



# The Mobile Economy 2014

## ARAB STATES





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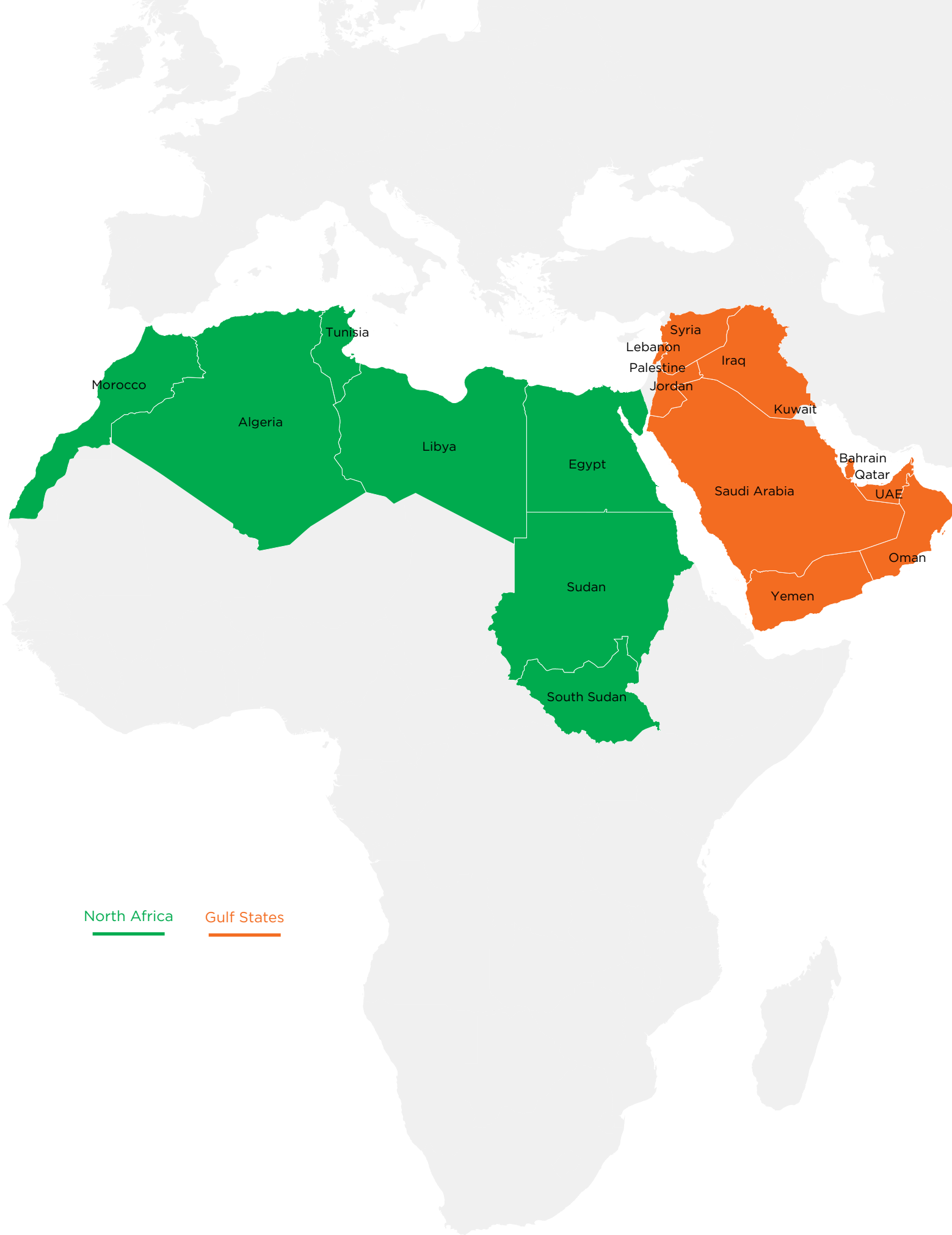
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North Africa



Gulf States



With 19 countries and 370 million people, the Arab States is a very diverse region, encompassing the expansive nations of North Africa and the oil-rich economies of the Gulf States. Where the Arab States is specifically referenced in the report, we refer to the 19 countries shown below.

	UNIQUE SUBSCRIBERS (M)	CONNECTIONS (M)	POPULATION (M)	GDP PER CAPITA (US\$)
ALGERIA	19.0	39.5	39.6	\$5,361
BAHRAIN	1.0	2.6	1.3	\$24,613
EGYPT	44.1	99.6	82.7	\$3,314
IRAQ	20.5	33.3	34.3	\$6,670
JORDAN	5.2	9.9	7.4	\$5,214
KUWAIT	2.6	6.5	3.4	\$54,506
LEBANON	2.5	3.9	4.9	\$9,928
LIBYA	3.8	10.2	6.2	\$12,167
MOROCCO	16.9	42.4	33.3	\$3,109
OMAN	2.7	5.6	3.8	\$22,181
PALESTINE	2.0	3.3	4.4	\$1,898
QATAR	1.6	3.8	2.2	\$93,352
SAUDI ARABIA	21.6	51.3	29.1	\$25,852
SOUTH SUDAN	1.9	3.0	11.5	\$1,221
SUDAN	15.6	27.6	38.4	\$1,753
SYRIA	9.2	12.5	21.9	\$1,219
TUNISIA	5.9	13.9	11.1	\$4,329
UAE	7.8	15.7	9.4	\$42,153
YEMEN	11.1	15.9	24.7	\$1,473

Source: GSMA Intelligence, World Bank, UN

# Executive Summary

Mobile has scaled dramatically over recent years in the Arab States. The region's mobile industry is one of the fastest growing globally, with over half of the population having subscribed to a mobile service at the end of 2013. This figure is forecast to reach almost 60% of the population by 2020, broadly in line with the global average. At the end of 2013 there were 195 million unique subscribers and 404 million connections<sup>1</sup> (i.e. SIM cards).

The Arab States is a very diverse region, encompassing both the expansive countries of North Africa and the oil-rich economies of the Gulf States. These two areas show both differing levels of economic development and maturity of their mobile markets. While just under half the population in North Africa has subscribed to a mobile service, the figure in the Gulf States already stands at over 60%. Several of the Gulf States are already amongst the global technology leaders when considering the migration to higher speed networks, and the adoption of smartphones and more advanced mobile services.

The general lack of fixed line infrastructure in the region means that mobile is already the primary mode of communication and also increasingly for internet access. In global terms, the Arab States were relatively late to launch higher speed networks, but parts of the region are now seeing a rapid migration to these networks. Both 3G and 4G connections account for well over a third of total connections in the Gulf States today. In the United Arab Emirates (UAE), Saudi Arabia and Qatar, the figure is as high as 60% of the total, ahead of the European average.

A number of the Gulf States are also seeing rapid levels of smartphone adoption, with smartphones accounting for around a third of total connections at the end of 2013. Qatar and the UAE had the world's highest take up levels, already accounting for four-fifths of total connections, ahead of even the Digital Pioneer markets, such as the Nordic countries and the United States.

There are also now signs of an accelerating technology migration underway in North Africa. Countries such as Morocco are seeing rapid growth in 3G connections, with the proportion of higher speed connections in North Africa forecast to overtake that in the Gulf States by 2019, by which date they will account for around two-thirds of total connections.

As both smartphone uptake and the number of mobile broadband connections grow, mobile data traffic will increase rapidly. The broader Middle East and Africa region is forecast to see data traffic grow at a compound annual growth rate (CAGR) of 70% between 2013 and 2018, the fastest of any region. Data traffic and the ongoing increase in the subscriber base has helped fuelled strong operator revenue growth of over 7% per annum over the last five years, well above the global average.

1. The total figure includes 3.4 million M2M connections

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However, operators across the region face a number of challenges. Competition is rising in many markets, as increased regulatory action has seen both new entrants and a number of mobile virtual network operators (MVNOs) launched. The outlook is further hampered by market fragmentation and short termism in policy decisions, and as a result, the region is forecast to see a clear slowdown in revenue growth, with a CAGR of 3.1% between 2014 and 2020. This highlights the importance for operators to develop new services and monetise the growth in data services, as well as adopt a more collaborative approach if the industry is to achieve these goals.

Mobile is already making an important contribution to social and economic development in the region, with the industry adding 4.4% to overall gross domestic product (GDP) in 2013. As the GDP contribution only reflects market impacts, this figure does not include all the benefits delivered by mobile services, and therefore has to be seen as a conservative estimate of the total economic impact of mobile in the region. The provision of mobile-enabled innovative products and services delivers a range of additional consumer benefits (e.g. improved access to information, better connectivity, or improved quality in the delivery of public services), neither of which are captured by the GDP calculation.

The mobile industry is also a very important and stable source of employment in the region. In 2013, the industry directly employed nearly one million people, many of which were in highly skilled jobs. An additional 600,000 jobs were supported in the rest of the economy as a direct result of activity generated by the mobile sector. The industry also makes a very large contribution to public sector funding in the form of general taxation (US\$13 billion in 2013), but also through further payments in the form of licence and regulatory fees and spectrum auctions.

Mobile has already made significant progress in closing the 'digital divide' and bringing both communications services, and increasingly internet access, to previously underserved populations across the Arab States, particularly given the lack of fixed line infrastructure in most countries. Despite the progress to date, there are several markets where less than 20% of the population have internet access. Mobile operators and the broader industry are making an important contribution to addressing this issue. For example, measures such as network sharing are helping expand coverage and more affordable devices and innovative new service plans are increasing the affordability of mobile services.

However, there is also an important role for governments and regulators in addressing these goals. Allowing commercially-agreed network sharing deals and ensuring the timely release of Digital Dividend spectrum can be important factors in enabling cost effective network coverage. Taxation of mobile services is relatively high in a number of markets in the region and can significantly add to the affordability barrier. Examples include Jordan, Tunisia and Egypt; all of which have a mobile service's burden of over 30% of revenues.

The widespread availability of mobile devices and improving higher speed network coverage is opening up new opportunities for businesses and consumers alike. A number of Gulf States have amongst the highest levels of internet penetration and social media engagement in the world, with access to these services increasingly delivered over mobile networks. This is creating significant opportunities for operators and new entrants to the mobile ecosystem to deliver innovative services.

Mobile can play a role in addressing some of the region’s social, economic and public services challenges. These challenges are becoming particularly acute as a result of some of the highest unemployment levels and one of the most youthful populations of any global region. Conflicts and ongoing political instability in several countries add further pressures, with mobile networks already playing an important role in disaster response and crisis management.

Mobile is delivering a range of innovative new services and applications across the more developed economies in the region, including mobile commerce and smart city solutions in a number of the Gulf States. In the less developed North African economies, mobile money services are playing an important role in delivering financial inclusion and convenience to previously unbanked sections of the population.

However, overall the Arab States are still at a relatively early stage of development in terms of realising the transformative potential of mobile technology, particularly with regard to more advanced services delivered by higher speed mobile broadband networks. Across the region, there were 3.4 million cellular machine-to-machine (M2M) connections at the end of 2013, a figure that is forecast to grow at a rate of just under 30% per annum out to 2020.

## **THERE ARE A RANGE OF ENABLERS THAT COULD HELP REALISE THE FULL POTENTIAL OF THE MOBILE INDUSTRY IN THE REGION:**

- For the operators this will require the development of new business models as well as increased levels of collaboration, both between operators themselves and with other players in the mobile ecosystem.
- Policymakers and regulators also have an important role to play. At a high level, governments should seek to establish an open and consultative regulatory environment that encourages investment by the private sector. The timely allocation of spectrum, particularly the Digital Dividend bands, is crucial if operators are to support the ongoing growth in new services and applications and the data traffic that these generate.
- Both operators and policymakers alike should look to reduce the barriers to the adoption of digital services, particularly with regard to affordability and the availability of local and relevant content.
- The GSMA itself has a number of programmes and initiatives aimed at addressing these challenges. For example, the Connected Living programme is looking to address the key barriers to the development and growth of M2M/ Internet of Things services, both within the Arab States and at a global level.



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Addressing these issues could unleash a wave of growth and innovation in the mobile ecosystem across the region. This could include a range of new M2M deployments, with growth rates well above the current forecasts in areas such as health and automotive. Mobile commerce is still in its relative infancy in the region, even in the technologically advanced Gulf States, and could see explosive growth in both the number of services deployed and end user adoption, whilst mobile money services can deliver financial inclusion to an even larger portion of the currently unbanked population. New mobile identity services could allow individuals to manage their identities when accessing the growing range of online services, transforming the user experience and allowing for new and strengthened e-government services that will benefit the citizens of the region.

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The mobile industry has already had a profound impact on all aspects of life in the Arab States. However, with the accelerating migration to higher speed networks and growing levels of smartphone adoption, the industry has the potential to play an even more active role in the future. Realising the full potential of this digital future, and helping to address a number of the particular social and economic challenges in the region, will require increased collaboration between all mobile ecosystem players, as well as governments, regulators and other industry stakeholders.

# MOBILE ECONOMY ARAB STATES

## Unique subscribers and SIM connections

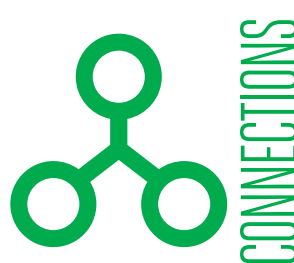


2013 **195M**

53% PENETRATION RATE

2020 **242M**

58% PENETRATION RATE



\*Excluding M2M

2013 **400M**

109% PENETRATION RATE

2020 **529M**

126% PENETRATION RATE

## Accelerating moves to mobile broadband networks and smartphone adoption

**63%**

3G/4G connections to increase from 26% of total in 2013 to 63% by 2020



**342M**

By 2020, there will be 342M smartphone connections, up from only 88M at the end of 2013

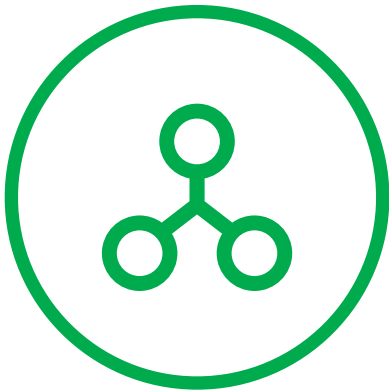
## Subscriber growth fuelled revenue trends over recent years

Rising competition and regulatory intervention means revenue growth slowing

Operator revenues grew at CAGR of 7% 2008-2013

Revenues forecast to grow at a CAGR of over 3.1% 2013-2020

# Mobile contributing to economic and social challenges across the region



Delivering digital inclusion to the still unconnected populations across the region



Delivering financial inclusion to the unbanked population in North Africa



New service launches will see the number of M2M connections grow at almost 30% per annum out 2020

## Mobile ecosystem contribution to GDP

2013  
US\$122B

4.4%  
GDP  
IN 2013

2020  
US\$161B

## Public funding



2013



2020

Mobile ecosystem contribution to public funding in the Arab States

## Employment



Jobs directly supported by mobile ecosystem:

1M 1.4M

2013

2020

# 1 The Arab States in context

Mobile has scaled dramatically in the Arab States, with the region one of the fastest growing globally in recent years. Market liberalisation and more competition has increased service affordability. Additionally, with increased access to mobile services due to widespread network investments, the region has seen rapid industry growth, bringing with it significant socioeconomic benefits to the population.

Unique subscribers<sup>2</sup> have grown at a compound annual growth rate (CAGR) of 9.5% per year between 2008 and 2013 compared to a global average of 8.2%. Mobile connections<sup>3</sup> have grown even faster at 13.2% per annum over the same period, compared to 11% globally. In addition, the region has seen rapid uptake of mobile broadband driven by the ongoing technology shift to 3G and, more recently, 4G networks—particularly in the more developed markets—resulting in increasing demand for data services. The total number of 3G and 4G connections grew at a CAGR of 65% per annum between 2008 and 2013, well ahead of the global average.

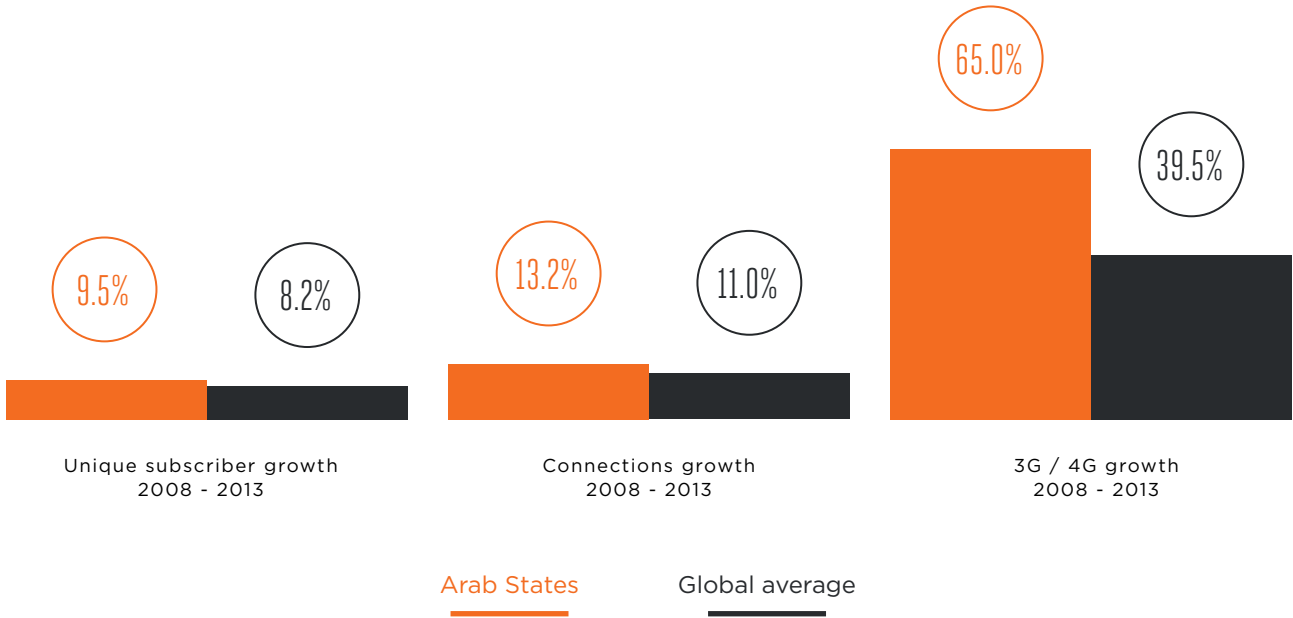
Sustained growth ahead of the global average in terms of mobile unique subscribers and connections has resulted in the region being home to some of the most highly penetrated markets across the globe, with over three-quarters of the population subscribing to mobile services in Bahrain, Kuwait, and the United Arab Emirates (UAE). This pushes the average subscriber penetration rate across the region to 53%, above the global average of 48%. In addition, multi-SIM ownership is particularly high in the region, with the connection penetration rate at 109%, well above the global average of 94%. Subscribers in the region have almost 1.9 SIM connections per user, more than the global average of nearer 1.8.

