The GSMA represents the interests of mobile operators worldwide, uniting more than 750 operators with nearly 400 companies in the broader mobile ecosystem, including handset and device makers, software companies, equipment providers and internet companies, as well as organisations in adjacent industry sectors. The GSMA also produces the industry-leading MWC events held annually in Barcelona, Los Angeles and Shanghai, as well as the Mobile 360 Series of regional conferences.

For more information, please visit the GSMA corporate website at www.gsma.com

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Executive Summary

5G debuts as 4G growth continues apace

In 2019, 4G adoption surpassed 2G to become the second most dominant technology. 4G growth will continue apace in the coming years and is on course to surpass 3G by 2021. 4G adoption is being driven by coverage expansion and operator efforts to migrate 2G and 3G users to 4G networks. However, device affordability remains a concern for many consumers in low-income brackets. By 2025, 4G will account for just over half of total mobile connections, up from around a third in 2019.

Subscriber growth slows, but mobile internet adoption continues to rise rapidly

The MENA region has some of the most penetrated mobile markets in the world. By the end of 2018, nearly half of the 25 countries in the region had unique subscriber penetration rates of 70% or more. For context, the global average at the end of the same period was 66%. In the more mature markets of the region, subscriber growth has slowed to below 2% annually. However, there are still significant growth opportunities in frontier markets in the region, where subscriber penetration rates remain below 50%. On average, the region will record a CAGR of 2.7% between 2018 and 2025.

Over the same period, the number of mobile internet users will grow at a CAGR of 5.4%, taking mobile internet penetration in the region above 50% for the first time. Growth is primarily being driven by the migration of existing 2G subscribers to mobile broadband networks. The majority of new mobile users, especially those in younger demographics, are adopting 3G/4G from the outset. Rising smartphone adoption is having a significant impact on mobile internet uptake and data demand. Total smartphone connections in MENA will exceed 500 million by 2025.
Mobile contributing to economic growth and addressing social challenges

In 2018, mobile technologies and services generated 4.5% of GDP in the MENA region – a contribution that amounted to $191 billion of economic value added. The mobile ecosystem also supported 1 million jobs (directly and indirectly) and made a substantial contribution to the funding of the public sector, with just over $18 billion raised through taxation. By 2023, mobile’s contribution will reach just over $220 billion as countries increasingly benefit from the improvements in productivity and efficiency brought about by the increased take-up of mobile services.

In 2017, the GSMA, in partnership with mobile operators and global humanitarian agencies, launched the Big Data for Social Good (BD4SG) initiative to scale and accelerate the opportunity for mobile big data analytics and help governments, public agencies and NGOs address economic, social and governance challenges. In the MENA region, mobile operators are leveraging big data solutions to address a number of these challenges. Key use cases include monitoring air pollution levels, tracking disease outbreaks, improving urban planning and responding to disasters.

Data privacy and governance take centre stage in an expanding digital ecosystem

For the digital economy to achieve its full potential, consumers must trust the online environment. As of 2019, more than 130 countries have enacted privacy and data protection laws. This number continues to grow, including across the MENA region. The European data protection regime, underpinned by the EU General Data Protection Regulation (GDPR) and its precursor – the EU 1995 Data Protection Directive, influenced the development of analogous legal frameworks around the world, including some countries in the MENA region. However, in most MENA jurisdictions, the protection of privacy and safeguarding of personal data is provided under general provisions of law rather than specific data privacy or data protection laws.

As data protection laws develop across the region, mapping the similarities and differences between the laws will be important for the private sector. Implementing laws based on similar underlying privacy principles can streamline compliance obligations for companies, saving time and resources, while also preventing misuse of personal data and spurring responsible innovation. Identifying common principles is also an important step in building trust between governments. A foundation of trust, built on recognition of shared privacy and governance principles, can help governments ensure that citizens’ data is protected as it travels across borders.
**Mobile Economy MENA**

**Unique mobile subscribers**
- 2018: 382m
- 2025: 459m
  - Penetration rate: 64% (69% CAGR 2018–25)

**Mobile internet users**
- 2018: 238m
- 2025: 344m
  - Penetration rate: 40% (52% CAGR 2018–25)

**SIM connections**
- Excluding licensed cellular IoT
  - 2018: 632m
  - 2025: 722m
  - Penetration rate: 105% (108% CAGR 2018–25)

**Operator revenues and investment**
- Total revenues
  - 2018: $65bn
  - 2025: $76bn
  - Operator capex of $85 billion for the period 2018–2025

**Internet of Things**
- Excluding licensed cellular IoT
  - % of connections: 54% in 2018, 74% in 2025
  - % of connections: 26% in 2018, 52% in 2025

