricing, GSMA, 2025

Industry data

Mobile internet connectivity by region

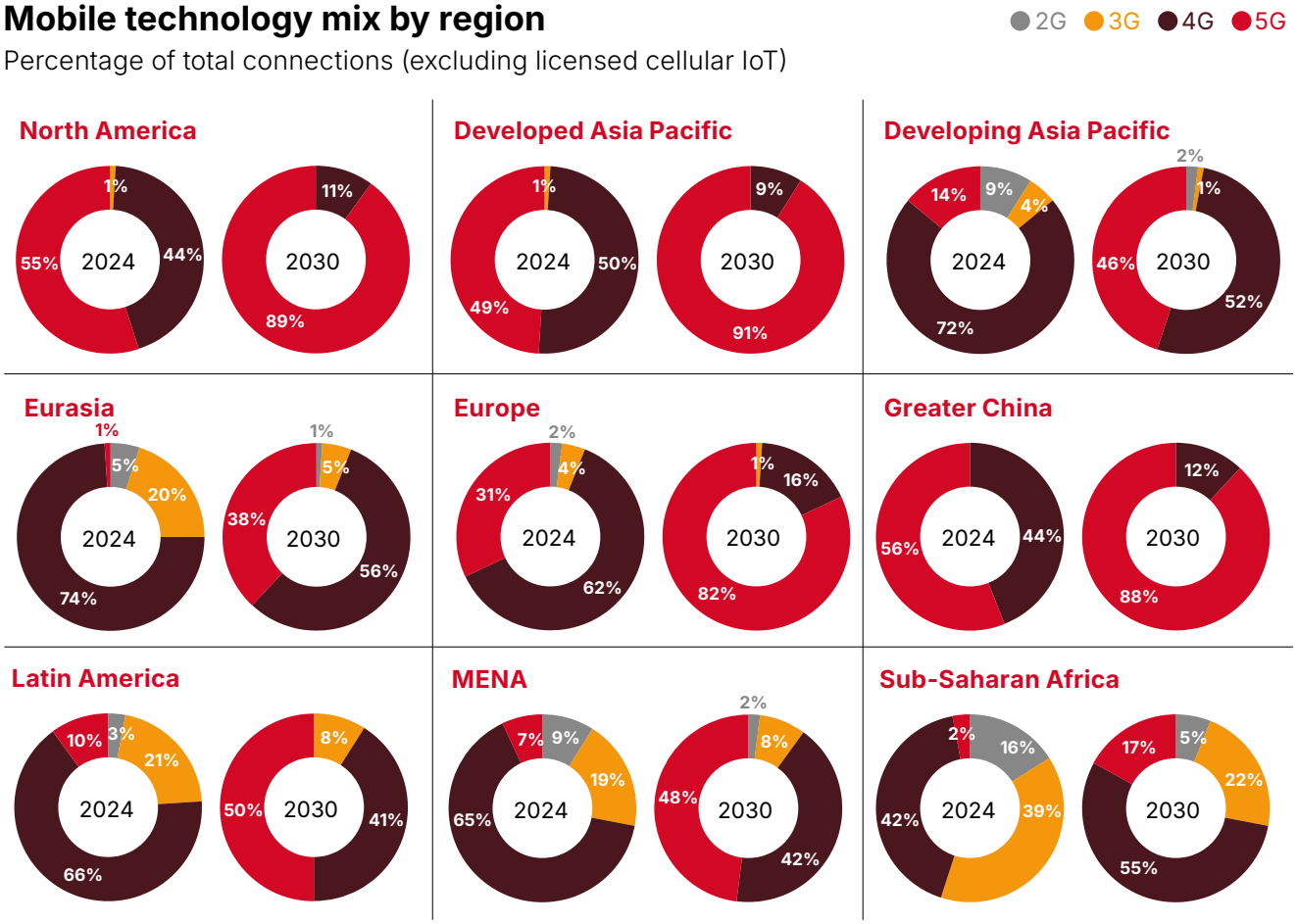
Percentage of population



Data correct to June 2025
Source: GSMA Intelligence

Mobile technology mix by region

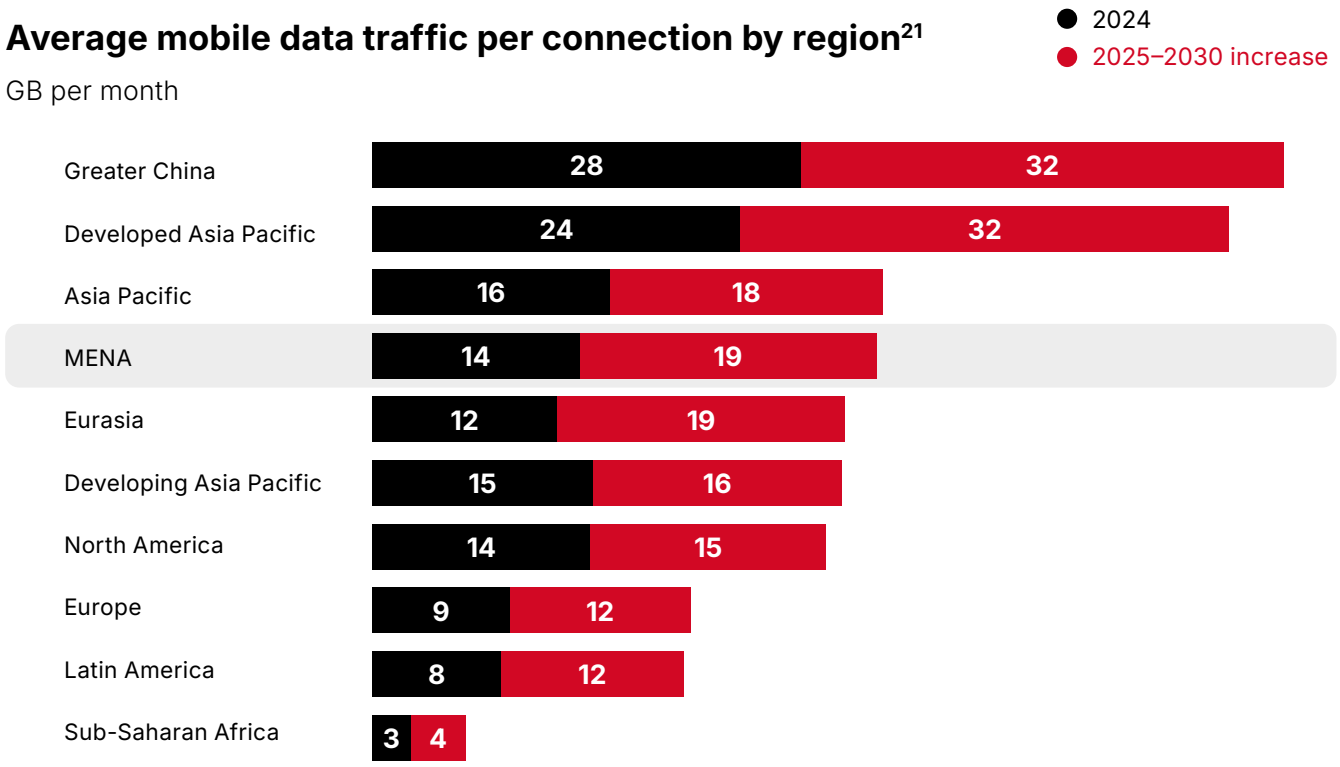
Percentage of total connections (excluding licensed cellular IoT)



Note: Totals may not add up due to rounding.
Data correct to June 2025
Source: GSMA Intelligence