2. Unique users who have subscribed to mobile services at the end of the period, excluding M2M. Subscribers differ from connections such that a unique user can have multiple connections.

3. SIM cards (or phone numbers, where SIM cards are not used) that have been registered on the mobile network at the end of the period. Connections differ from subscribers such that a unique subscriber can have multiple connections.

Source: GSMA Intelligence

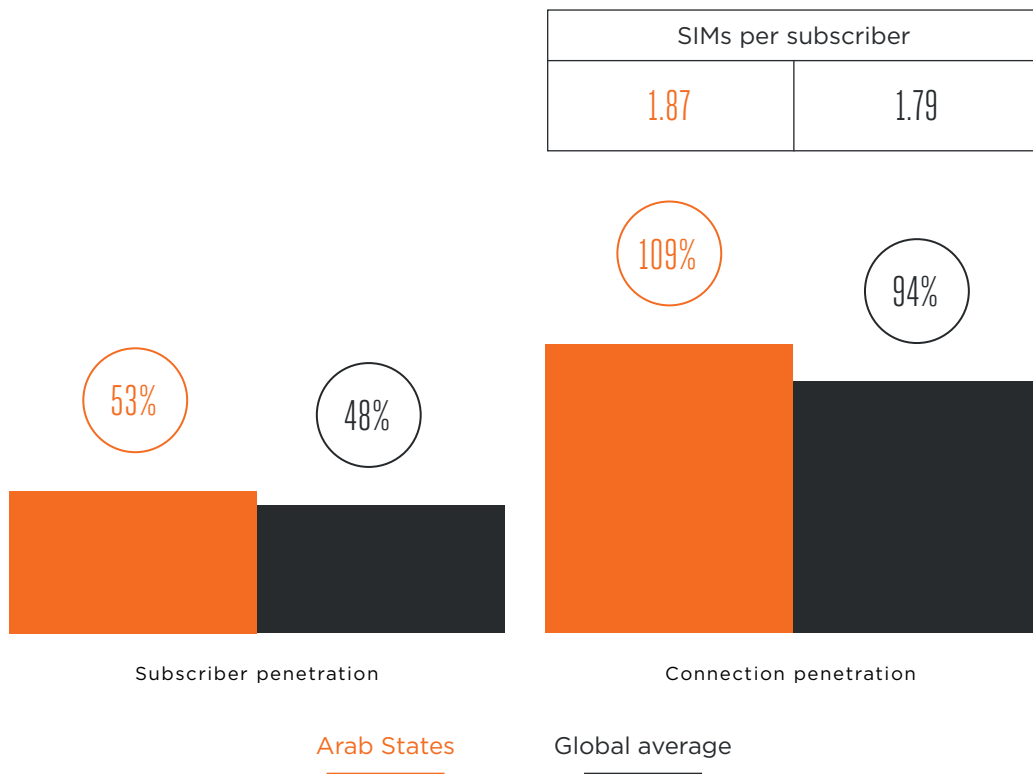
## Arab States growing ahead of the global averages



Source: GSMA Intelligence

## Connection and subscriber penetration by region

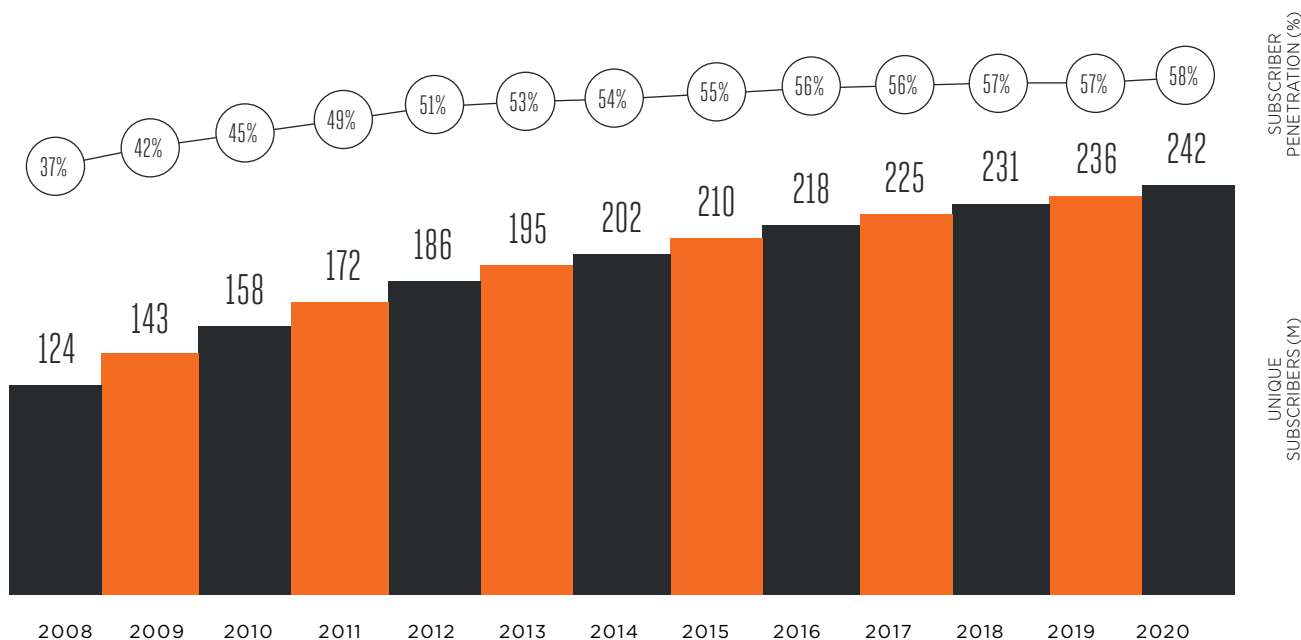
2013



By the end of 2013, the unique subscriber base in the Arab States stood at 195 million, 6% of the global total, having grown at a CAGR of 9.5% over the last five years. Going forward subscriber growth rates will slow, with the total base forecast to increase at a CAGR of 3.1% out to 2020. This reflects both market maturity in some of the more developed markets and the challenge of growing penetration in the often lower income and rural-based groups that will increasingly be the source of incremental subscriber growth.

Source: GSMA Intelligence

### Unique subscriber growth - Arab States



Egypt is the largest market in the region with 44 million subscribers by the end of 2013, accounting for 23% of the region's total. The five largest markets (Egypt, Saudi Arabia, Iraq, Algeria and Morocco) make up just under two-thirds. The markets typically have a national operator (with some state ownership of operators throughout the region) competing against a second and sometimes a third operator owned by one of the large international groups such as Orange, MTN and Vodafone. In addition, the Gulf States is home to very large regional telecom groupings such as Etisalat of the UAE, Ooredoo of Qatar, Zain of Kuwait, STC of Saudi Arabia and Batelco of Bahrain.

Source: GSMA Intelligence

## Largest markets by subscribers - Arab States (2013)

Million



The Arab States contains many markets that are relatively small by global standards. Only three countries in the region have over 20 million subscribers, and eight have fewer than five million. This long tail of small countries and operators results in a very fragmented market with high levels of competition. Particularly within the smaller countries, there are a number of small operators who may lack the scale to effectively develop new services, potentially hindering the outlook for the region.

## 1.1 Diversity of the region

The Arab States is a highly diverse and fragmented region, with 55 operators across 19 countries showing significant economic and social differences. The region comprises two sub regions, categorised very generally as the mature and oil-rich economies of the Gulf States, and the big, populous and growing markets of North Africa. Each sub region varies widely in terms of socioeconomics, mobile penetration, technology maturity and public policy.

### DEMOGRAPHICS

With half of its people under 25, the Arab States region has one of the youngest populations in the world today, second only to sub-Saharan Africa<sup>4</sup>. In general, young people are more likely to be early adopters of new technology, and have helped drive the rise of smartphones and mobile services such as social networking. In addition, in the labour-receiving Gulf States such as Bahrain, Kuwait, Qatar and the UAE, international migration has played a larger role in shaping the population. The Gulf States have attracted such large numbers of foreign workers that they have become the majority in some countries such as the UAE, where nearly 90% of the population is foreign nationals.

These transient workers tend to push up mobile penetration in terms of connections as they are more likely to own multiple SIMs. They can also be the target of mobile virtual network operators (MVNOs) seeking to find a niche in the market. This leads to increasing competition in the region, particularly around tariffs, with operators offering competitive voice and mobile data bundles, and with calling card and VoIP providers looking to exploit consumer needs for low cost international voice.

### MOBILE INDUSTRY - DIFFERING TRENDS ACROSS THE REGION

Market liberalisation in several Gulf States has led to a number of new entrants over the last few years. MVNOs are also now emerging, with three scheduled to launch in both Oman and Saudi Arabia in the next few years. Some markets, particularly Qatar, the UAE and Bahrain, have a relatively high level of fixed broadband penetration of between 10% and 13% and there is a strong fibre strategy, highlighting the overall theme of pushing telecommunication advancements across the Gulf States. However, these countries are very much the exception in a region which is generally typified by very limited fixed line infrastructure.

Due to the relatively advanced nature of the mobile markets, the strategy of operators in the Gulf States is focused on increasing mobile broadband penetration and data usage to counteract revenue erosion in more traditional voice and messaging services. Most operators in the Gulf States have launched a 4G network, and are pushing data and digitisation through network advancements to increase revenues and customer relevance. The advanced state of the industry, coupled with the relatively youthful and tech savvy population, is resulting in growing demand for smartphones, social networking and e-commerce.

4. UN Population Division

Across North Africa, mobile markets are typically at an earlier stage of development. As a result, operator strategies are more focused on maintaining revenues and margins, driving pre- to post-pay migration, and increasing subscriber penetration with innovative voice and data tariffs. Economic and political instability has reduced consumer spending in many countries, in some cases impacting the overall financial performance of and the network investments by the mobile operators.

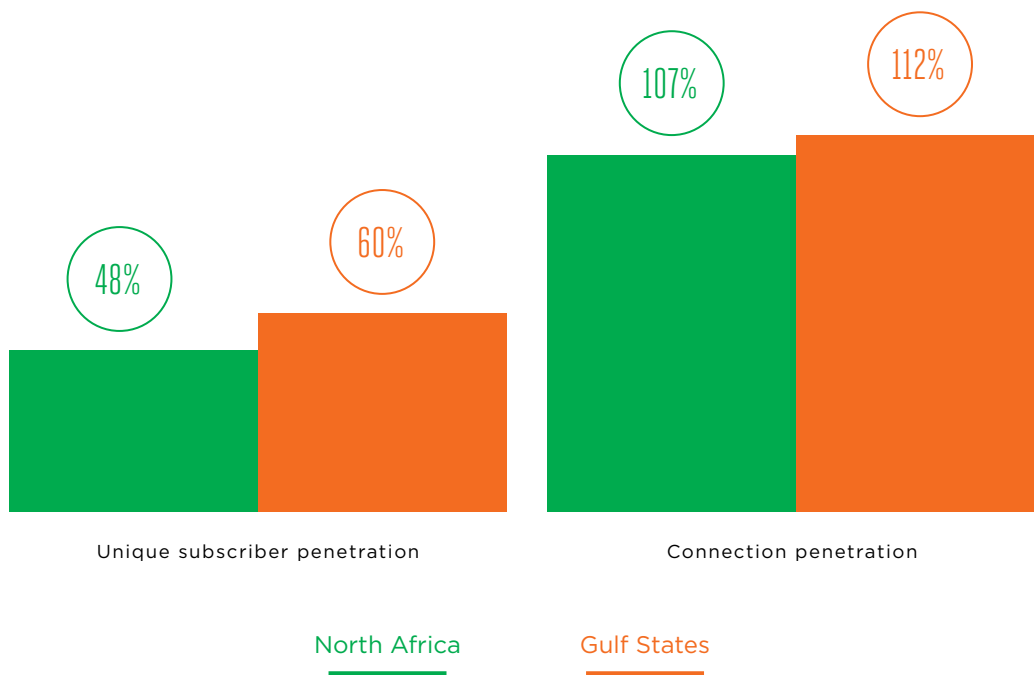
However, operators in North Africa have now begun to invest in higher speed networks, and as a result smartphone adoption rates and the number of 3G connections have grown rapidly, demonstrating a high demand for data services. With 4G network launches planned in four countries across North Africa over the next few years, mobile broadband will see rapid growth out to 2020 and beyond.

Across the entire region, intense competition and regular promotional activity encourages the use of multiple SIMs amongst cost-conscious users seeking the best and most affordable tariffs. Additionally, the advancement of mobile broadband data services is also increasing multiple SIM usage across various data devices, such as dongles and tablets.

The diversity across the Arab States' mobile markets is well demonstrated by the broad range of unique subscriber penetration rates. Forty-eight percent of the North African population subscribe to mobile services, with a connection penetration rate of 107%. This is compared to a subscriber penetration rate of 60% in the Gulf States, and a connection penetration rate of 112%.

Source: GSMA Intelligence

## 2013 Subscriber and connection penetration – North Africa versus the Gulf States

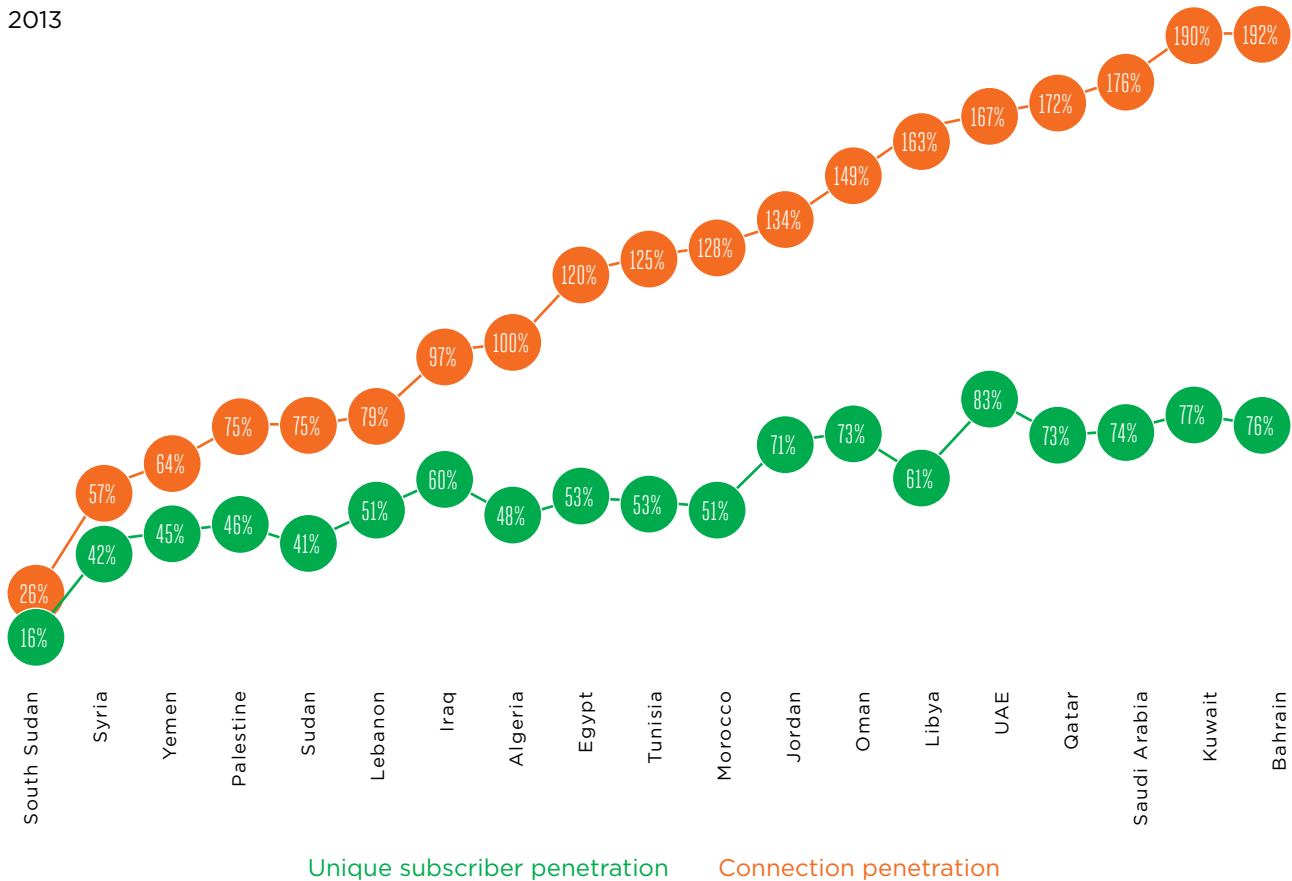


A number of countries including Bahrain, Kuwait and UAE already have unique subscriber penetration rates above 75%. These markets have already reached the 70-80% threshold at which growth tends to stall in developed markets. In contrast, five markets have subscriber penetration rates below 50%, and in South Sudan, this figure is only 16%.