**Operator capex of $85 billion for the period 2018–2025**
## Mobile Economy

### Employment

- **Public funding**: Mobile ecosystem contribution to public funding (before regulatory and spectrum fees)
  - **2018**: $18bn

### Jobs

- **2018**: 390,000 jobs directly supported by the mobile ecosystem
- Plus 650,000 indirect jobs

### Mobile Industry

- **Total connections**: 396m in 2018, 1.1bn in 2025

### Smartphones

- % of connections: 54% in 2018, 74% in 2025

### 4G

- % of connections: 26% in 2018, 52% in 2025

### 5G

- Connections: 45m in 2025

### Internet of Things

- **Total connections**: 396m in 2018, 1.1bn in 2025

### Mobile Industry

- **Contribution to GDP**: $191bn in 2018, $220bn in 2023

### Mobile Internet

- **Penetration Rate (of population)**: 69% in 2018, 105% in 2025
- **CAGR 2018–25**: 5.4%

### Operator capex

- $85 billion for the period 2018–2025

### Internet of Things

- **Smartphones**: 54% in 2018, 74% in 2025
- **5G connections**: 45m in 2025
- **Penetration Rate (of population)**: 40% in 2018

### Public funding

- **Contribution to GDP**: 3.7% in 2018, 4.5% in 2025

### Internet of Things

- **Connected devices**: 396m in 2018, 1.1bn in 2025

### 5G

- % of connections* excluding licensed cellular IoT: 6% in 2025

### 4G

- % of connections: 26% in 2018

*Excluding licensed cellular IoT
Six key mobile markets in the Middle East and North Africa

**GCC Arab States**

- **Technology Mix**: 2018: 74% 3G, 17% 4G, 1% 5G; 2025: 7% 2G, 15% 3G, 74% 4G, 17% 5G
- **Subscriber Penetration**: 2018: 75%, 2025: 81%
- **Smartphone Adoption**: 2018: 77%, 2025: 80%

**North Africa**

- **Technology Mix**: 2018: 52% 3G, 33% 4G, 6% 5G; 2025: 27% 2G, 31% 3G, 44% 4G, 17% 5G
- **Subscriber Penetration**: 2018: 52%, 2025: 75%
- **Smartphone Adoption**: 2018: 68%, 2025: 74%

**Other Arab States**

- **Technology Mix**: 2018: 51% 3G, 22% 4G, 7% 5G; 2025: 27% 2G, 37% 3G, 56% 4G, 7% 5G
- **Subscriber Penetration**: 2018: 39%, 2025: 64%
- **Smartphone Adoption**: 2018: 48%, 2025: 54%
Iran

SMARTPHONE ADOPTION

SUBSCRIBER PENETRATION

TECHNOLOGY MIX*

2018

2025

Iran

SMARTPHONE ADOPTION

SUBSCRIBER PENETRATION

TECHNOLOGY MIX*

2018

2025

Israel

SMARTPHONE ADOPTION

SUBSCRIBER PENETRATION

TECHNOLOGY MIX*

2018

2025

Turkey

SMARTPHONE ADOPTION

SUBSCRIBER PENETRATION

TECHNOLOGY MIX*

2018

2025

* Percentage of total connections
01
The mobile market in numbers
1.1 Unique mobile subscribers will reach 459 million by 2025

More than two thirds of the population in MENA will subscribe to mobile services by 2025

The GCC Arab States lead the region in terms of subscriber penetration (Q2 2019)
1.2 5G remains a long-term play for most, with 4G share increasing

Beyond 2021, 4G will be the dominant technology for the foreseeable future

Percentage of total connections (excluding licensed cellular IoT)

Figure 3  Source: GSMA Intelligence

5G adoption in GCC States will lag previous generations on device availability and network coverage

Percentage of total connections, years from commercial launch

Figure 4  Source: GSMA Intelligence
The majority of 5G launches in MENA are still a few years away, though 5G coverage will rise steadily in the period to 2025.

![Graph showing 5G connections, 5G adoption (% of total connections), and 5G population coverage (%).]

IoT connections will more than double in the period to 2025, boosted by enhanced 5G capabilities.