Average mobile data traffic per connection by region[21]

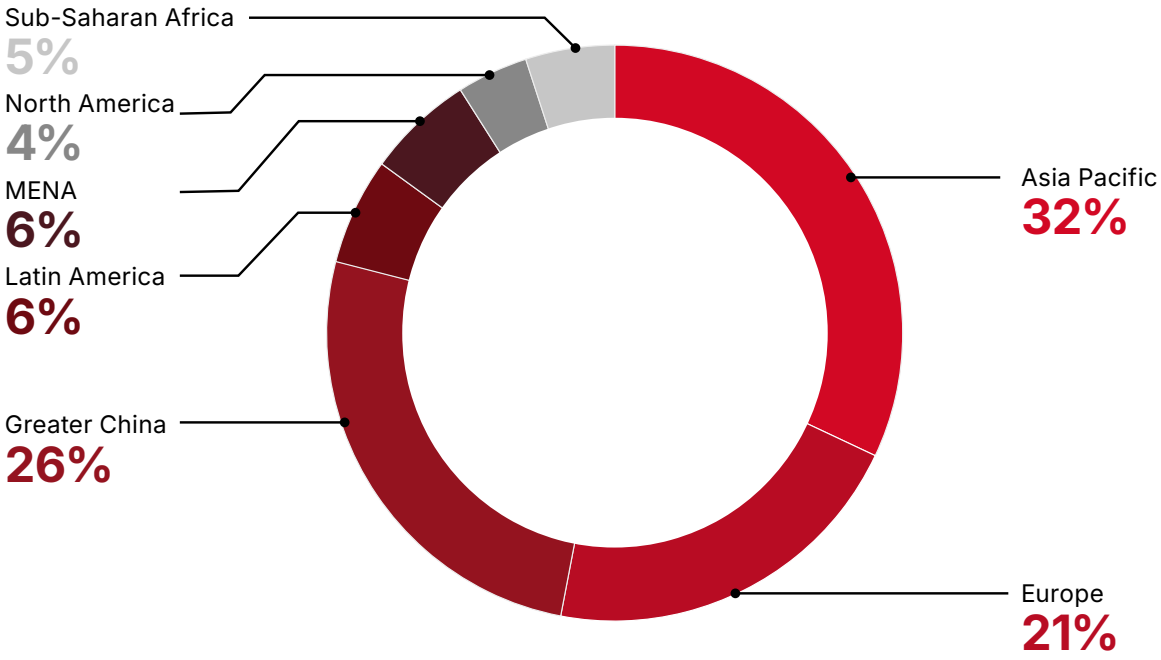
GB per month



Data correct to June 2025
Source: GSMA Intelligence

Participation in the GSMA Open Gateway initiative by region

Percentage of total participating operators based on total mobile connections



Data correct to June 2025
Source: GSMA Intelligence

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

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