Source: GSMA Intelligence

## Penetration by country - Arab States

2013



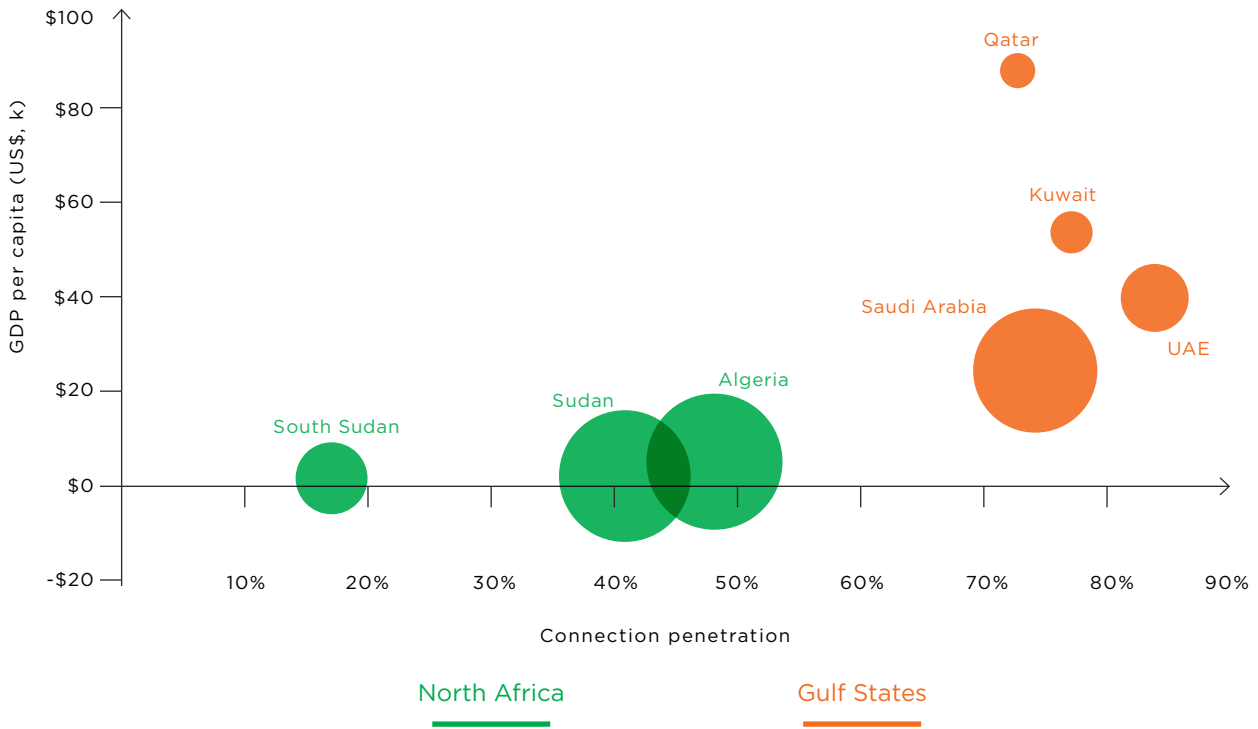
GDP per capita is an important factor in this variation of penetration rates given the impact on the affordability of mobile services. On average, GDP per capita across the Gulf States is US\$9,522, compared to US\$3,545 in North Africa, providing the basis for the generally more advanced level of the mobile industry in the sub-region.

The Arab States is a primarily prepaid region, accounting for 92% of connections in 2013, compared to the global average of 77%. Contract connections are much more prevalent in the Gulf States and, on average, account for 12% versus 6% in North Africa. This high prepaid proportion is fuelled by many factors including a youthful population, a high migrant workforce, immature or simple billing systems, and an intensely competitive market.

Source: GSMA Intelligence

## Penetration, GDP per capita & population - Arab States

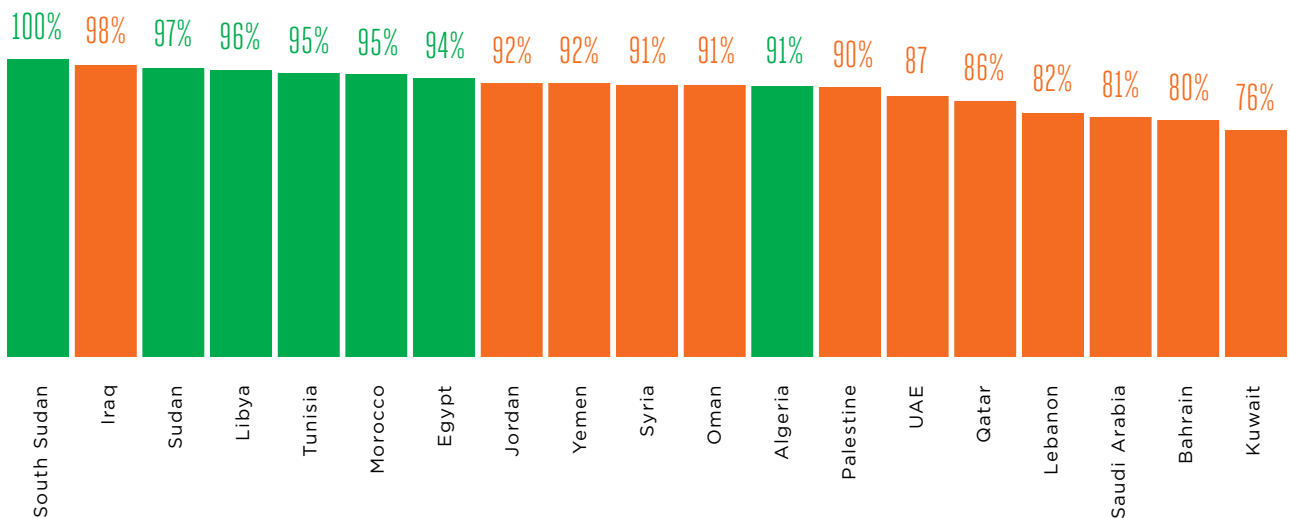
2013 / Bubble size proportionate to relative population size



Source: GSMA Intelligence

## Prepaid proportion of connections by country

2013

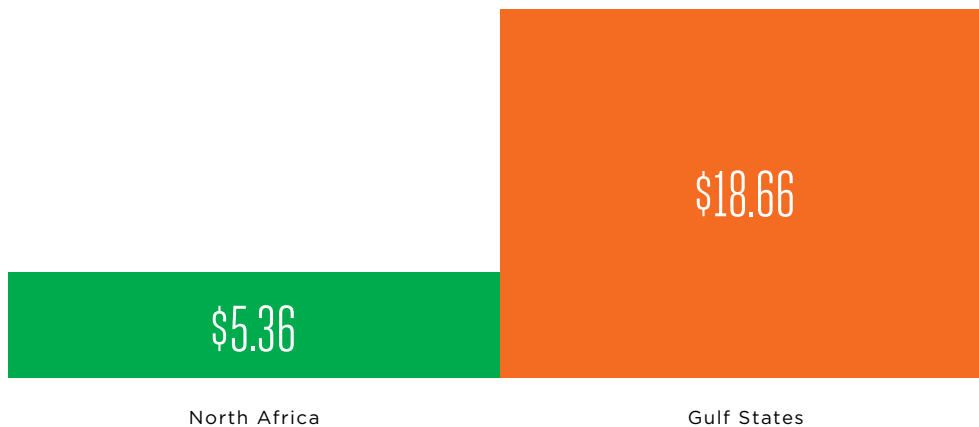


The mobile industry is typically much more advanced in the Gulf States, with higher levels of adoption of mobile broadband services as operators have invested heavily in network development. The relatively high proportion of contract subscriptions, coupled with the more developed mobile industry and high GDP per capita of the sub-region, results in a much higher average revenue per user (ARPU) in the Gulf States than in North Africa.

Source: GSMA Intelligence

## 2013 ARPU by sub-region

(US\$ M)



## 1.2 Shift to mobile broadband underway

With increased competition and relatively mature markets with limited scope for further subscriber growth, operators are increasingly focusing on mobile broadband and innovative new applications and services to generate additional revenues.

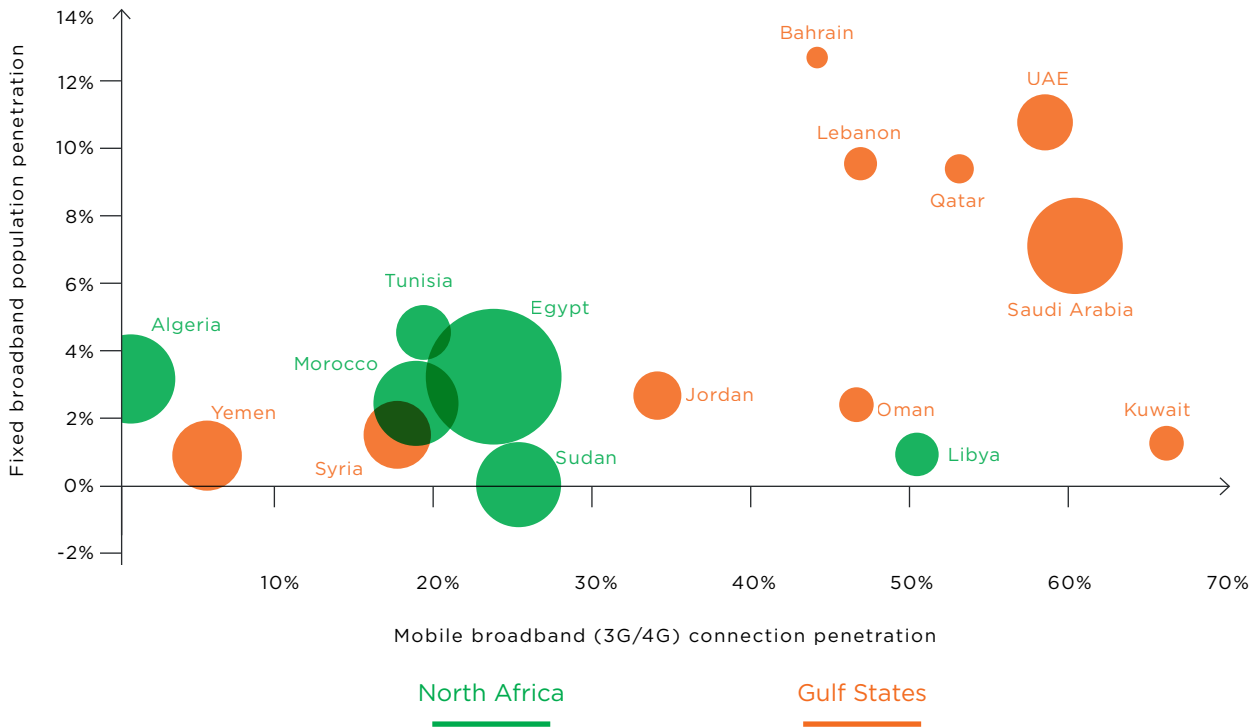
Further, the general lack of fixed broadband infrastructure in the region means that internet access is increasingly provided over mobile networks. Fixed broadband population penetration across the Arab States is less than 5%, and only five markets (Bahrain, Lebanon, Qatar, Saudi Arabia

and the UAE - all Gulf States markets), have a penetration rate of over 5%, due to a relatively advanced fibre rollout strategy. This highlights the crucial role of mobile networks and particularly of mobile broadband for data and internet access in the region. Many operators are therefore investing heavily in their mobile networks to take advantage of this shortfall, and 3G and 4G rollouts have gained speed in recent years.

Source: GSMA Intelligence, ITU

## Mobile versus fixed broadband penetration – Arab States

2013 / Bubble size proportionate to size of subscriber base



### MOBILE BROADBAND GAINING TRACTION - 3G GROWING RAPIDLY, BUT 4G STILL NASCENT

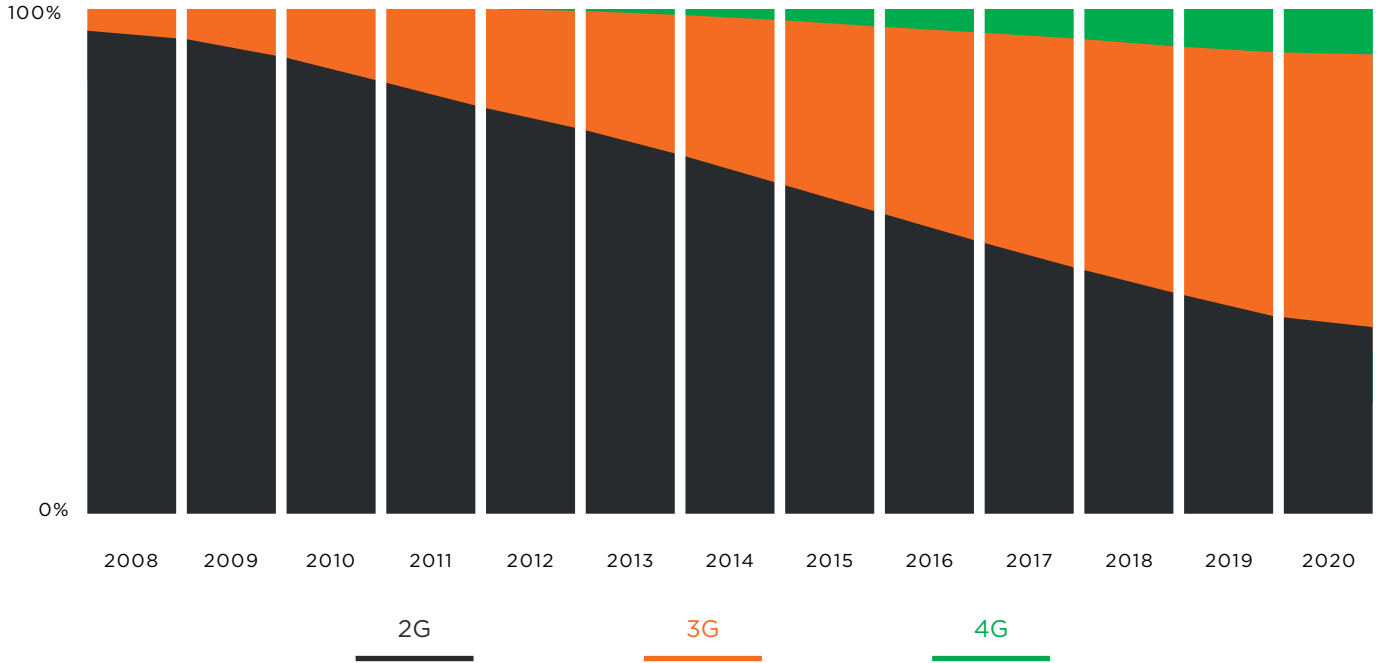
In global terms, the Arab States were relatively late in adopting 3G. The number of 3G and 4G connections increased from just under nine million in 2008 to 106 million in 2013, a 12-fold increase and a CAGR of 64% (compared to 37% globally), growing from 4% to 26% of the total connection base. Nearly all countries in the region have rolled out a 3G network and it will become the dominant technology in the coming years, accounting for over half of connections by 2020.

4G deployments are still at a very early stage in the Arab States, with operators in many markets still focused on 3G deployments. Network launches to date have mainly taken place in the Gulf States. However, this situation appears set to change, with 17 operators in 10 countries planning to launch 4G networks over the next few years. The number of 4G connections is forecast to grow with a CAGR of 41% between 2014 and 2020. However, delays in service launches and potentially issues around affordability meant that 4G will still only account for 9% of regional connections by 2020, well behind the global average of 27%.

Source: GSMA Intelligence

## Connections by technology - Arab States

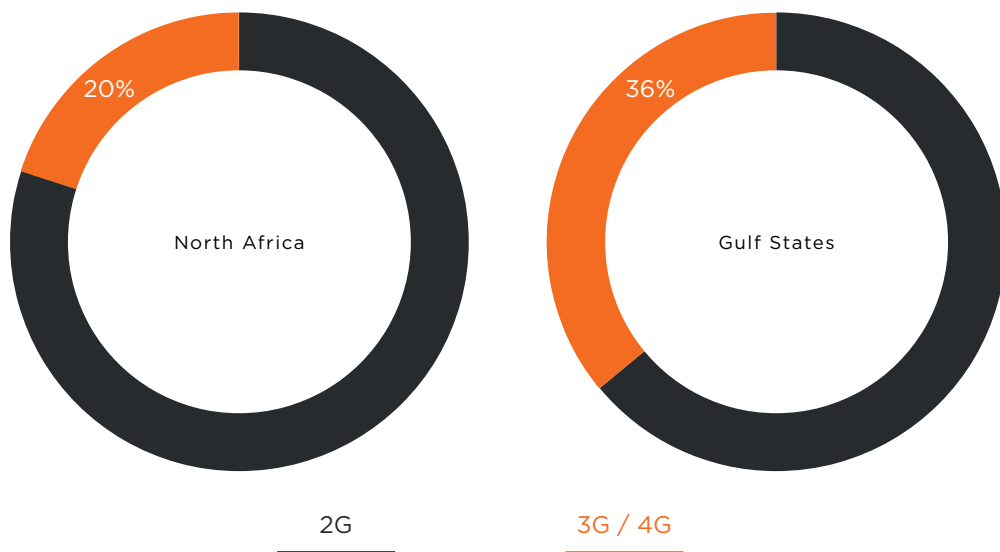
2013



Within the region itself, the Gulf States are currently well ahead of North Africa in terms of migration to higher speed networks, with 36% of connections in 2013 compared to 20%. This is driven by Saudi Arabia, the UAE and Qatar where 3G/4G accounts for around 60% of connections.

Source: GSMA Intelligence

## Proportion of connections by generation

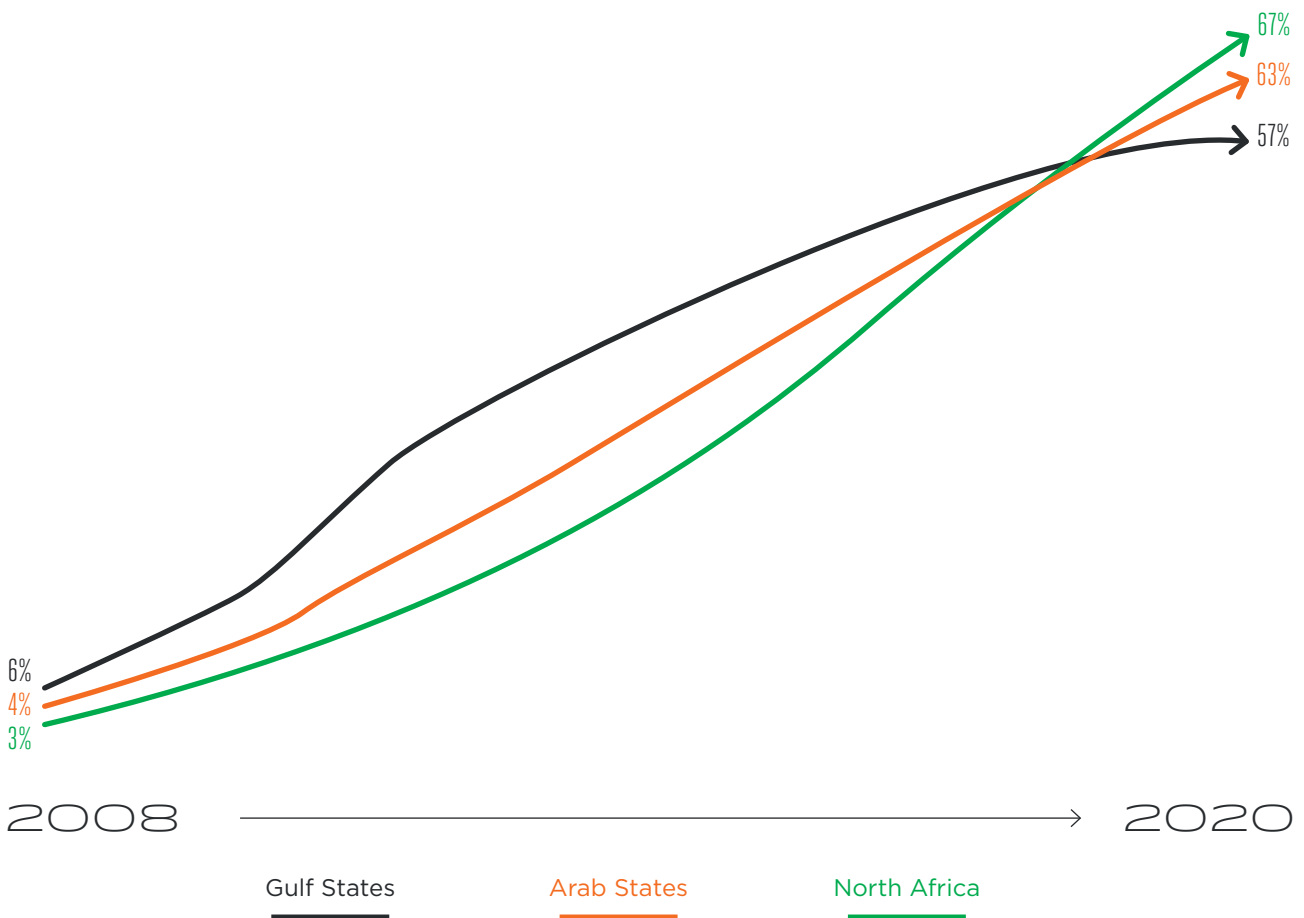


Looking forward, the sub-regions will see contrasting trajectories in terms of the growth of the number of higher speed connections. In the Gulf States, markets such as Saudi Arabia, the UAE and Qatar are among the most penetrated in the world, with little additional connection growth potential. Iraq remains a largely 2G focused market given ongoing delays in the award of 3G licences. Additional 4G networks are set to be launched in Iraq, Jordan, Kuwait, Lebanon, Saudi Arabia and the UAE in the next few years, and 4G will account for 22% of total connections by 2020.