Connections (million)

<table>
<thead>
<tr>
<th>Year</th>
<th>Consumer</th>
<th>Smart vehicles</th>
<th>Wearables</th>
<th>Smart home</th>
<th>Consumer electronics</th>
<th>Smart city</th>
<th>Smart utilities</th>
<th>Smart retail</th>
<th>Smart buildings</th>
<th>Smart manufacturing</th>
<th>Health</th>
<th>Enterprise others</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>396</td>
<td>10</td>
<td>7</td>
<td>32</td>
<td>147</td>
<td>80</td>
<td>41</td>
<td>90</td>
<td>57</td>
<td>155</td>
<td>15</td>
<td>14</td>
<td>53</td>
</tr>
<tr>
<td>2025</td>
<td>1,098</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

Source: GSMA Intelligence
1.3 Data demand boosted by rising smartphone adoption

Smartphone connections in MENA will exceed 500 million by 2025, driven by take-up of more affordable devices

Percentage of connections (excluding licensed cellular IoT)

![Graph showing percentage of connections in MENA, GCC Arab States, North Africa, and Other Arab States.](image)

Mobile data consumption in MENA will grow rapidly, underpinned by increased smartphone adoption and availability of high-speed networks

**Mobile data traffic**
(GB per subscriber per month)

![Graph showing mobile data traffic growth from 2018 to 2024.](image)
1.4 A modest financial outlook

A return to revenue growth is expected in 2019, following slower subscriber growth and increased political and economic uncertainty

With most 5G launches in MENA not expected until post-2020, 4G will be the main driver of operator capex in the near term

The mobile market in numbers

[Bar chart showing mobile revenue and annual growth from 2018 to 2025]

[Bar chart showing 5G capex, Non-5G capex, and Capex to revenue (%) from 2018 to 2025]
02
Mobile contributing to economic growth and addressing social challenges
2.1 Mobile contribution to economic growth

In 2018, mobile technologies and services generated 4.5% of GDP in the MENA region - a contribution that amounted to $191 billion of economic value added. The mobile ecosystem also supported 1 million jobs (directly and indirectly) and made a substantial contribution to the funding of the public sector, with just over $18 billion raised through taxation. By 2023, mobile's contribution will reach just over $220 billion as countries increasingly benefit from the improvements in productivity and efficiency brought about by the increased take-up of mobile services.

The mobile ecosystem contributed $191 billion to the MENA region’s economy

$ billion, % of GDP 2018

Note: totals may not add up due to rounding.
The direct economic contribution is mainly driven by mobile operators

$ billion, % GDP 2018

The mobile ecosystem directly employs 390,000 people in MENA and supports another 650,000 jobs indirectly in other parts of the economy

Employment impact (jobs, thousands)

More than half of the 390,000 jobs created directly by the mobile ecosystem are created by mobile operators and distribution & retail.
In 2018, the mobile ecosystem contributed just over $18 billion to the funding of the public sector through consumer and operator taxes

$ billion

The economic contribution of mobile in the MENA region will increase to just over $220 billion in 2023, mainly driven by productivity gains

$ billion, % GDP

Note: totals may not add up due to rounding.
5G will contribute $52 billion to the MENA economy over the next 15 years

5G contribution to GDP over the next 15 years, by sector (%)

- Agriculture & Mining: 17%
- Manufacturing & Utilities: 4%
- ICT & Trade: 24%
- Professional & Financial Services: 15%
- Public Services: 40%

Mobile remains a primary tool for digital inclusion in MENA, particularly in non-GCC frontier markets where access to alternative forms of internet connectivity, such as fixed broadband, remains limited. By the end of 2018, there were approximately 240 million active mobile internet users in the region, representing 40% of the population, compared to 29% four years earlier. Growth in the number of mobile internet users in recent years has mainly been driven by the rollout of mobile broadband networks in previously underserved areas. 3G and 4G networks now cover 89% and 62% of the region’s population, respectively, with operators committing to further investment in mobile broadband coverage expansion in the coming years.

Another key factor driving mobile internet adoption is the increasing affordability of mobile data services. The average monthly cost of data as a percentage of GDP has reduced by half to just 1% over the last two years, while the average cost of entry-level internet-enabled devices as a percentage of GDP has also reduced over the same period to 17.1% in 2018.1 The MENA region has also seen an increase in locally relevant online content, from e-government services to media and entertainment. Since 2014, mobile social media penetration in the region has more than doubled to 44%.2 Over the same period, the region’s e-government online service index, according to the UN, increased by 6 percentage points to 56% in 2018.

1. The State of Mobile Internet Connectivity, GSMA, 2019
2. GSMA Intelligence calculations based on data from Datareportal
Increase in aggregate score in the latest Mobile Connectivity Index underscores improvement in infrastructure, affordability and content in MENA

Score out of 100

<table>
<thead>
<tr>
<th>Category</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aggregate</td>
<td>56.2</td>
<td>57.8</td>
</tr>
<tr>
<td>Infrastructure</td>
<td>55.3</td>
<td>58.1</td>
</tr>
<tr>
<td>Affordability</td>
<td>54.4</td>
<td>56.0</td>
</tr>
<tr>
<td>Consumer Readiness</td>
<td>59.3</td>
<td>59.5</td>
</tr>
<tr>
<td>Content and Services</td>
<td>57.6</td>
<td>59.6</td>
</tr>
</tbody>
</table>

The GSMA Mobile Connectivity Index measures the performance of 165 countries – representing 99% of the global population – against key enablers of mobile internet adoption: infrastructure, affordability, consumer readiness, and content and services.

2.3 Mobile big data helping to address key social challenges

The world faces a host of environmental, social and governance challenges. National governments and their global partners, including the United Nations agencies, aim to address these challenges through local and cross-border initiatives, but their efforts are often constrained by a lack of sufficient relevant data to support timely and efficient solutions.

Mobile operators are uniquely placed to help governments and their partners respond effectively and efficiently to these challenges. This is achieved by harnessing invaluable and actionable insights from aggregated, anonymised and analysed data on people’s geographic locations, calling behaviour and movement patterns generated on mobile networks.

In 2017, the GSMA, in partnership with mobile operators and global humanitarian agencies, launched the Big Data for Social Good (BD4SG) initiative to scale and accelerate the opportunity for mobile big data analytics and help governments, public agencies and NGOs address a range of challenges. Several trials have been run around the world, successfully combining aggregated and anonymised operator data with third-party data and advanced analytics to provide powerful insights and solutions, while protecting and respecting individuals’ privacy.

Key use cases include monitoring air pollution levels, tracking disease outbreaks, improving urban planning and responding to disasters. For example, Turkcell has developed a powerful real-time analytics tool, Galata, to assist the government in responding to natural disasters.
Turkey is particularly vulnerable to natural disasters due to its location and geological structure. More than 95% of the country lies on one of the most active earthquake and landslide regions in the world. In addition, Turkey’s largest city, Istanbul, is located on the North Anatolian Fault. Seismologists have already predicted that the area will be affected by a worst-case scenario earthquake of 7.6 magnitude in the coming decades.4

Following the Marmara Earthquake in 1999, the government of Turkey invested significant resources into strengthening their disaster risk assessment and response capabilities. In 2009, the Disaster and Emergency Management Presidency (AFAD) was established with the aim of transforming the country’s disaster risk management and co-ordination of emergency services. The Turkey National Disaster Response Plan was launched in 2015, outlining the roles and responsibilities for every party involved in disaster and emergency response situations, to determine the basic principles in all three phases: before, during and after a disaster.

4. See “A disaster waiting to happen - why a huge earthquake near Istanbul seems inevitable”, theguardian.com, December 2006
The mobile big data solution

Turkcell has played a pivotal role in supporting the government’s aims for the benefit of society. Beginning with improving the resilience of its network and supporting business infrastructure, it has expanded its efforts in the development of a real-time analytics platform, Galata. This uses Turkcell’s mobile signalling and network metadata from connecting users to build a pseudonymised location platform, which the Galata data analytics team transform into anonymised analytical insights for government disaster response teams. In the event of a disaster, authorised members of the government’s emergency response team and aid institutions can request information from security-approved members of Turkcell’s specialised operations team. The team, who are responsible for round-the-clock monitoring and maintenance, are able to provide analytical outputs in less than an hour, following a process of internal security checks.

Impact and next steps

The Galata application demonstrates how mobile operators and the government are able to work together to deliver a life-saving product.

• The round-the-clock analytical insights drawn from mobile big data enable the government to make pre-emptive decisions, allowing them to mitigate further risk.

• Public emergency response and aid institutions are able to make better-informed decisions regarding the allocation of resources, ensuring civilians receive the right support when and where they need it.

• In the midst of a natural disaster, timing is crucial; mobile data-driven insights enable rapid decision making and response, expanding the rescue and resource allocation options available to civilians during critical moments.

Following the successful implementation of Galata, Turkcell is developing internal systems that will enable it to integrate roaming data into the application and widen its geographical coverage to other countries. This will enable Turkcell to detect where city customers who have subscribed to the application are located, when travelling abroad. To achieve this, Turkcell is exploring how it can work with other network providers to continue to protect their consenting customers while they travel abroad.
Key trends shaping the digital landscape
The digital ecosystem in MENA is evolving rapidly, underpinned by the increasing number of connected devices, the emergence of new digital services, and increasing interconnectivity of digital platforms. Here we highlight three trends that will shape the region’s digital ecosystem in the coming years.