In contrast, a comparatively late launch of 3G in the North African markets has resulted in considerable pent-up demand for higher speed services. This suggests a rapid adoption trend will follow, particularly in stable economies such as Morocco, Algeria and Tunisia. Morocco has had a 3G network since mid-2007, but has recently started to see an increasing migration to 3G. Maroc Telecom added 1.2 million 3G connections in the second quarter of 2014 to reach 3.9 million, a quarterly growth rate of 46%. In addition, operators in Algeria, Egypt, Libya and Morocco are due to launch 4G networks in the next few years, and as a result, the proportion of higher speed (3G and 4G) connections in North Africa is expected to overtake the Gulf States by 2019, reaching 67% by 2020 (versus 57% in the Gulf States).

Source: GSMA Intelligence

### 3G/4G connection penetration forecast: Gulf States and North Africa



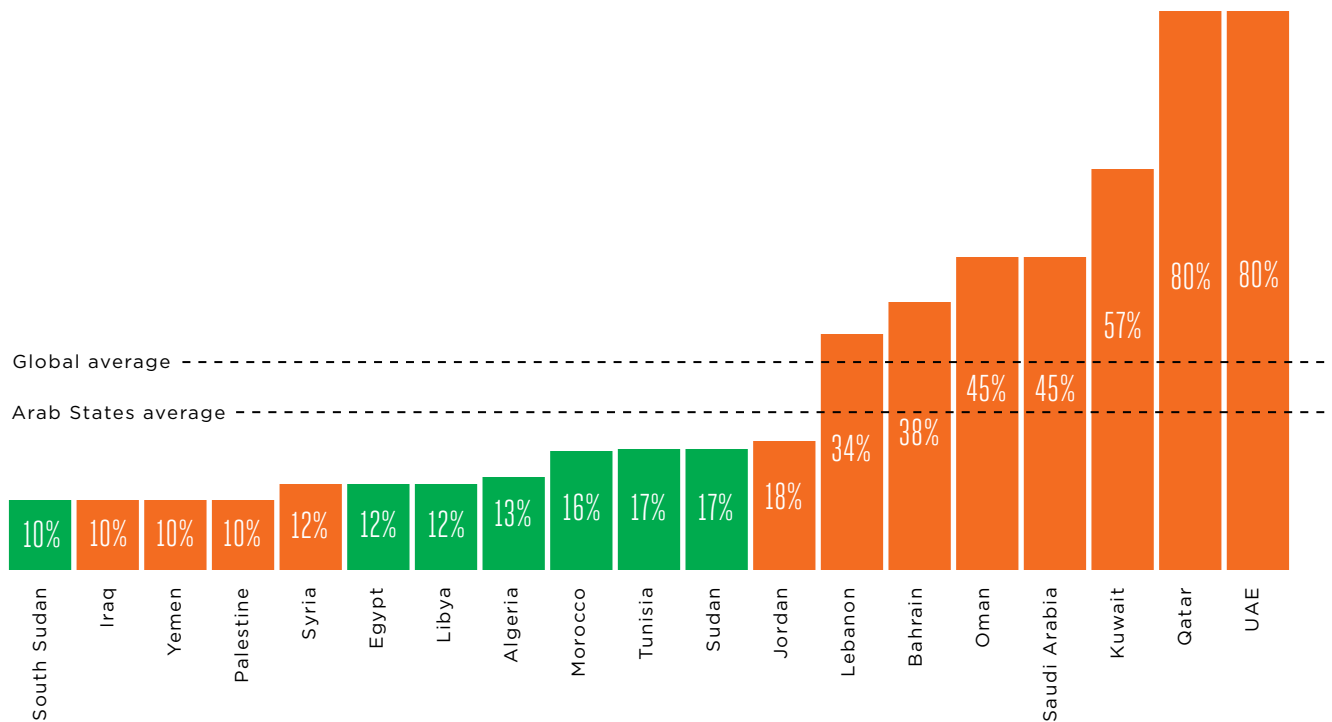
## HIGH SMARTPHONE PENETRATION IN SOME MARKETS, WITH THE REST GROWING RAPIDLY

Smartphones accounted for over a fifth of connections across the region at the end of 2013, well below the global average of 29%. In North Africa, smartphones accounted for 14% of total connections, owing to the underdevelopment of many of the markets and more limited deployment of mobile broadband networks. In the Gulf States by contrast, smartphones made up a third of connections, above the global average. The Gulf States are also home to two markets (the UAE and Qatar) with the highest smartphone adoption rates in the world, accounting for 80% of connections.

Source: GSMA Intelligence

### Smartphone connection adoption by country

(percentage of total connections, 2013)

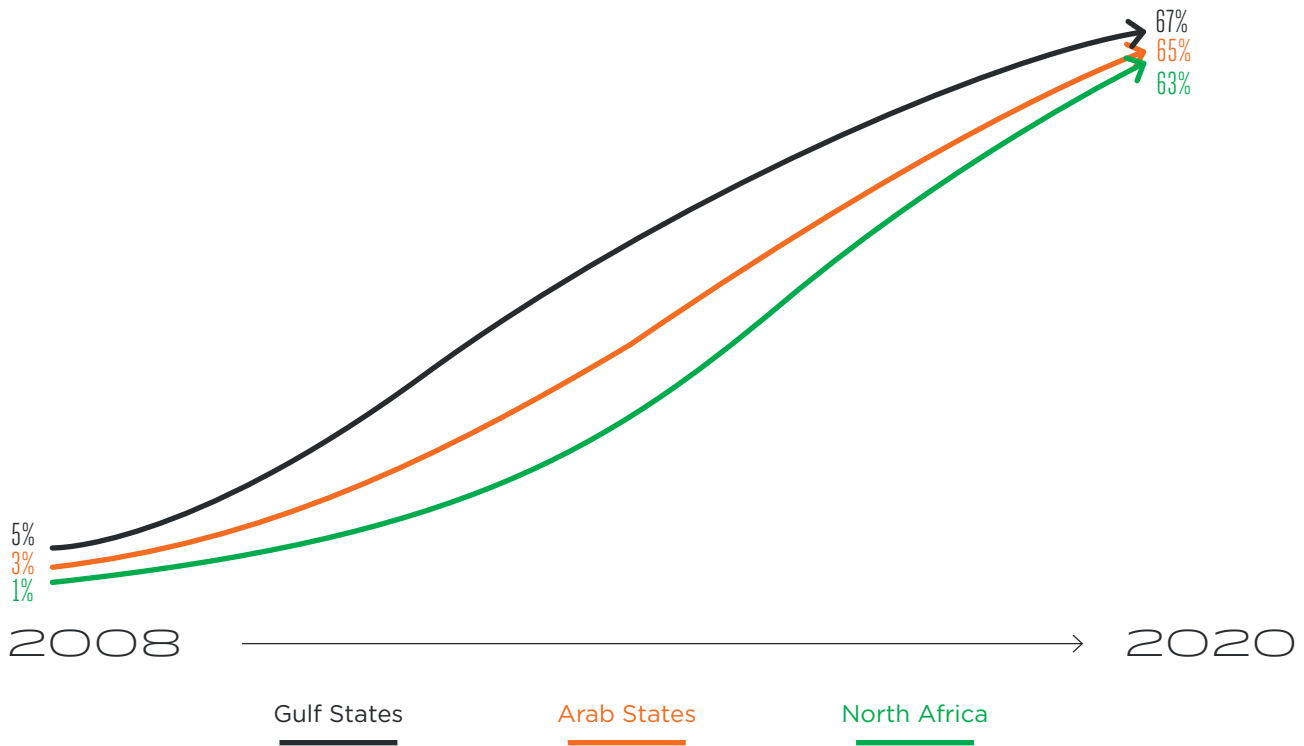


Smartphone growth will continue to be strong over the next few years, as mobile broadband deployments increase, devices become more affordable, and demand for more advanced applications and services rises. The region is forecast to grow more rapidly than the global average. By 2020, 65% or 342 million connections across the Arab States will be smartphones, representing a CAGR of 19% between 2014 and 2020, compared to the global average of 14%. The smartphone adoption curve in North Africa will follow a similar trajectory seen in the Gulf States a few years ago, resulting in penetration being almost equal by 2020.

Source: GSMA Intelligence

## Smartphone adoption in Gulf States and North Africa

(percentage of total connections)



### DATA TRAFFIC AND REVENUE HAS BEEN STEADILY INCREASING

Higher speed network rollouts, increased smartphone uptake, and the rise in popularity of advanced mobile services and applications has resulted in the rapid growth of mobile data traffic in the Arab States in recent years. Zain Saudi Arabia reported that on an annual basis, mobile data usage grew by 108% in 2013, and STC Saudi Arabia reported a 196% year-on-year increase in data traffic in the first half of 2014. Alfa Lebanon stated that data traffic doubled to 7.8 terabytes in 2013, with more than half of its customer base (over one million users) using mobile data, and in VF Egypt, data traffic also doubled between 2012 and 2013 to 18.8 petabytes.

The rapid growth in data traffic in turn generates an increase in data revenues, and operators across the Arab States have reported sharp increases in these revenues over the last year. For example, Zain

reported a 25% annual increase in 2013, with data now representing 14% of all Zain Group's service revenues. Similarly, du in the UAE reported an 18.6% year-on-year increase in non-voice revenues in the second quarter of 2014, while for MTN Syria data revenues grew by 44.2% annually in 2013. VF Egypt stated that, despite competitive pressures and an uncertain political environment, data revenue grew by 11% annually in 2013, with data as a percentage of service revenue increasing to 18%, up from 15% in 2012.

As smartphone uptake and mobile broadband grows, data traffic will continue to increase, and the broader Middle East and Africa region will see an annual growth rate of 70% between 2013 and 2018<sup>5</sup>, the fastest of any region. While this rate is boosted by Sub-Saharan Africa, there is still plenty of growth coming from the Arab States. In Saudi Arabia for example, mobile data traffic is forecast to grow 11-fold from 2013 to 2018, a CAGR of 60%.

5. <http://www.ericsson.com/mobility-report>

## 1.3 Competition increasing in the region

### 1.3.1 MVNOs are on the rise

The easing of regulation over the last decade has resulted in a wave of market liberalisation, in which second or third players in each country have begun competing with the historical incumbent using their own spectrum and infrastructure. In addition, MVNOs are starting to become more prevalent throughout the region, particularly in the Gulf States.

There are currently only eight MVNOs operating in four countries, with the majority in Oman. However, with regulators looking to foster greater competition, the region is attracting more and more MVNO launches. Twelve MVNOs are planned across the region, potentially playing a key role in further penetrating key segments, such as youth, migrant workers, and small and medium-sized enterprises. To date, operators have struggled to serve these segments as they are typically too small to justify tailored products and services.

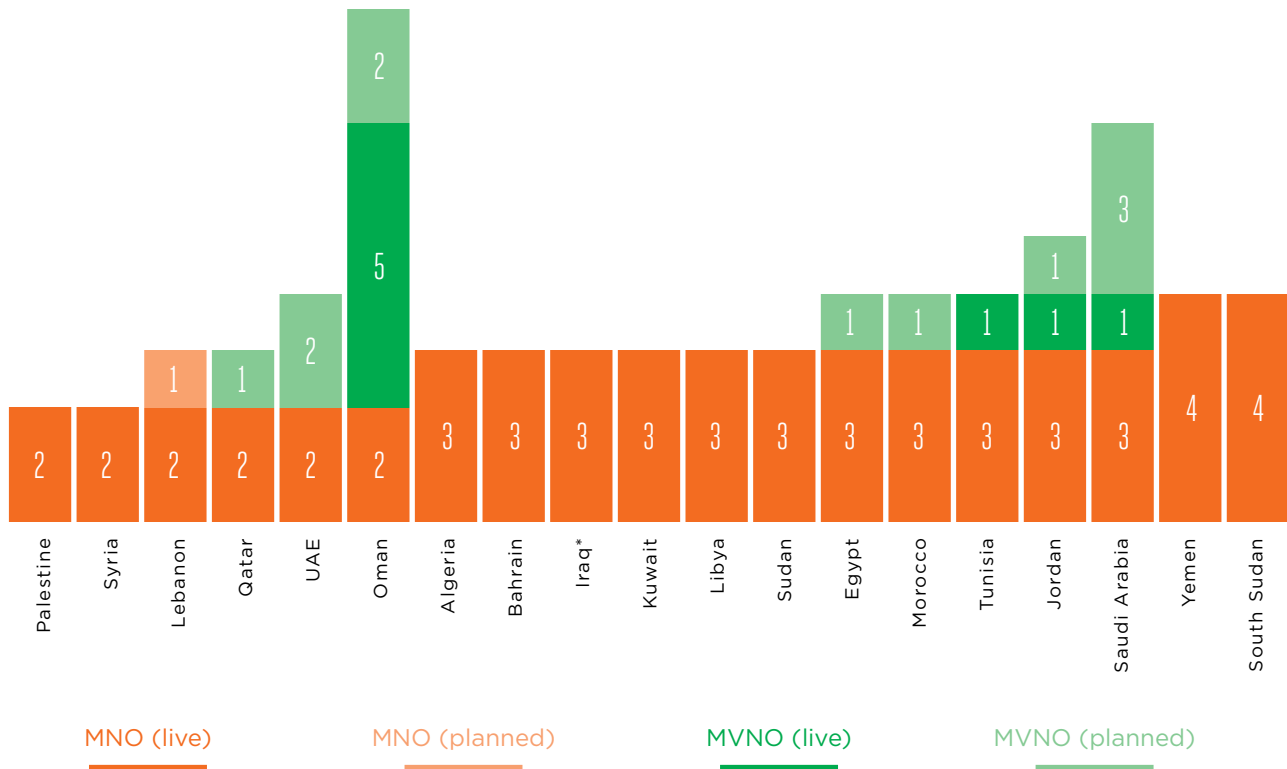
Oman was one of the first countries in the region to implement mobile number portability back in 2006, and with a relatively open regulatory regime, five MVNO licences were awarded in July 2008. It was the first country to launch an MVNO network in the region in April 2009, with four more launched in 2009 and 2010, and three more are currently planned. As such, it is one of the most dynamic and competitive markets in the region.

In Saudi Arabia, three MVNOs are to be launched by the end of 2014, with each existing mobile operator partnering with one of the new MNVOs. Virgin Mobile plans to launch mobile services on the STC network, and the Lebara Group will offer low-cost services on the Mobily network targeting the migrant community and those with relatives and friends abroad.

In the UAE, the regulator has recently launched two initiatives with a vision to liberalise the market and enhance competition, paving the way for MVNO entrants in the near future. The first was to launch mobile number portability, allowing the transference of mobile telephone numbers when switching networks, and the second was to allow the country's two MNOs—Du and Etisalat—to offer new prepaid mobile packages without prior regulatory approval. As a result, two MVNOs—Virgin and Axiom Telecom—are expected to launch services in the next year.

Source: GSMA Intelligence, \*plus two live regional operators in the Kurdistan region

## Nationwide operators by country



### 1.3.2 Competitive pressure is driving a decline in ARPU

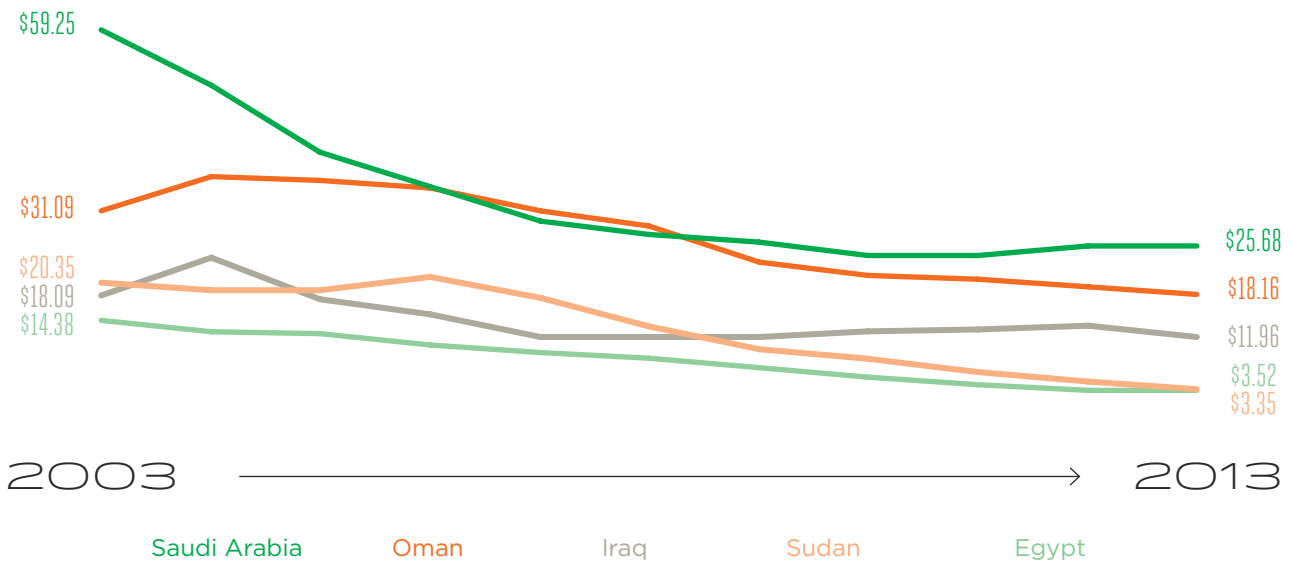
The increasingly competitive nature of many Arab States markets, as well as high levels of both subscriber and connection penetration, is leading to ongoing pricing pressure, resulting in a steady decline in ARPU. ARPU across the Arab States has dropped from US\$31.30 in 2003 to US\$10.80, a compound annual decrease of 10.1%. In Saudi Arabia, ARPU has decreased by over US\$34 over the last decade, with the decline particularly noticeable between 2003 and 2007 as Mobily entered the market with an aggressive pricing strategy.

Egypt now has the lowest ARPU in the region following a drop from US\$14.40 to US\$3.40 over the last 10 years (a CAGR of -13.6%), as operators fight for subscribers with aggressive pricing, and optimise their mobile expenditure in an unstable economic environment. Whilst ARPU trends can be distorted by local currency fluctuations, data for one of the leading operators in Egypt that does report in local currency terms shows a very similar ARPU decline for the period.

Source: GSMA Intelligence

## ARPU per connection in selected countries

(US\$ per month)



### 1.3.3 Online messaging service providers are spreading

Intense competition, the increasing availability of faster mobile broadband networks, rising smartphone adoption in many markets and a large proportion of prepaid connections makes the Arab States a potentially attractive market for online messaging services (OMS). In some cases, operators have partnered with these new entrants, with, for example, Mobily in Saudi Arabia having a partnership with WhatsApp that allows users to access the service at nominal cost.

The impact of these new services is already evident in a number of markets. In the UAE, SMS and MMS volumes have dropped considerably, with an average annual decline of 10% and 19% respectively between 2010 and 2013. Similarly, monthly average minutes per user (AMPU) declined by approximately 5% every year over the same period<sup>6</sup>. In parallel, communication apps have become increasingly popular, and in the UAE, seven of the

top 10 free Android apps in August 2014 were OMS applications<sup>7</sup>. Meanwhile in Qatar, between 76% and 78% of 15 to 54 year olds use instant messaging at least once a week<sup>8</sup>.

However, in the wake of the role OMS apps and social media played in the Arab Spring uprisings, and for other political, social or religious reasons, there continues to be some concerns from the authorities around the role of internet players and some messaging services throughout the region. Regulators and governments in several countries are censoring or even blocking access to some sites. For example, Facebook has previously been blocked in Egypt and Syria, and in 2013, the Saudi Arabian regulator threatened to block Viber, Skype and WhatsApp if the services failed to comply with local regulations requiring them to establish a local server allowing officials to monitor user activity.

6. UAE Telecommunications Sector Developments & Indicators, 2010-2013, UAE Telecommunications Regulatory Authority, June 2014

7. App Annie

8. Qatar's ICT Landscape 2014: Households and Individuals, Ministry of Information and Communication Technology, May 2014



In the UAE, seven of the top 10 free Android apps in August 2014 were OMS applications.

## 1.3.4 Operators responding with new services including VoLTE

As a response to the increased adoption of these online messaging services, operators in the region are becoming more active in this space themselves in an attempt to remain relevant to their customers. The global mobile operator industry, spearheaded by the GSMA, is working towards deploying the next mobile communications standard for an IP world, based on the Rich Communication Services (RCS) standard.

The GSMA has made a call to action to the mobile operator community in the region towards more collaborative action in order to rapidly establish interconnection on IP-based communication. Etisalat, Nawras (Ooredoo) and Zain all now own licences to offer HD Voice. Additionally, Du tested the region's first VoLTE call in August 2014, and four other operators (Zain in Kuwait, Alfa in Lebanon, Mobily in Saudi Arabia and Etisalat in UAE) plan to launch VoLTE services in the coming year.

## 1.4 Operator investment and revenues

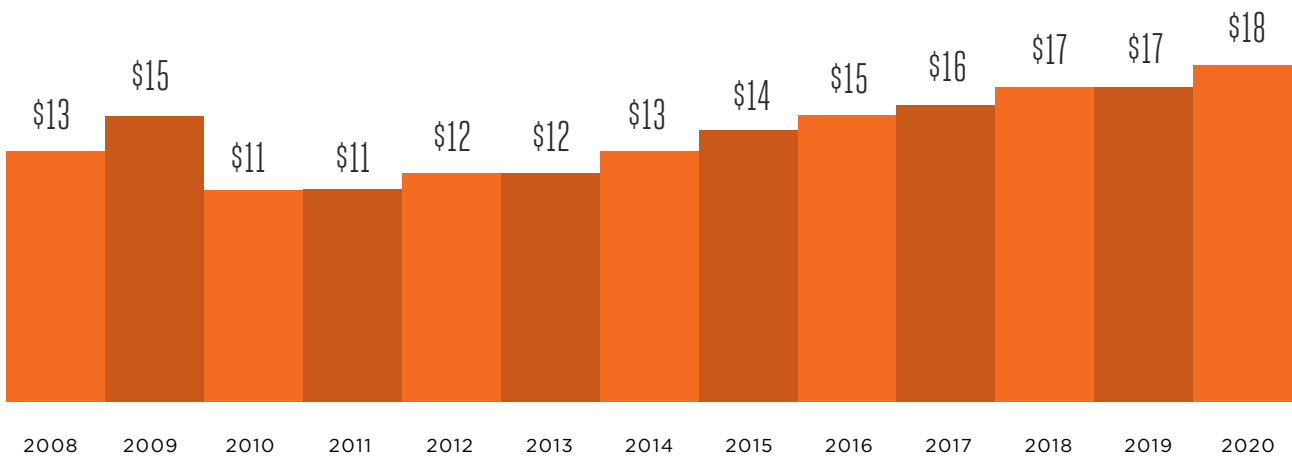
Operators throughout the Arab States are making significant investments in their networks to accommodate future growth in subscribers, mobile broadband and data usage, and the region is forecast to see the second highest investment growth globally over the next few years. Operators in the region invested US\$75 billion over the last six

years on improving network coverage, increasing network capacity, and on deploying higher speed mobile broadband networks (both 3G and 4G). This is expected to increase to US\$110 billion over the next six years, with an annual growth rate of 5% between 2014 and 2020, well ahead of the global average of 2.6%.

Source: GSMA Intelligence

## Arab States mobile network operator capex

(US\$ B)



In terms of revenue, the Arab States have seen one of the highest growth rates of any region with a CAGR of 7.2% over the last six years, well ahead of the global average of 4.6%. Growth has been fuelled by increasing subscriber penetration, as well as the ongoing migration to mobile broadband and data.

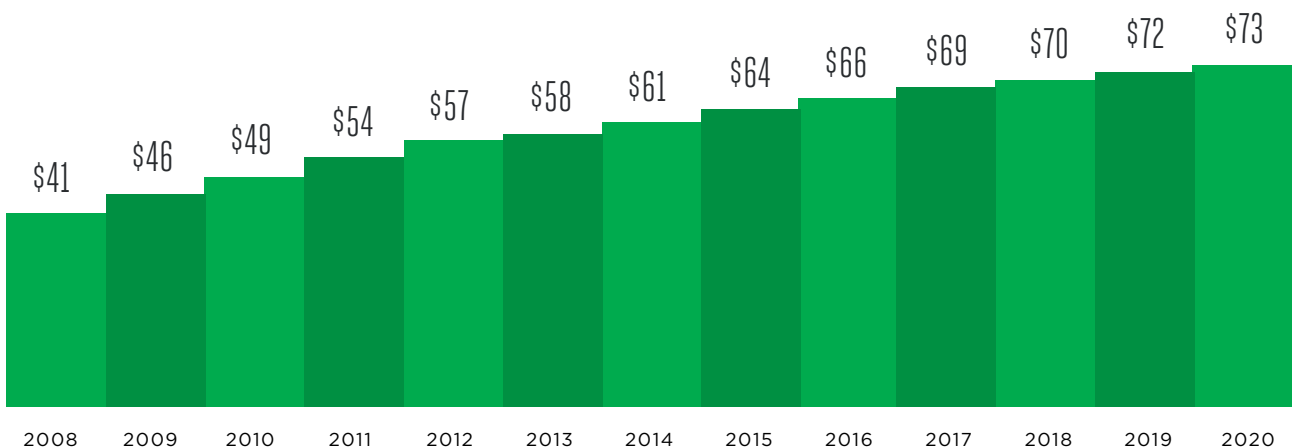
Going forward, revenue growth is likely to reduce in the region due to slowing subscriber growth, increasing competition and the growth in usage of

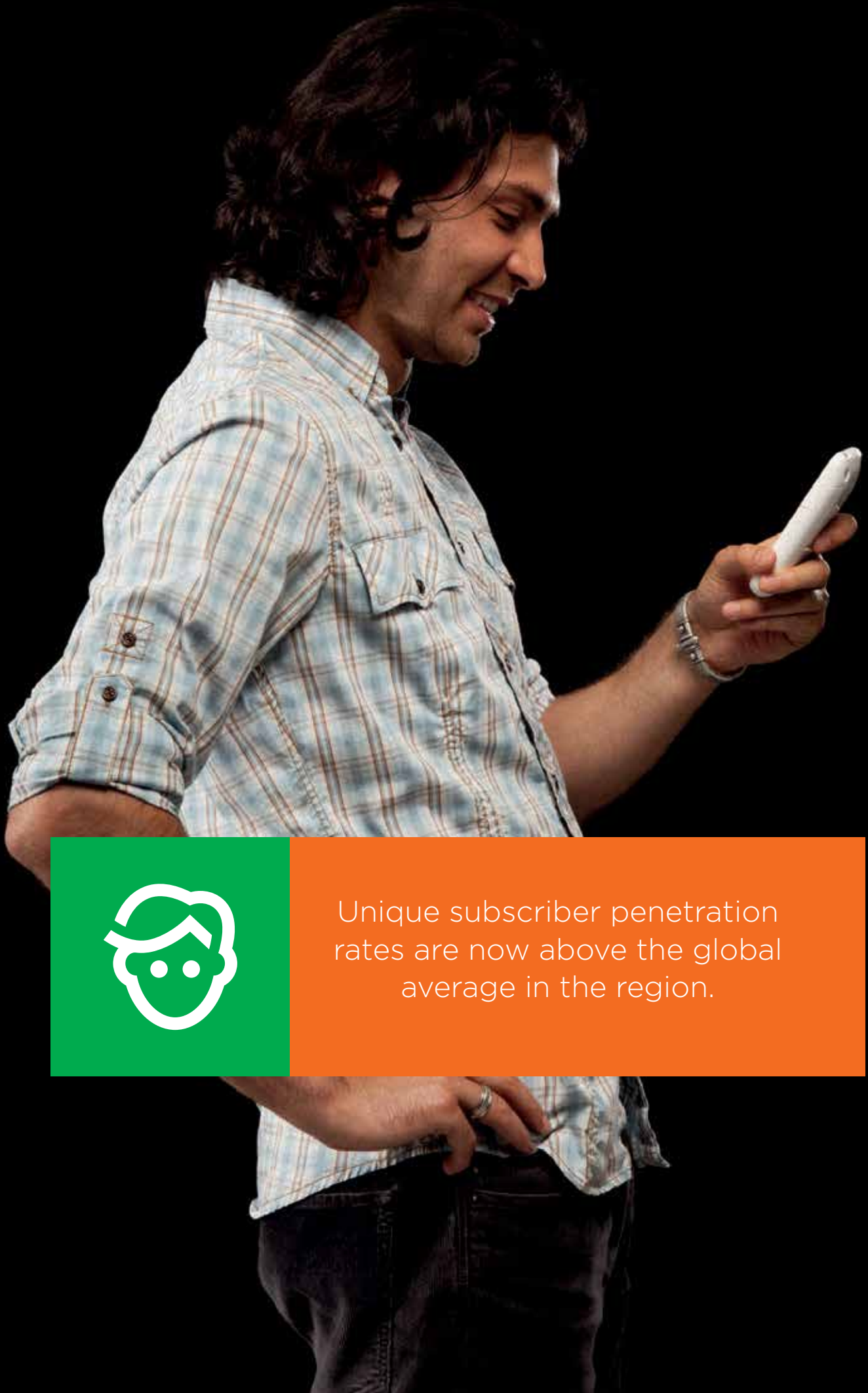
OVS providers. This in turn will increase the pressure on mobile operators to diversify their revenue streams and find effective ways to monetise the growth in data traffic. The outlook for the region is further hampered by market fragmentation and short termism in policy decisions, and as a result, the region is expected to see modest growth, with a CAGR of 3.1% between 2014 and to 2020.

Source: GSMA Intelligence

## Operator revenue trends in the Arab States

(US\$ B)





Unique subscriber penetration rates are now above the global average in the region.



## Mobile delivering digital inclusion across the Arab States

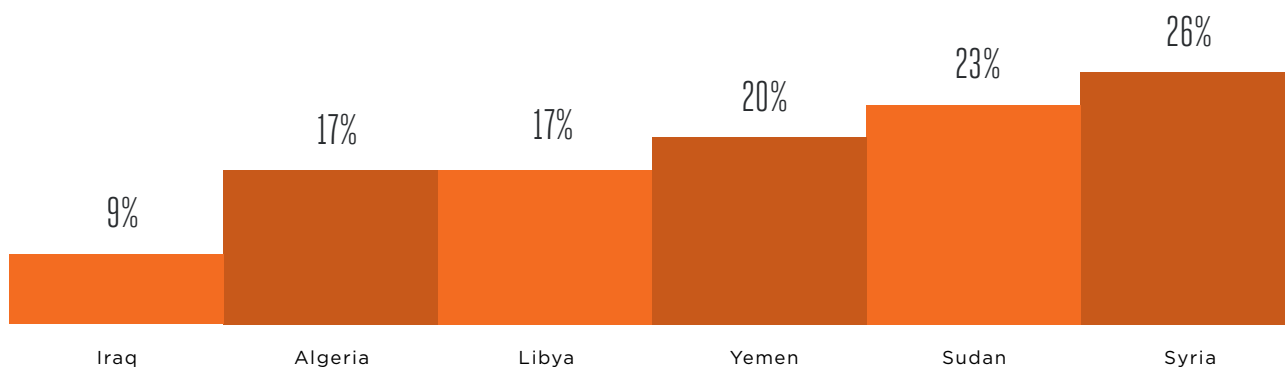
There has been an explosion in the number of mobile subscribers and connections in the Arab States over recent years. Unique subscriber penetration rates are now above the global average and the region is also seeing increasing adoption of smartphones and other connected devices. The general availability of mobile services has changed the way people live, and brought communications services to previously unconnected populations. However, beyond the provisions of basic communications services, mobile technology has a key role to play in social and economic development across the region, and particularly in developing countries.

However, for the full potential of mobile to be realised, populations need access to mobile broadband networks, and affordable devices and services. A number of the Gulf States have some of the world's highest levels of internet and smartphone penetration rates, which have grown significantly over recent years. Mobile networks have made a significant contribution to these trends, given the relative lack of fixed line infrastructure in the region.

However, despite the significant progress of recent years, there remain large populations in the region who still do not have internet access, particularly in the more developing economies of North Africa. The following chart shows six countries where, on average, well under 20% of the population has internet access.

Source: World Bank

### Internet penetration in selected countries



Mobile will be the key technology to help connect these still unconnected populations in the region, particularly in bridging the digital divide and delivering internet access. In particular, mobile broadband has the potential to transform access to jobs and education in these countries; a number of studies have shown that broadband access is a key driver of job creation and economic growth.

Mobile internet access can create a virtuous cycle in developing countries. In the first instance, mobile connectivity using simpler feature phones can provide communications and basic services to currently disadvantaged populations. Indeed, as mobile networks become more ubiquitous, penetration rates are often higher than those for other basic services, including utilities, education and banking. As a result, mobile can act as an enabler when other traditional delivery mechanisms fall short. It is already being used to provide underserved populations with information and services in areas including education, health care, and financial services (examples of the use of these services in the Arab States are discussed later in the report).

Moving forward, access to higher speed networks and more advanced smartphones allows users to

use a broader range of services, with benefits for individuals, businesses and governments. Mobile is already delivering a range of innovative new services and applications across the more developed economies in the region, including mobile commerce and smart city solutions.

There are four key barriers to increasing the availability and uptake of mobile internet services:

- **Infrastructure and networks: increasing network coverage to currently unserved areas;**
- **Affordability: improving the affordability of mobile internet services;**
- **Consumer barriers: including digital literacy and awareness;**
- **The availability of local content: content that is both local language and locally relevant.**

Mobile operators and the wider ecosystem, including device and equipment manufacturers, are working towards the goal of connecting the still unconnected populations across the world. However, there is also an important role for governments and other industry stakeholders to play in addressing these barriers.

## 2.1 Infrastructure and networks: improving coverage is key

Whilst 2G mobile coverage is relatively ubiquitous in the region, and 3G and increasingly 4G networks have been built out extensively in many of the Gulf States and a number of markets in North Africa, there remain significant populations in the region who still are not covered by higher speed networks. Many of the still unconnected populations live in rural areas, where the lack of electricity infrastructure and low road density can also impact on efforts to extend network coverage

More generally, minimal levels of urbanisation correspond directly to low subscriber penetration in several of the least developed countries in the region, such as Yemen and South Sudan. An additional hurdle for improving coverage in a number of countries is their sheer geographic scale and often challenging environmental conditions.

### 2.1.1 Measures to improve network coverage: the industry players

Operators in a number of countries across North Africa are already employing a wide range of innovative solutions to help improve access in remote and often inaccessible areas. These include the growing use of ‘green’ solutions such as solar, wind, water, biomass and fuel cells. Such alternatively powered cell sites can significantly reduce the cost of using diesel, often the main power source in areas of the main electricity grid, and so help extend coverage to more remote areas on a more cost-effective basis.

Network sharing is another solution that can help reduce the cost of extending network coverage, particularly into remote or geographically challenging areas. Network sharing can also have a role to play in helping to increase capacity in urban areas, particularly where operators are looking

to deploy small cell technology. While network sharing deals have to date been more common in Sub-Saharan Africa, there are several independent tower companies offering their services to operators across the region and signs of a number of operators in North Africa looking to use them.

Several operators in the region, in conjunction with the GSMA, announced an agreement in early 2014 to “cooperate on network sharing initiatives” and “to help to provide mobile broadband access to unserved rural communities and drive down the cost of mobile services for all sections of the population”<sup>9</sup>. Amongst the operators with a presence in the Arab States that supported this agreement were Etisalat, Ooredoo, Orange, STC, Vodafone and Zain.