### 3.1 5G

The transition to 5G is now underway in MENA. As of October 2019, 10 operators across five markets – Bahrain, Kuwait, Qatar, Saudi Arabia and the UAE – had launched commercial 5G services. Initial use cases have centred on enhancing mobile broadband connectivity for individual consumers and providing FWA (fixed wireless access) connectivity for households and businesses as an alternative to fibre.

The coming years will see operators increase efforts to develop new and commercially viable use cases to extract more value from the key capabilities of the technology. There is already a growing emphasis on immersive services, such as cloud gaming, AR and VR, among operators in the region. In April 2019, Etisalat launched a cloud gaming service, which could benefit from 5G capabilities such as low latency and high-speed connectivity. In July 2019, Telecom Egypt partnered with Ericsson to trial AR, VR and MR on a 5G network, delivering an immersive experience for football fans.

5G will play a pivotal role in the development of smart cities. Governments across the MENA region have launched several smart city initiatives to improve the quality of life in fast growing urban areas as well as address environmental concerns and maximise the utilisation of scarce resources. From purpose-built smart city projects, such as the Neom mega-city in Saudi Arabia and Egypt’s new capital city, to existing cities, such as Dubai, Muscat and Istanbul, 5G is expected to enable the application of AI, massive IoT and other transformative technologies in key verticals and public service delivery.

**Key 5G capabilities will enable a variety of enterprise and consumer services**

![Key trends shaping the digital landscape](Image)
The 2020s will see 5G-related activities grow in non-GCC markets, with Turkey, Egypt and Morocco among countries where 5G trials have been announced. In Turkey, rapid 4G adoption, rising data usage and fibre densification point to increasing market readiness for the transition to 5G. In February 2019, the Information and Communication Technologies Authority (BTK) of Turkey approved a bid by Turkcell, Vodafone and TT Mobil to conduct 5G trials in different frequency bands in the country’s three biggest cities – Istanbul, Izmir and Ankara. Turkey’s 5GTR forum, which brings together operators, public institutions and other stakeholders, demonstrates a collaborative approach to the transition to 5G.

Saudi Arabia: government support for 5G development

Government support is crucial to the development of 5G in MENA, particularly in making spectrum available with the right conditions to support infrastructure deployment. Saudi Arabia stands out in efforts to support the development of the next generation of mobile services, including 5G, through the allocation of spectrum in a variety of bands to support multiple use cases, to improve the quality of services offered and stimulate investment in network infrastructure.

In early 2018, the government established the National 5G Task Force to support the development of 5G and prepare the necessary administrative foundations. Measures include increased regulatory certainty, particularly through the Unified Licence scheme, and the timely availability of 5G spectrum. In February 2019, Saudi Arabia’s Ministry for Communications and Information Technology (MCIT) released an additional 400 MHz in mid-band (3.5 GHz) spectrum, taking the combined spectrum available for mobile services, including 5G, to around 1,000 MHz.

3.2 Evolving payments landscape

Cash is still the dominant form of payment across MENA, despite nearly 60% of adults owning a bank account. But this is changing rapidly, helped by growing innovation and investment in digital payment platforms as well as government policies to stimulate cashless payments. For example, Saudi Arabia has set an e-payment target of 70% by 2030, from just 18% in 2016, as part of the government’s Vision 2030 reform plan. In Egypt, the government signed a law in April 2019 mandating the use of cashless payment by public and private entities.

Mobile platforms will play a central role in the region’s emerging cashless payment landscape. Global mobile payment solution providers such as Apple, Google and Samsung, and fintech start-ups such as Beam, have entered the fray in recent years, focusing on the more sophisticated digital payments markets in GCC countries. In non-GCC countries, mobile money services have been growing moderately over the last five years. By the end of 2018, there were 19 mobile money services, enabling nearly 20 million 90-day active customer accounts in the region.

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5. World Bank Global Findex, 2017
6. See “Saudi Arabia aims to achieve e-payment target of 70%”, proven-sa.com, February 2019
While airtime top-ups continue to dominate transaction volume, transaction value shows a more complex and diversified ecosystem, with bulk payments and international remittances accounting for a growing share. This trend reflects the move by mobile money providers to digitise a range of payments. Results from the GSMA’s 2018 Global Adoption Survey revealed the following among those mobile money providers that participated in the survey:

- 50% were connected to more than 10 companies for bill payments
- 50% were planning to launch a credit, savings or insurance product in the next 12 months
- 71% have either launched or are planning to launch international money transfer services in the next 12 months