9. <http://www.gsma.com/newsroom/gsma-and-operators-mobile-access-affordability-across-africa-and-the-middle-east/>

## 2.1.2 Measures to improve network coverage: governments and regulators

Whilst operators are starting to address the coverage challenge, there are measures that can also be taken by governments and regulators to help support the goal of improving mobile broadband coverage. These particularly relate to issues around spectrum management, network sharing and proposals for single wholesale networks (SWN).

### A) SPECTRUM MANAGEMENT AND RELEASE OF THE DIGITAL DIVIDEND SPECTRUM BANDS

The timely release of spectrum to accelerate mobile broadband deployments, particularly the Digital Dividend spectrum, can play an important role in helping to facilitate network deployments. Lower frequency bands in particular (the 700MHz and 800MHz bands) have broadest geographical coverage and are therefore more cost-effective in providing coverage to wider areas. The spectrum management policies of countries in the region are therefore key to helping realise the potential of mobile broadband, particularly in the countries which to date have seen the lowest levels of mobile broadband uptake.

### B) REGULATORS SHOULD FACILITATE VOLUNTARY NETWORK SHARING

The GSMA believes that regulators should facilitate voluntary network sharing by operators by easing planning controls to encourage shared fibre transmission facilities, including preferential access along roads and other state property. Furthermore, registered providers (including third party tower companies) should be permitted to construct and acquire passive infrastructure and then sell access to operators.

### C) REGULATORS SHOULD NOT IMPOSE SINGLE WHOLESALE NETWORKS

Regulators and governments in a number of developing markets are looking at the creation of 'single wholesale networks' as a policy tool, particularly to deliver mobile broadband networks. No SWN has as yet been implemented and some of the proposals differ in the detail. However, this would represent a radical departure from the existing model of competing networks and there are a number of concerns as to how a SWN would operate in practice. The challenges around SWNs and the GSMA's perspective on this topic are discussed in more detail in the final section of this report.

## 2.2 Improving the affordability of mobile internet access

Unconnected populations in developing regions often have low income levels. According to the United Nations, nearly half the global population, 2.8 billion people, live on less than US\$2 a day, which represents the poverty line in developing nations. Even with the declining prices of mobile data plans and devices, connectivity remains beyond the reach of many, particularly those who must prioritise food, shelter, clean water and energy over access to the internet.

Research by the World Bank found that the proportion of the population in the broader MENA region living in poverty fell to 25% by 1987, but has subsequently stayed broadly flat in the 20-25% range<sup>10</sup>.

### 2.2.1 Measures to improve affordability: industry players

Falling device prices have played an important role in improving the affordability of mobile services, with smartphone penetration rising across the world. However, smartphone penetration remains relatively low in many less developed countries in the region, remaining a key obstacle to accessing the mobile internet and, in particular, more advanced services and applications.

Smartphone adoption will be helped by ongoing declines in handset pricing. However, with the smartphone average selling prices still standing at US\$293 in 2013, such devices remain unobtainable by the vast majority of the population in developing countries. Mozilla has announced plans to bring a low cost smartphone to developing countries, with the company announcing in 2013 plans to launch a new device in the sub-US\$50 range through collaboration with a number of handset manufacturers and operators. The company has recently announced that it will begin marketing a device priced as low as US\$25 in a number of markets including India and Indonesia before the end of 2014<sup>11</sup>.

Operators have also played a role in improving the affordability of mobile services, particularly with regard to mobile data and internet access and the challenge of making these services available to low income consumers on prepaid tariff plans<sup>12</sup>. For example, a range of flexible tariffs are now available from operators focusing on mobile data, that allow users to access the internet for a period of time or alternatively allow access to a particular web property.

10. <http://web.worldbank.org/WBSITE/EXTERNAL/NEWS/0,,contentMDK:20895344-pagePK:34370-piPK:34424-theSitePK:4607,00.html>

11. <http://online.wsj.com/articles/mozilla-to-sell-25-smartphones-1402466959>

12. <https://gsmaintelligence.com/files/analysis-subscription/?file=131205-prepaid-data-tariffs.pdf>

## 2.2.2 Measures to improve affordability: governments and regulators

Taxation of mobile services remains significant in many emerging markets, including a number across the Arab States. A recent study by the GSMA found that across a sample of 19 countries,

US\$ 3 out of every US\$10 of mobile revenues was transformed to the government in the form of taxes, regulatory fees or other charges<sup>13</sup>. Examples of highly taxed mobile countries in the study include Jordan, Tunisia and Egypt, all of which have a mobile service's burden of over 30%. These high levels of taxation add significantly to the cost of services for consumers, so proving additional obstacles to the

goal of delivering more affordable mobile services to currently underserved populations.

High taxes and fees hold back the growth of mobile services and the economic benefits they offer. Previous research has found that as mobile services become more affordable, for example, via reductions in the taxes and fees burden, the impact on economic growth is sufficiently high to offset, in the medium term, the direct negative effect on tax revenue. Based on analysis by the GSMA, a number of priority areas for reform have been identified, which are detailed in the final section of this report.

## 2.3 Consumer barriers: improving digital literacy and awareness

Populations that currently have limited mobile and internet access often also have low levels of literacy. Research published by the International Telecommunication Union (ITU) in 2012 showed a positive correlation between digital literacy (encompassing both basic literacy in the traditional sense but also the skills needed to use and access technology) and levels of internet access. There are additional and related challenges for some population segments ranging from a lack of basic awareness of the existence of the internet to a lack of knowledge of how to use and access the internet.

There are a number of initiatives in the region aimed at improving digital literacy rates, although to date, many are computer rather than mobile-based. Examples of initiatives include the Community Development Portals in Egypt which aim to educate individuals and help them improve their lives through the use of ICT. The service was first

launched in 2004 under the name 'Keena Online', with a number of related portals developing subsequently that focused on specific topic areas<sup>14</sup>.

Ooredoo has launched a number of initiatives in its markets to help young people develop their skills and fulfil their ambitions<sup>15</sup>. An example is the Najja7ni ('Make Me Succeed') platform of mobile services in Tunisia (a country that suffers from high levels of youth unemployment) which aims to provide a range of employment and education services to young people.

Operators can play an important role in spreading awareness, for example, by using existing sales forces, mobile money agents and other in-built distribution channels. Initiatives from operators that have helped women increase their knowledge of ICT and mobile usage are discussed later in this report.

13. [http://www.gsma.com/publicpolicy/wp-content/uploads/2014/02/Mobile-taxes-and-fees-A-toolkit-of-principles-and-evidence\\_fullreport-FINAL1.pdf](http://www.gsma.com/publicpolicy/wp-content/uploads/2014/02/Mobile-taxes-and-fees-A-toolkit-of-principles-and-evidence_fullreport-FINAL1.pdf)

14. <http://www.oecd.org/internet/ieconomy/50305352.pdf>

15. <http://www.ooredoo.com/en/news/media/news/ooredoo-launches-series-initiatives-enable-arab-youth-reach-aspirations.html>

## 2.4 Improving the availability of local content

Despite high levels of social media engagement and internet usage across the Gulf States, there is a clear lack of local language digital content. Arabic digital content represents only 0.2% of the total of global online digital content, and the total number of websites hosted in the broader Middle East and North Africa (MENA) region is less than 2% of the global total<sup>16</sup>. Much of both the digital content and mobile applications currently available in the region are both focused on more developed markets and largely English-language based. Increasing the amount of content that is both locally relevant and more accessible (i.e. produced in locally relevant languages such as Arabic) will be a key factor in driving further internet penetration in the region.

There are encouraging signs of progress in developing content that is both more relevant to consumers in the region and also more accessible by being produced in local languages. For example, a number of the global internet players are beginning to take a more active role. Yahoo! acquired Maktoob in 2009, which at the time was the region's largest internet portal. Google is also becoming more active in a number of countries, particularly those of the Gulf Cooperation Council (GCC), and remains the region's largest search engine.

However, the strong growth in both online and mobile internet access is driving digital media consumption, which in turn should provide an attractive market place for monetising both new and existing content. New start-ups and entrepreneurs typically play an important role in developing online and mobile content, and there are signs of activity in this area improving. There is also support from regional government initiatives in providing funds

for digital entrepreneurs, with examples such as twofour54 and Ibtikar in the UAE, Oasis 500 in Jordan, and the digital cluster of the government's ictQATAR among others<sup>17</sup>. The digital cluster in Qatar includes a Digital Incubation Centre that helps entrepreneurs set up their own businesses. Twofour54 has two initiatives, one that offers funding to new ideas originating in the Arab World, and Apps Arabia, which invests in new mobile applications.

Mobile operators themselves are looking to help develop a broader ecosystem to deliver digital content. A number have launched their own app stores, including Mobily's Universal app store that aims to offer a growing range of Arabic apps. In addition, operators and other ecosystem players (such as device manufacturers) are offering training and other support to local app developers.

16. <http://www.worldbank.org/en/region/mena/publication/broadband-networks-in-mna>

17. <https://www.deloitte.com/assets/Dcom-Lebanon/Local%20Assets/Documents/ME%20PoV/ME%20PoV%20issue%207/Media.pdf>

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# 3 Social and economic impact of mobile in the Arab States

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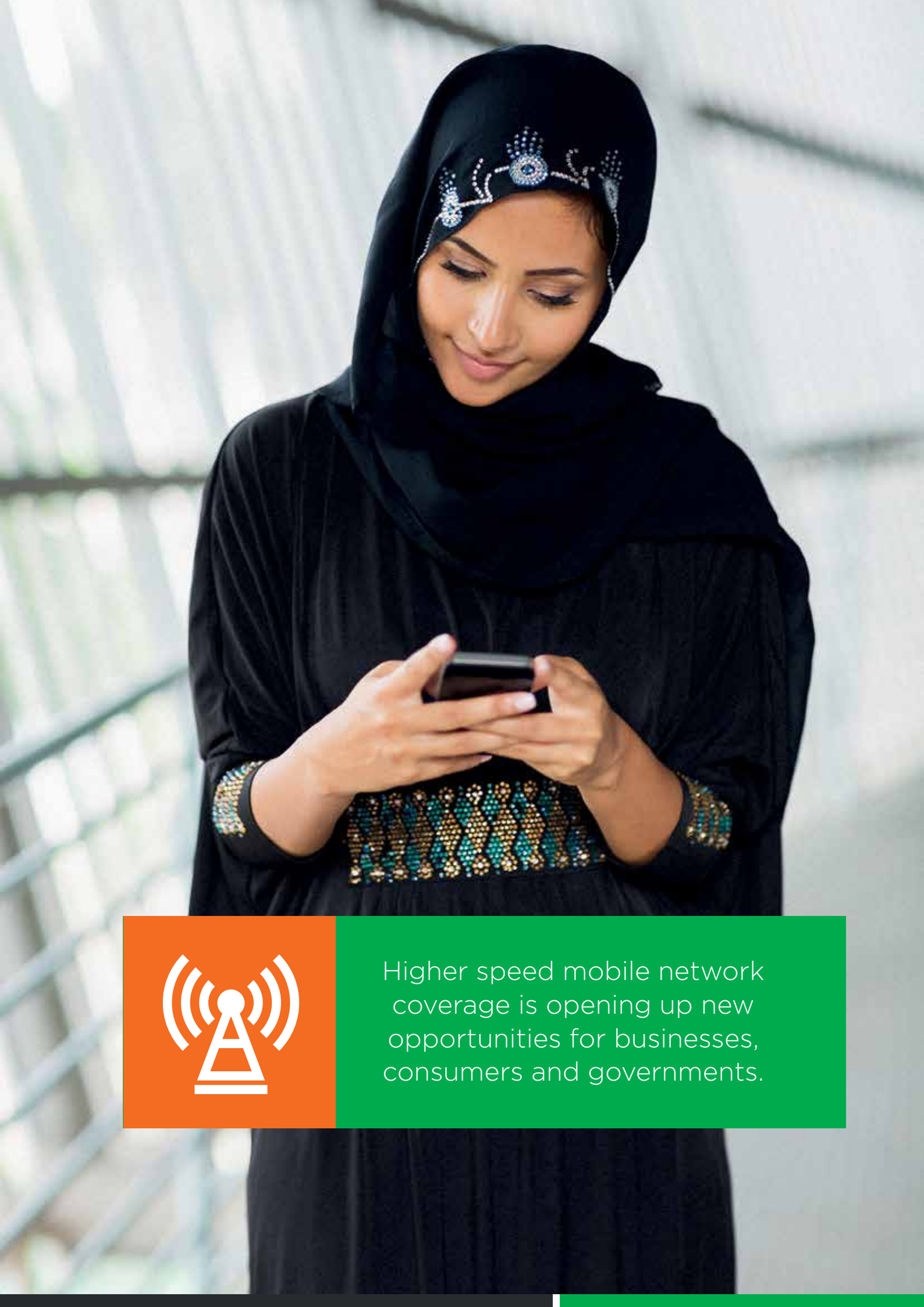
The widespread availability of mobile devices and higher speed mobile network coverage is opening up new opportunities for businesses, consumers and governments. Mobile already makes a significant contribution to the social and economic development of the Arab States, while the broader mobile ecosystem is delivering a range of innovative new services and applications. These range from mobile commerce and smart city solutions in the more developed Gulf States; to facilitating access to more basic services, including delivering financial inclusion in some of the more developing countries in North Africa.

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However, overall the Arab States are still at a relatively early stage of development in terms of realising the transformative potential of mobile technology, particularly with regard to the potential of more advanced services delivered by higher speed mobile broadband networks.

The region also faces a number of specific social, economic and public services challenges. In certain countries, these challenges are becoming particularly

acute as a result of some of the highest levels of unemployment and a most youthful population of any region in the world. Conflicts and ongoing political instability in several countries are further exacerbating some of these existing challenges. This section of the report explores the role of mobile in addressing a number of these issues and barriers.



Higher speed mobile network coverage is opening up new opportunities for businesses, consumers and governments.

### 3.1 The mobile ecosystem makes a significant contribution to economic growth in the region

The mobile sector makes a very significant contribution to the region's economy (4.4% of GDP in 2013). This overall impact includes a direct contribution from mobile network operators of US\$35 billion (1.3% of GDP); a contribution from directly related industries such as handset manufacturers and mobile content providers of US\$10 billion (0.3% of GDP); and an indirect contribution from induced activity in the rest of the economy of US\$9 billion (0.3% of GDP).

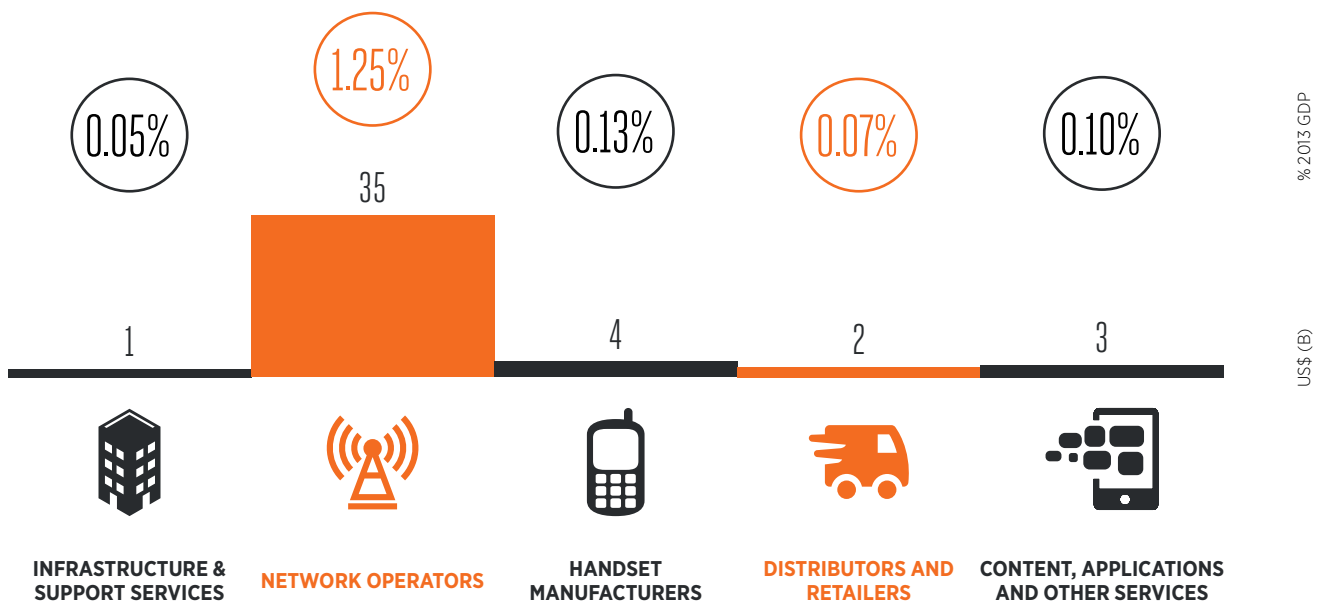
Additionally, the increased productivity brought about by the widespread use of mobile technology in businesses and by workers generated an additional US\$68 billion in 2013, or 2.4% of GDP.

The direct economic impact of the mobile ecosystem (operators and related industries) is measured by the value that is added to the economy, which is equivalent to the payment of wages, tax contributions and business profits by the industry<sup>18</sup>.

Source: GSMA Intelligence

#### Direct GDP contribution of the mobile ecosystem

(US\$ B, % 2013 GDP)



18. Value added by the sector can also be approximated as the difference between the value of sales made by the sector and the direct cost of making these sales.

Further to the direct economic impact, the income generated by the mobile industry has a multiplier effect on the rest of the economy. This is because a significant proportion of the wages, taxes or profits paid out by the industry are subsequently spent across other sectors of the economy. This results in other economic sectors also benefiting from the value added generated by the mobile ecosystem. It is estimated that this effect resulted in the generation of additional economic activity of US\$9 billion in 2013.

Finally, and in addition to the direct and indirect contribution to GDP by mobile network operators and the mobile ecosystem, an additional 2.4% in GDP was generated from the increased productivity brought about by the widespread use of mobile technology across other sectors of the economy. Mobile technology facilitates productivity improvements for many workers and businesses, for example, by speeding up access to information, allowing better decision making in the sales process, reducing unproductive travel time, and facilitating improved logistics for businesses and workers in services, manufacturing and agriculture.