Meanwhile, mobile money is having a significant social impact in the region through services that target financially excluded population groups. Mobile money provides a convenient and secure way for migrant workers to send and receive remittances, and is increasingly being used to digitise cash and voucher assistance to refugees and displaced persons:

- In Qatar, Ooredoo partnered with MoneyGram in 2017 to allow mobile money users (largely migrant workers) to send money across Asia and Africa. This has provided migrant workers with a cheap, convenient and secure way to send and receive remittances to/from their families back home, primarily to Bangladesh, India, Kenya and the Philippines.
- In May 2019, Dubai-based fintech service Now Money was launched to target low-income migrant workers earning up to $1,360 per month. There are around 8 million migrant workers in the UAE.
- In Jordan, Zain Jordan has partnered with UNHCR, Refunite and Red Crescent to deliver humanitarian aid via mobile money. Similarly, Mahfazti in Jordan has collaborated with Vericash to deliver 90% of UNHCR cash assistance to Syrian refugees in Jordan.
- In Iraq, UNHCR has partnered with Zain Cash to support 120,000 families and 30,000 refugees through cash assistance via mobile money. Iris Guard has also teamed up to ease the registration and cash-out process for refugees using iris-based biometrics.

Distributed ledger technologies (DLTs) – including the most prominent example, blockchain – originated around the same time as bitcoin in the late 2000s, but are now being explored for financial, enterprise and public administration applications around the world. The MENA region is no different, with the growing application of DLTs across verticals and public sector services.

In October 2018, the UAE government worked with IBM to launch a government-backed blockchain platform. The platform enables solutions across different government departments, including transport and infrastructure, energy, health and education, to deliver innovative services to people and businesses. Government agencies can now execute transactions with banks and companies in real time through the Dubai Pay Blockchain Settlement and Reconciliation System avoiding manual, cumbersome processes that usually lasted up to 45 days.

Meanwhile, Dubai aims to become the ‘first paperless state’ by digitising documents and transactions. Blockchain-related technologies are being used to deliver efficiency savings that can reach up to $1.17 billion annually in document processing costs alone.8

In September 2018, the government of Turkey announced plans to establish a national blockchain infrastructure to use DLTs in public administration, with potential use cases including land registration, academic certificates and customs.

In Tunisia, Banque Centrale Tunisienne (BCT) intends to develop a blockchain-based, central bank digital currency which could combat money-laundering, reduce the country’s grey economy, and empower women and vulnerable segments of the population.9 Meanwhile, the Central Bank of Egypt (CBE) has announced that it is working on a draft law for crypto-related activities.10

The GCC countries are global leaders in the international money transfer market due to the large expatriate population across the region. Saudi Arabia and the UAE are the world’s largest outbound remittance markets; the UAE Central Bank reported that remittances from the country grew 3% in 2018 to total $46 billion.11 Blockchain has emerged as a key technology to facilitate international remittances. In February 2018, UAE-based payments and foreign exchange company Finablr said its brands UAE Exchange and Unimoni will partner with US start-up Ripple to offer cross-border remittances to Thailand via blockchain. In December 2018, the National Bank of Kuwait also announced a partnership with Ripple to launch a blockchain-based, cross-border remittance solution.

Mobile operators across the region are increasingly applying blockchain to a variety of use cases:

• In June 2019, Etisalat Digital announced it had signed up eight major banks in the UAE to develop the new blockchain-based trade finance solution, dubbed the UAE Trade Connect. This nationwide trade finance platform could help banks address the risks of double financing and fraud.

• In February 2019, Turkcell introduced a blockchain-based service for ID management to authorise international roaming and donations.

• In January 2019, Du announced plans to build the UAE’s first ‘patient safety’ blockchain solution in collaboration with Dhonor HealthTech, designed to ensure security and transparency of patient data.

8. See https://www.smartdubai.ae/initiatives/blockchain
9. See “Tunisia Aims to be A Pioneer in Blockchain Technology”, CoinJournal, April 2019
11. See “Blockchain poised to revolutionise the GCC’s remittance market”, gulfbusiness.com, September 2019
04 Effective regulation for digital progress
For the digital economy to achieve its full potential, consumers must trust the online environment. The collection of personal data by apps and devices can be a catalyst for innovation, enabling service providers to open up new possibilities for individuals and society; for example, better products, smarter cities, and services that improve health and disaster response systems. At the same time, large-scale data breaches have raised the global profile of data protection and privacy issues. It has therefore become imperative for governments, regulators and the wider digital ecosystem to promote transparency and choice and to encourage responsible privacy governance practices.

As of 2019, over 130 countries have enacted privacy and data protection laws. This number continues to grow, including across the MENA region. In recognition of the proliferation of privacy laws around the world, the GSMA issued a paper on Smart Data Privacy Laws\(^\text{12}\) to provide a resource for drafting and reviewing rules or legislation.

Many of the principles identified in the Smart Data Privacy Laws report align with characteristics of the European data protection regime, underpinned by the EU General Data Protection Regulation (GDPR). GDPR, and its precursor – the EU 1995 Data Protection Directive – influenced the development of analogous legal frameworks around the world, including some countries in the MENA region. However, in most MENA jurisdictions, the protection of privacy and safeguarding of personal data is provided under general provisions of law rather than specific data privacy or data protection laws.

Data Privacy Frameworks in MENA

In June 2019, the GSMA published a report entitled “Data Privacy Frameworks in MENA: Emerging approaches and common principles”\(^\text{13}\) to provide an understanding of the development of data protection and privacy laws across the MENA region. The objective of the report was to map the relevant laws of 13 specific MENA jurisdictions against certain principles and features of GDPR. The report sheds light on the foundational bases for any specific data privacy and protection laws. The report also identifies elements of other national laws and regulations that produce effects similar to privacy laws – for example, requirements around consent. The report considers the future of these laws in terms of updates, amendments, revisions or repeals, as well as any likely developments in privacy/data protection.

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\(^{12}\) Smart Data Privacy Laws, GSMA, 2019

\(^{13}\) Data Privacy Frameworks in MENA, GSMA, 2019
Some jurisdictions in MENA have passed specific data protection laws, including Bahrain and the UAE Free Zones of the DIFC and ADGM. These laws are based on the EU 1995 Directive. Both the 1995 Directive and GDPR are rooted in the same globally accepted privacy principles. As a result, the data protection laws in Bahrain and the DIFC and ADGM share the same general principles as GDPR.

Other governments in the region are in the process of drafting or enacting data protection laws:

- the Egyptian government is nearing passage of a new data protection law
- Saudi Arabia is in the process of drafting a comprehensive data protection law
- Jordan is finalising a draft law that will soon be sent to parliament
- It is expected that the UAE will also implement a data protection law.14

However, it is not clear whether the laws in Saudi Arabia, Jordan and the UAE will be sector-specific or will cover all organisations, both public and private.

In jurisdictions where there is no specific data protection law, there may be another law with provisions governing the collection and use of personal data. For example, in the UAE, there are several federal laws that contain provisions related to privacy and the protection of personal data, including the Constitution (Federal Law No 1 of 1971), the Cyber Crime Law (Federal Law No 5 of 2012 as amended), the Telecoms Regulations (Federal Law by Decree No 3 of 2003 as amended) and the Consumer Protection Regulations passed pursuant to the Telecoms Regulations.

14. Data Privacy Frameworks in MENA, GSMA, 2019
Jurisdictional overview

<table>
<thead>
<tr>
<th>Country</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bahrain</td>
<td>Aligned with GDPR</td>
</tr>
<tr>
<td></td>
<td>Partially aligned with GDPR</td>
</tr>
<tr>
<td></td>
<td>Not aligned with GDPR</td>
</tr>
<tr>
<td>Egypt</td>
<td>Like many other MENA jurisdictions, Egypt does not currently have a specific data protection law. However, a draft law regulating the freedom of data exchange and data protection has nearly been finalised. A final version of the draft is expected in 2019. The new law purports to establish a Centre for Personal Data Protection that will make and formulate various policies and regulations, and will be tasked with monitoring compliance with, and enforcing the provisions of, the new law.</td>
</tr>
<tr>
<td>Jordan</td>
<td>There is currently no specific data protection law in Jordan. However, a draft data protection bill is currently under consultation. The draft bill appears broadly based on GDPR, incorporating the main concepts of transparency, accuracy, storage limitation and data minimisation. However, the 2018 draft has raised questions about the lack of independence of the Jordanian Privacy Commission, a failure to incorporate international standards and best practices for data protection, and insufficient consideration for modern forms of data processing.</td>
</tr>
<tr>
<td>Kuwait</td>
<td>There is currently no specific data protection law in Kuwait. There are limited provisions in cyber-security and electronic transactions legislation. However, the jurisdiction lags behind other GCC nations. With the focus on cybersecurity, and the efforts of the Communication and Information Technology Regulatory Authority to improve the standards and practices of information security and protect IT infrastructure in Kuwait, it is expected that there will be developments in data protection in the near future.</td>
</tr>
<tr>
<td>Lebanon</td>
<td>Data protection is governed in Lebanon by the E-Transactions and Personal Data Law, introduced in 2004 and updated in 2018. The framework has been criticised for being weak and somewhat outdated by not reflecting the reality of online data and for the substantive provisions including vague and open-ended requirements. Additionally, experts say that the law fails to adequately protect Lebanese citizens’ and residents’ data by putting in place weak safeguards and only granting authority to the executive branch of the Lebanese government. Compared to GDPR, the law is not as detailed or comprehensive, primarily because it fails to provide for the establishment of an independent regulatory body in charge of monitoring personal data.</td>
</tr>
<tr>
<td>Oman</td>
<td>Oman does not currently have a specific privacy or data protection law. However, the Oman Information Technology Authority announced in 2017 that it was developing a data protection law. There is, though, no clear indication of when it will be published. It was reported that if approved and signed into law, it will grant powerful rights to individuals in Oman, enabling them to exercise GDPR-style levels of control over their personal data, including the ability to object to the processing of their personal data and demand access to any personal data about them held by any organisation in Oman.</td>
</tr>
</tbody>
</table>
Qatar
Qatar was the first GCC nation to issue a generally applicable data protection law, which took effect in 2017. Executive regulations further implementing it are expected to be passed in 2019. The law is modelled on and incorporates familiar concepts from other international privacy frameworks, such as the 1995 Directive (and by extension GDPR) and mandates that any party who processes personal data adhere to the principles of transparency, fairness and respect for human dignity. The Ministry of Transport and Communications is responsible for implementing and enforcing the law.