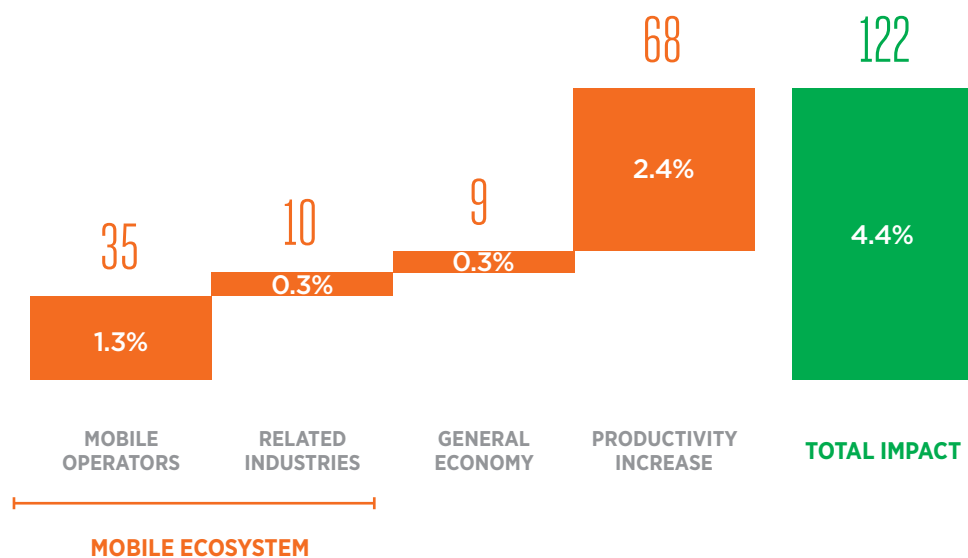
This productivity impact is estimated to have already contributed US\$68 billion to GDP in 2013. There is further untapped potential for this to rise in the future if mobile can support an increase in the penetration of e-commerce and support the internationalisation of local companies by reducing costs to market and facilitate sales outside the country.

Overall, the mobile industry contributed US\$122 billion to the region's GDP or 4.4% of the total in 2013.

Source: GSMA Intelligence

### Total (direct & indirect) contribution to GDP

(US\$ B, 2013)



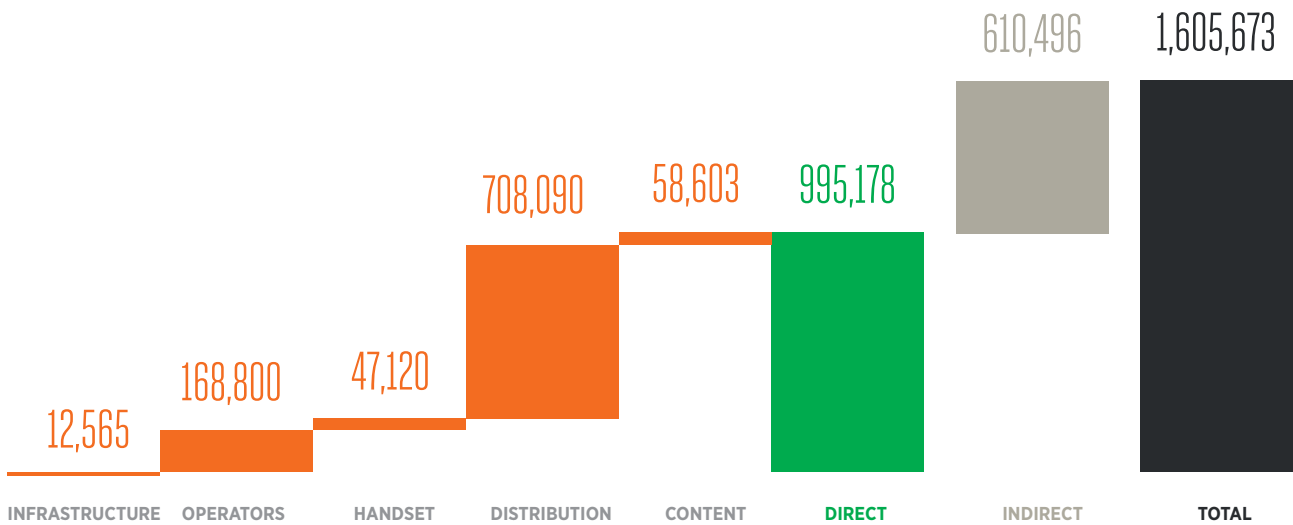
In 2013, the mobile industry provided direct employment to nearly one million people in the region. A large number of these direct jobs was supported in distribution and retail services, with approximately 700,000 employees, many of which small retailers involved in selling pre-pay and other mobile-related products and services. A significant proportion of jobs was provided by network operators, with approximately 170,000 persons directly employed in the industry. There were smaller, but also significant, numbers of jobs in the areas of content and services, infrastructure provision and handset manufacturing.

In addition to the employment that is sustained within the industry and its most immediate supply chain, further jobs were also indirectly supported in the rest of the economy as wages, public funding contributions and profits paid by the industry are re-spent elsewhere in the economy, supporting additional jobs in other sectors. It is estimated that approximately 600,000 jobs were indirectly supported in this way, bringing the total impact (both direct and indirect) of the mobile industry to 1.6 million jobs in 2013.

Source: GSMA Intelligence

## Jobs directly and indirectly supported in Arab States

2013



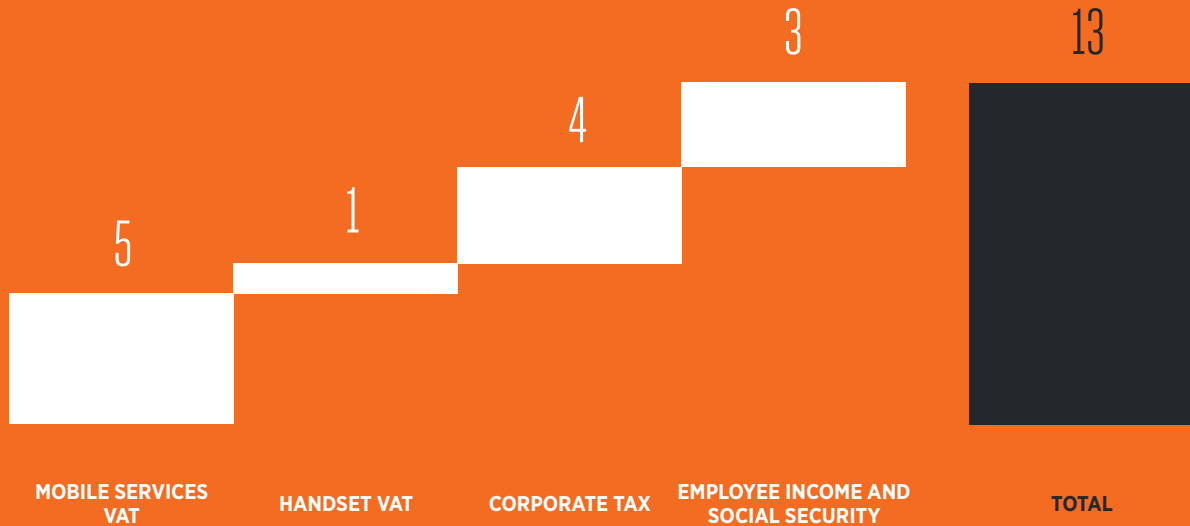
The mobile industry also makes a very significant contribution to public funding in the region, even before considering the revenues that are generated to the public sector from spectrum auctions and other regulatory fees. Considering only the

contribution made through general taxation—which for most countries in the region includes sales tax, corporation tax, income tax and social security—it is estimated that the sector made a contribution in 2013 of around US\$13 billion.

Source: GSMA Intelligence

## Tax contribution by the mobile industry

(US\$ B, 2013)



In addition to the mobile ecosystem's contribution to public funding through general taxation, operators also support public finances through the payment of mobile-specific taxes in a number of countries. For example, Saudi Arabia imposes a number of royalty-style taxes on operators' net revenues, in the form of a commercial services provision (15% of net revenues) and a licence fee (1% of net revenues). It is estimated that in 2013 such mobile-specific taxes raised over US\$3 billion in Saudi Arabia alone.

Finally, mobile network operators in the region make even further contributions to public finances through the payment of fees for the allocation of spectrum. For example in 2014, the allocation and renewal of spectrum licences generated approximately US\$350 million in Jordan.

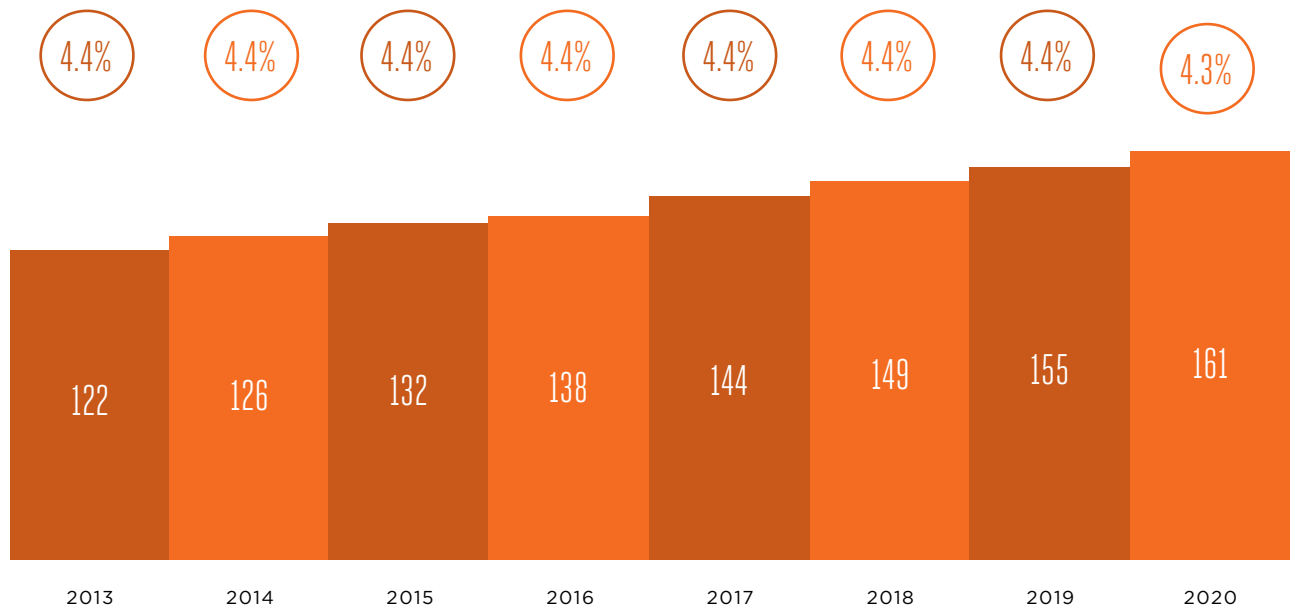
### 3.1.1 Outlook to 2020

Going forward, the mobile industry will continue to increase its contribution to economic activity and job creation in the region. By 2020, it is estimated that the mobile ecosystem will contribute US\$161 billion to the region’s economy, up by almost a third from its contribution in 2013 of US\$122 billion. Despite the strong growth in the industry value added, it is expected the industry’s relative contribution to the region’s overall GDP will remain fairly stable over the period (at around 4.4%) as a result of the strong growth projected in other sectors of the economy, especially in the Gulf States.

Source: GSMA Intelligence

Arab States, total economic contribution 2013 to 2020

US\$ B



In line with the predicted growth in GDP contribution over the period, the number of people employed by the industry is also expected to experience significant growth, reaching 1.4 million by 2020. The public funding contribution will reach US\$18 billion by 2020 if tax rates remain at current levels.

## 3.2 Mobile facilitating the growth of social media

Consumers across the Arab States are also rapidly taking to social media. Additionally, the accelerating rate of smartphone adoption means that access to social media is increasingly delivered by smartphones and mobile networks:

- **There were over 55 million Facebook subscribers across the MENA region by the end of May 2013<sup>19</sup>, with 28 million logging on a daily basis, and over half doing it from a mobile device;**
- **The MENA region has the second highest consumption of YouTube worldwide. Saudi Arabia is the regional leader with the highest level of viewership in the world, at over 90 million daily views. Over half of all views in Saudi Arabia are on mobile devices, while the figure for the UAE is over 40%.**

The rapid adoption of social media has the potential to deliver profound changes in the region, having already played a role in the 'Arab Spring', and can also deliver more inclusive and accessible forms of government. As the World Bank stated 'social networking tools have the potential to enhance citizen engagement in the region, promote social inclusion, and create opportunities for employment, entrepreneurial activities, and social development'<sup>20</sup>. There are some early signs of governments looking to take advantage of these trends with, for example, the UAE's e-government strategy which aims to deliver services through a range of different channels including mobile phones.

## 3.3 The Internet of Things in the Arab States

There are a number of hurdles facing communities and governments across the region. These arise from high levels of population increase and rapid urbanisation, and the challenges this brings in moving to a more sustainable growth path. These issues in some countries are becoming increasingly acute as political disruption and conflicts are further exacerbating existing problems such as access to basic services, including healthcare and education.

The Internet of Things (IoT) will offer a range of innovative new services to consumers whilst also helping to address some of these broader

challenges. The GSMA's vision for the IoT is the 'Connected Life'. The term 'Connected Life' refers to a world in which consumers and businesses use many different devices to experience compelling new services and ubiquitous internet access delivered via mobile networks. These devices include the next wave of smartphones, tablets and consumer electronics, as well as machines, vehicles, monitors and sensors equipped with machine-to-machine (M2M) communications.

19. <http://www.digitalqatar.qa/en/wp-content/uploads/sites/2/2014/01/info-graphic-PNG.png>

20. <http://www.worldbank.org/en/region/mena/publication/broadband-networks-in-mna>

21. The GSMA Intelligence M2M connections data used in this report refers exclusively to a SIM connection that enables mobile data transmission between machines. It does not count SIMs used in computing devices in consumer electronics such as smartphones, dongles, tablets, e-readers, routers and hotspots

### 3.3.1 Growth in the M2M market in the region set to accelerate

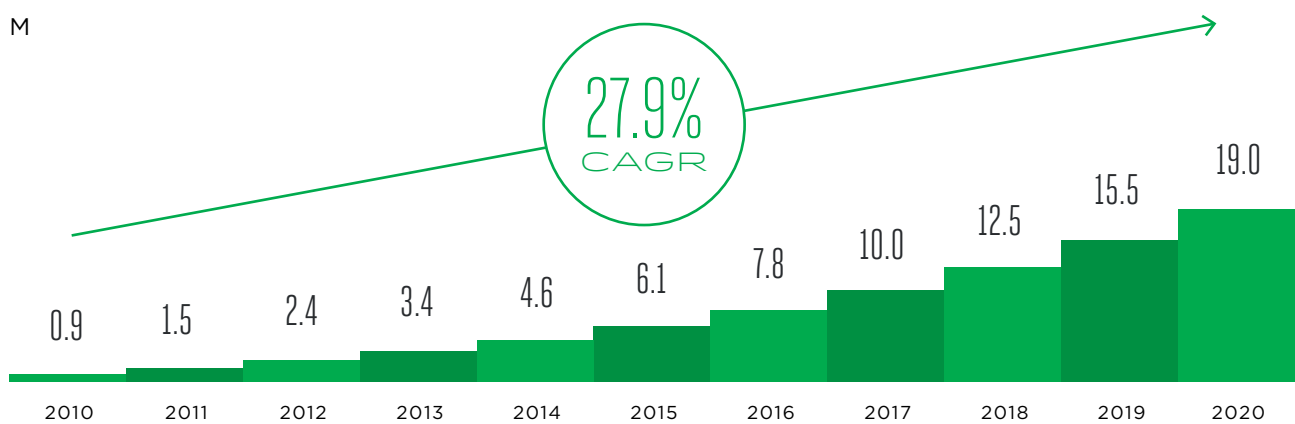
The M2M market is still at a relatively early stage of development in the Arab States, although its transformation potential has clearly been recognised by several operators and governments, with signs that the number of active deployments is beginning to accelerate.

The IoT could play a pivotal role as a number of the oil-rich countries in the region look to transform themselves into technology-led economies. In the lower income countries of North Africa, IoT related services have the potential to extend access to basic services to previously underserved populations.

Across the region as a whole, there were 3.4 million M2M connections at the end of 2013<sup>21</sup>, representing 1.2% of the global connections total at that date. However, growth is set to accelerate, with the total number of M2M connections growing at a CAGR of 28% out to 2020, bringing the total to around 19 million by that date. These cellular M2M forecasts reflect the current trajectory that the market is taking based on known and tangible deployments, opportunities and growth inhibitors for each operator and M2M sector.

Source: GSMA Intelligence

#### Arab States M2M connections



There are upside scenarios to these forecasts if a number of these growth inhibitors are addressed by industry players, regulators and governments over the coming years, as highlighted in recent research by GSMA Intelligence<sup>22</sup>. The areas identified as possible growth stimulators and that are of particular reference to the Arab States include the following:

- **The introduction of additional government policies enabling a wider deployment of cellular M2M connections in key sectors such as utilities, smart cities, automotive and healthcare.**
- **The development of new operator business models in the M2M space, particularly those that move beyond simply providing the mobile connectivity.**

22. <https://gsmaintelligence.com/analysis/2014/9/cellular-m2m-forecasts-and-assumptions-2010-2020/446/>

Addressing these growth inhibitors, both at a regional and global level, could see growth rates similar in future to those witnessed over the past few years, which could result in an uplift over the current trajectory forecasts ranging from 30% to 50%.

The fastest growing industry sectors in the region are in the areas of transport and automotive, in and particularly fleet monitoring and telematics. However, deployments are also gaining traction in other areas as for example cities look to move their

growth to a more sustainable footing. A number of the major cities of the region are now beginning to deploy contactless transport and ticketing systems, as governments seek to exploit new payment technology to improve the efficiency of their transport systems. M2M connections are also used in security solutions, and play a role in the region's oil and gas industry in areas such as remote monitoring. Other focus areas of activity include utilities, health and education.

Some examples of deployments in the region are as follows:

- **STC began offering connected car services in 2011, as part of the company's 'Quicknet' service which provided connectivity to BMW 7 series vehicles. This was a three stage process that progressed from using Bluetooth to provide connectivity for smart devices, to building a platform that allowed BMW drivers to access a range of services including road side assist and other infotainment services.**
- **The Emirates Energy Star (ESS) programme in Dubai aims to reduce carbon emissions in the Emirate by using smart building technology to reduce energy usage<sup>23</sup>. By the end of 2012, over 140 building developments had connected to the Command and Control Centre, which monitors energy-usage in real time and allows the active management of a building's heating, ventilation, lighting and air-conditioning systems 24 hours a day. The goal is reduce a building energy consumption by 30%, with the first year's saving estimated at 19% of aggregate energy usage.**
- **There are a growing number of smart grid and smart metering deployments. Dubai has initiated its 'Smart Meters and Networks' initiative, a five year plan that aims to over 250,000 meters in both residential and commercial properties. In Qatar, the General Electricity and Water Corporation (Kahramaa) recently began the first phase of a key project to install smart water meters throughout the country.**

- **Du has launched its 'MyHealth' portal, an integrated health records (IHR) service that allows users to access their health records and other health services online, as well as via mobile devices. Records can also be viewed by health professionals who are authorised to do so.**
- **A number of operators in the region have launched services that send individuals health tips and advice for healthier living. One example is Du's 'Health Text' service that offers SMS based tips and factoids to help users make healthy lifestyle services.**
- **The 'Mobile Doctors' service in the UAE aims to address the challenges of limited primary care services throughout the GCC<sup>24</sup>. The service allows users to access both English and Arabic-speaking health professionals on a 24 hour basis, offering a range of services ranging from consultations with doctors to access to health records and healthy living tips. The service is already active in the UAE and Qatar, and plans to further expand across the region into Saudi Arab, Bahrain, Kuwait and Oman.**

Following the trends evident in the M2M industry across the world, operators across the Arab States are joining international alliances and partnerships in order to increase both the range of services on offer and their geographic reach. For example, Etisalat's Saudi operation (Mobily) became the latest regional operator to sign an agreement with Jasper Wireless; with Jasper having a particular focus on supplying applications to the automotive sector in the region.