Qatar Financial Centre
The QFC introduced its own Data Protection Regulations in 2005 and established a Data Protection Directorate responsible for implementing and enforcing the law, managing related disputes and applying GDPR standards. The regulations are largely modelled on, and inspired by, the privacy and data protection principles and guidelines contained in the 1995 Directive and the OECD Guidelines on the Protection of Privacy and Transborder Flows of Personal Data.

Saudi Arabia
While Saudi Arabia does not have a specific data protection law, media reports suggest that a new freedom of information and protection of private data law is currently under review. A novel and innovative regulatory framework for cloud computing exists; one of only a few examples of cloud-specific regulatory frameworks around the world. The framework is based on international best practice and public consultation. Saudi Arabia also recently issued Regulations on Electronic Commerce which include some obligations for handling and protecting data.

Turkey
Turkey’s Data Protection Law is predominantly modelled on the 1995 Directive, with many of the terms and central provisions mirroring their equivalents in EU law. Enactment of the Data Protection Law marks a new era for data protection in Turkey. Although the Data Protection Law is still in its infancy and no enforcement actions have been taken, the Personal Data Protection Board (the national supervisory authority in Turkey) has published the draft versions of secondary legislation, as well as booklets providing guidance on implementation of the law.

UAE
The UAE does not have a specific federal data protection law analogous to GDPR. However, reports suggest that a draft federal law (or laws) are in the pipeline. There is no indication of when these may be published. Telecommunications and cyber crime laws provide some limited data protection rights and obligations in the UAE alongside the Constitution and Penal Code. Telecoms service providers have certain personal data protection obligations under the Consumer Protection Regulations.

UAE free zones
The DIFC and ADGM have enacted their own data protection laws based on international best practice, which apply to organisations in their jurisdiction. The DIFC and ADGM laws are generally consistent with data protection laws in other developed jurisdictions (specifically the 1995 Directive and the UK Data Protection Act 1998). Both have deliberately sought not to pre-empt GDPR – rather, they have adopted a “wait and see” approach before further alignment. In June 2019, DIFC conducted a consultation on updating the data protection law.

A common element of many data protection laws is the establishment of a distinct data protection regulatory authority. Across MENA, while there are regulators covering other digital issues, specific data protection authorities have not generally been put in place. However, across those countries with specific data protection laws, there has been movement towards independent data protection supervisory authorities. For example, the Saudi Arabian Commission for Cybersecurity (SACC) recently issued a public tender to include the establishment of the SACC as the regulator for personal data protection and freedom of information.
Call to action: effective data protection and governance

As data protection laws develop across the region, mapping the similarities and differences between the laws will be important for the private sector. Implementing laws based on similar underlying privacy principles can streamline compliance obligations for companies, saving time and resources, while also preventing misuse of personal data and spurring responsible innovation.

Identifying common principles is also an important step towards building trust between governments. A foundation of trust, built on recognition of shared privacy and governance principles, can help governments ensure that citizens’ data is protected as it travels across borders. As the mobile economy continues to grow and become more dynamic across the MENA region, it will become more important to establish regional trust, and to implement ‘smart privacy’ laws that protect the privacy of individuals while enabling innovation.