23. <http://wirelesstechnologyforum.org/wp-content/uploads/2014/05/GSMA-Smart-City-Case-Study-Dubai.pdf>  
 24. <http://www.mobiledoctors.ae/our-connected-community/>

## 3.3.2 The importance of government and regulatory support

As discussed previously, governments and regulators have an important role to play in looking to further stimulate the growth of M2M services and the deployment of new services and applications in the region. For example, mobile health has the potential to play a significant role, with chronic and lifestyle related diseases on the rise in the more affluent states of the GCC, whilst in North Africa, many still lack access to even basic health services. Even some of the wealthier countries in the region suffer from a shortage of trained staff, highlighting the potential for mHealth services to improve the delivery and reach of health services. However, despite the clear potential, mHealth services in the region are still at an early stage of development.

The UAE's Ministry of Health has announced a partnership with both Etisalat and Du to develop a range of mHealth services covering areas such as remote monitoring and diagnosis, particularly for chronic diseases such as diabetes and obesity, as well as health education services. This agreement forms part of the UAE's wider Vision 2021 that aims to both deliver healthier lifestyles as well as improved access to health services for the local population.

The government in Qatar has developed its 'National Vision 2030', which aims to deliver sustainable development for the country and to diversify its economy away from its historic reliance on oil. Smart city services and M2M deployments are likely to play a key role in delivering this vision, with Vodafone Qatar and Netcom Wireless recently announcing a partnership aimed at helping to realise these goals.

### 3.3.3 The role of the GSMA in realising the potential of the IoT

The initial focus of the Connected Living programme is to address key barriers and challenges that are prohibiting the development and growth of M2M/IoT connections and services across the world. This will be achieved by industry collaboration and appropriate regulation, as well as by developing key enablers to support the growth of the M2M market and new services and applications.

- **The GSMA works with its ecosystem partners to establish guidelines for how machines should communicate via the mobile network and in the most intelligent and efficient way. The goal is to define future network requirements and capabilities that are required to allow operators to support IoT devices and services.**
- **The GSMA's vision is to unite all industry stakeholders behind a single, common embedded SIM specification to help accelerate the growth in M2M connections. The GSMA recently announced an agreed specification for a machine (embedded) SIM<sup>25</sup> that addresses remote provisioning requirements. The Embedded SIM specification project has the support of a number of the world's leading mobile operators.**
- **The GSMA is working on a range of business enablers that aim to create a sustainable regulatory and policy environment that enables operators to deliver the consumer and business benefits of the IoT.**
- **The GSMA is also working to identify and develop enablers that will support future network capabilities such as in the areas of end-to-end security, non-GSM device authentication and billing and charging.**

The GSMA also engages with partners across the broader ecosystem to help drive adoption and to facilitate the development of new services in markets including automotive, health, utilities and transportation. In the automotive field, the GSMA automotive special interest group allows automakers and mobile operators meet to share information and enable industry cooperation, with the goal of resolving barriers to connected car deployments and to speed the adoption of telematics and infotainment services. There are also active special interest groups for health and education, utilities and transportation.

25. <http://www.gsma.com/newsroom/gsma-publishes-embedded-sim-m2m-services/>

## 3.4 Digital commerce showing strong growth in the Arab States

Digital commerce is beginning to gain traction in the Arab States as individuals across the region are moving away from a traditional reliance on cash-based transactions. The growth of digital commerce is primarily a feature of the more developed countries in the region, especially the Gulf States, whilst for example in the less developed economies of North Africa, mobile money is playing an important role in delivering financial inclusion and convenience to previously unbanked sections of the population.

The Gulf States have amongst the highest global per capita internet penetration levels, with penetration rates having seen significant growth over the last decade. The region is also wealthy, with GDP per capita across the states of the GCC<sup>26</sup> in line with levels in the European Union. Combined with a young and growing population (with a median age under 25), online spending in the region is showing strong growth.

In 2012, US\$3.2 billion was spent by online shoppers in the GCC<sup>27</sup>, and new retail formats are gaining share in a rapidly growing retail market in the region. PayPal has estimated that in the broader MENA region, e-commerce will reach US\$15 billion by 2015, more than double the equivalent figure in 2011, by which time the company expects mobile commerce to account for more than 20% of the total<sup>28</sup>.

These trends reflect the growing consumer confidence and trust in both card payments and by extension online payment systems, with fraud having traditionally been a major concern for users in what has traditionally been a very cash-based economy. The prevailing payment method for major purchases has been 'cash on delivery' (COD), whilst there are relatively low levels of credit card penetration in the region.

A number of global players are establishing a presence in the region in reaction to the strong growth outlook. PayPal, the leading global payments provider, announced plans to enter the region in late 2012 (mainly the Gulf States), but by mid-2014 had

only around 500,000 active users<sup>29</sup>. The challenges of overcoming the traditional COD model and an inability to make local payments having been cited as issues.

However, these challenges also highlight the potential for effective mobile commerce and mobile payments services going forward. Rapid smartphone adoption across the Gulf States, combined with the ongoing migration to higher speed mobile broadband networks, will drive the increasing growth of mobile commerce. For many young consumers in the region, their first experience of online shopping will inevitably be mobile, using smartphones and tablets.

Recent research indicates that the UAE, Saudi Arabia and Qatar are the regional leaders in mobile commerce, with mobile accounting for 10% of all online transactions in these markets.<sup>30</sup> This figure is forecast to increase to 20% by 2015. Many smartphone owners already review potential purchases online before making a purchase in store, but the proportion of purchases made online is likely to increase over time.

Jordan provides a good example of a market where the authorities have taken a clear strategic view on the potential for digital commerce and in particular mobile payments, and have taken action to address issues such as collaboration and interoperability between different payment systems.

26. The Arab States of the Persian Gulf, with the exception of Iraq

27. [http://www.visamiddeast.com/me/common/include/uploads/ecommerce\\_apr2013.pdf](http://www.visamiddeast.com/me/common/include/uploads/ecommerce_apr2013.pdf)

28. [http://static.wamda.com/web/uploads/resources/24-09-2013\\_FINAL-low\\_res.pdf](http://static.wamda.com/web/uploads/resources/24-09-2013_FINAL-low_res.pdf)

29. <http://online.wsj.com/news/articles/SB10001424052702304198504579573383594757594>

30. <http://www.wamda.com/2013/09/paypal-e-commerce-report-middle-east>



In Jordan the government is looking to boost the adoption of mobile payments by passing a new 'e-transactions' law and through the implementations of the Jordanian 'Mobile Payments project'. This allow mobile phone subscribers living in the kingdom to open a mobile wallet, either directly with the mobile operator or with local banks and other service providers. Users will be able to use the mobile wallet to make small purchases and to make withdrawals from ATMs. The Central Bank of Jordan plans to expand the role of mobile payments to include benefits payments (including for example fuel subsidies which are currently paid in cash) and international transfers.



A number of operators are focused on developing new services and applications, particularly with signs of increasing Near Field Communication (NFC) adoption in the region. A young and relatively technology savvy population suggest a clear appetite for tap and go services, whilst there are also signs of increasing investment in the supporting hardware and infrastructure (particularly around point of sale) that is a prerequisite for more widespread mass market services.



In September 2013, Dubai saw the launch of the Smart Nol service<sup>31</sup>, which enables a passenger to open the ticket barrier by tapping their NFC-enabled handset against a reader. The service enables users to store credit on a virtual Nol account stored on the phone's SIM card. The service was developed by Dubai's Roads and Transport Authority (RTA) in conjunction with the Emirate's two mobile operators, Etisalat and Du. This

new service removes the need to use the normal Nol plastic card, of which there are currently over six million in use in Dubai. The RTA announced at the end of 2013 that the service would be extended to paying taxi fares, and has plans in the future to expand the service to allow payments for services in shops and restaurants. Etisalat says Smart Nol has seen "impressive immediate service take-up", and the mobile operator's goal is to have 100,000 of its customers using the service in its first year of launch.



Mashreq bank is now offering its credit card customers in the UAE an NFC sticker for their phones which allows customers to make small purchases of under 100 dirhams (US\$27) at more than 4,000 contactless payment terminals in the Emirate.



In Egypt, the Phone cash mobile wallet was launched in 2013 by Mastercard in partnership with the National Bank of Egypt, Fawry and Etisalat. The service is available to both banked and unbanked customers, and allows users to pay for goods and services both online and in stores, as well as to make cash deposits/withdrawals and to transfer funds between individuals.

31. <http://www.gsma.com/connectedliving/smoothier-smarter-transport-in-the-uae/>

## 3.4.1 The role of the GSMA in developing digital commerce

Digital commerce faces different challenges in different markets across the world, often reflecting the level of local market development. To address these differing challenges, the GSMA's Digital Commerce initiative is focusing on different issues in developed as opposed to developing markets. Mobile wallets have the potential to simplify the use of digital commerce services, allowing a user to manage a range of payment cards, loyalty programmes, vouchers and tickets. For more developed markets, such as many of those in the Gulf States, a key issue to help accelerate the deployment of mobile wallet services is the simplification of often complex interfaces between operators and other service providers:

- **Business-to-business (B2B) wallet interfaces:** mobile operators can play an important role in mobile commerce by storing secure credentials (such as credit card details) on the SIM card. However, the provisioning of these secure credentials is currently a relatively slow and fragmented process. Addressing this problem requires an interoperable solution between operators and service providers, which will reduce integration costs and time to market. A number of leading global operators have already committed to support this goal.
- Many developing markets have more than one mobile money service, although most are not interoperable. Mobile money interoperability is a key focus area if the full potential of these services is to be realised. The GSMA's global Mobile Money Interoperability (MMI) programme focuses on helping operators to successfully launch and scale interoperable mobile money services through identifying and sharing best practices, guidelines and processes, creating performance benchmarks, and providing regulatory support. A number of operators from the region have committed to work together to accelerate the implementation of interoperable MMU services. The operators included Etisalat Group, Millicom, MTN Group, Ooredoo Group, Orange, STC Group, Vodafone Group and Zain Group<sup>32</sup>.

32. <http://www.gsma.com/newsroom/operators-commit-accelerate/>

## 3.5 The potential for mobile identity services in the Arab States

With the rapid growth of online commerce, high levels of social media engagement and other online activities in countries across Middle East, there is a growing need for individuals to be able to manage and authenticate their identities when accessing these online services. Consumers across the region need convenient, secure and privacy protecting digital identities to make it both safer and easier to access online services. These are common requirements across both developed and developing markets across the region. However, in an often fragmented content and application market, consumers can be frustrated by complex authentication processes.

Governments can also benefit from the application of mobile identity services, taking advantage of the rapid adoption of mobile services and the high levels of engagement shown by individual across the region in mobile services. The government of the UAE is looking to implement a 'Mobile Government' plan that would see the creation of a nationwide mobile identity, payments and authentication system. This is part of a general shift towards 'mgovernment' in the Emirates, as the government looks to deliver all services through smartphones and other connected devices. The government already issues digital smart cards to all residents, both citizens and expatriates, which will provide the basis for developing secure mobile identities.

Whilst the main developments in the field of identity services have so been in the more developed countries in the region, there is also considerable scope for the development of mobile identity services in the developing countries in the region, as falling handset prices drive further smartphone adoption. Mobile identity trails have been launched previously in countries such as Egypt.

Mobile operators are well placed to act as the link for their customers between their mobile and on line services. Growing exposure to identity-based fraud and theft are beginning to bring to light the inherent weaknesses in traditional methods for online login and access.

## 3.5.1 The GSMA's role in further developing mobile identity services

Reputation and trust are emerging as key themes for both consumers and service providers in the online world. As a result, they are increasingly turning to organisations with sufficient customer loyalty, trust and the operational capacity to deliver secure access services. In some cases service providers default to the large, global names in the online world, such as Facebook, Google and others. While these companies offer quick access to a global audience; the registration process behind each identity carried by these and other companies is cursory, and unable to provide the same level of assurance and relevance as a mobile identity service.

The use of mobile identity services offers benefits to consumers, operators and other ecosystem players. It establishes the SIM card and the mobile medium as a frontline identity management service provider. Mobile operators are well placed in many markets to provide identity services, given their strong customer relationships which in some cases have been enhanced by the provision of other trusted services such as mobile banking.

The GSMA's Personal Data programme is working with the majority of mobile operators who have launched mobile identity services across the globe to help realise their potential. The mobile industry needs to deliver common and consistent interfaces to a range of service providers, which at the same time need to offer seamless and convenient solutions to consumers.

The use of standards and interoperability are therefore key, in particular the need to create a common, industry-wide set of identity-related APIs (application programming interfaces). The GSMA is also working closely with operators to establish a uniform set of APIs to underpin key mobile identity services. To help realise this goal, the GSMA has launched its 'Mobile Connect' product which aims to facilitate broad interoperability across a range of mobile operators and service providers<sup>33</sup>. The initiative is supported by a number of leading operators in the Arab States, including Etisalat and Ooredoo.

33. <http://www.gsma.com/newsroom/leading-mobile-operators-unveil-mobile-connect-initiative/>

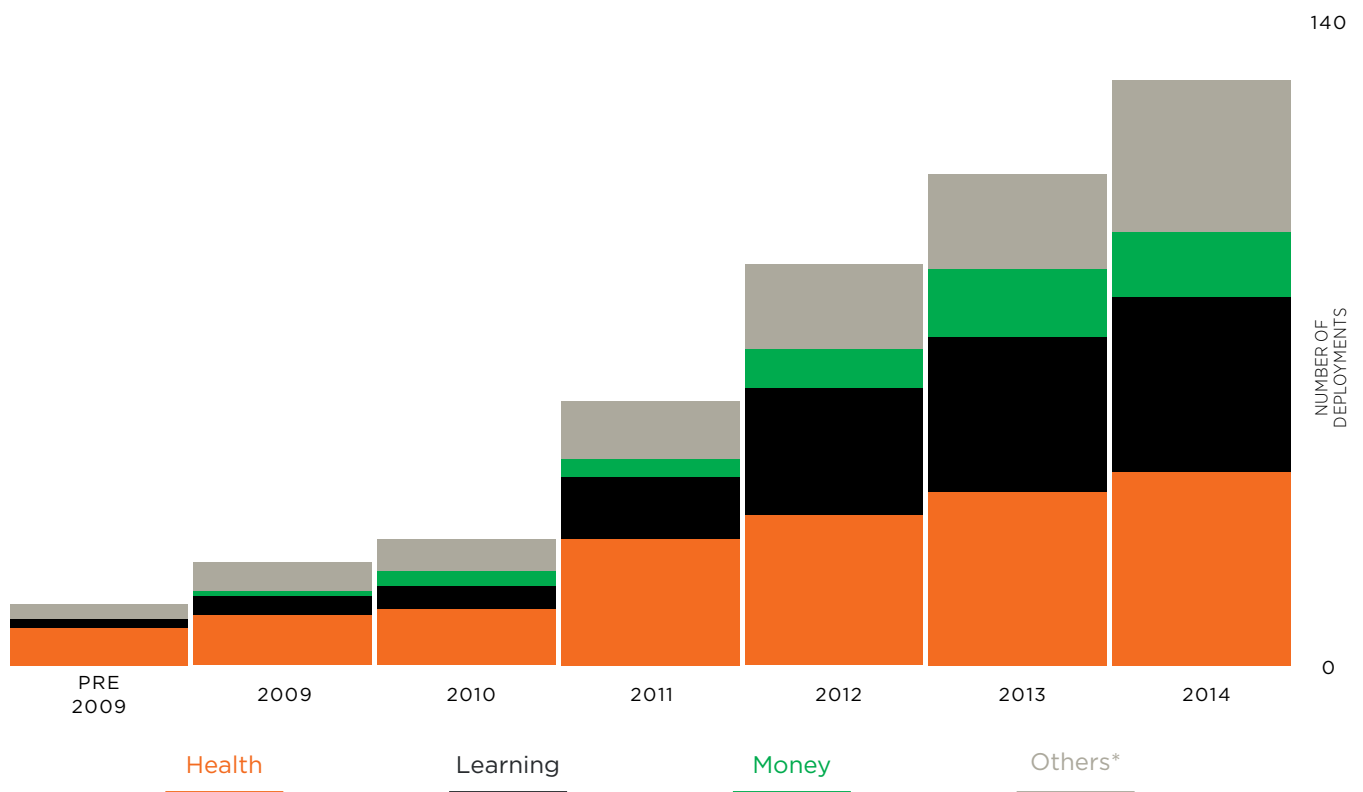
## 3.6 Mobile is already delivering social benefits in developing markets across the region

A diverse range of players, including mobile operators; entrepreneurs; corporates; governments; investors and non-profit organisations have together driven an explosion in mobile-enabled products and services in developing countries across the Arab States. The following chart shows that the number of new service launches in developing markets has increased consistently over recent years, particularly in the areas of health, learning and mobile money.

Source: M4D Impact Tracker, GSMA Intelligence Analysis

### Mobile-enabled products and services in the Arab States

(Cumulative)



\*Others includes: Disaster Response, Energy Access, Green Networks, Women and Mobile, mIdentity, NFC and Smart Cities

## 3.6.1 Delivering financial inclusion

While access to bank accounts on average in North Africa is higher than some developing regions, for example Sub-Saharan Africa, there remains a significant proportion of people across the region who do not have a bank account. World Bank data indicates that the ‘bancarised’ population ranges from a low of just 10% in Egypt to 32% in Tunisia and 39% in Morocco. These unbanked populations are forced to rely on cash or informal financial services that are typically unsafe, inconvenient and expensive. However the relative ubiquity of mobile phones in these countries provides the basis for mobile money, whereby mobile technology is used to deliver convenient and affordable financial services to the underserved.

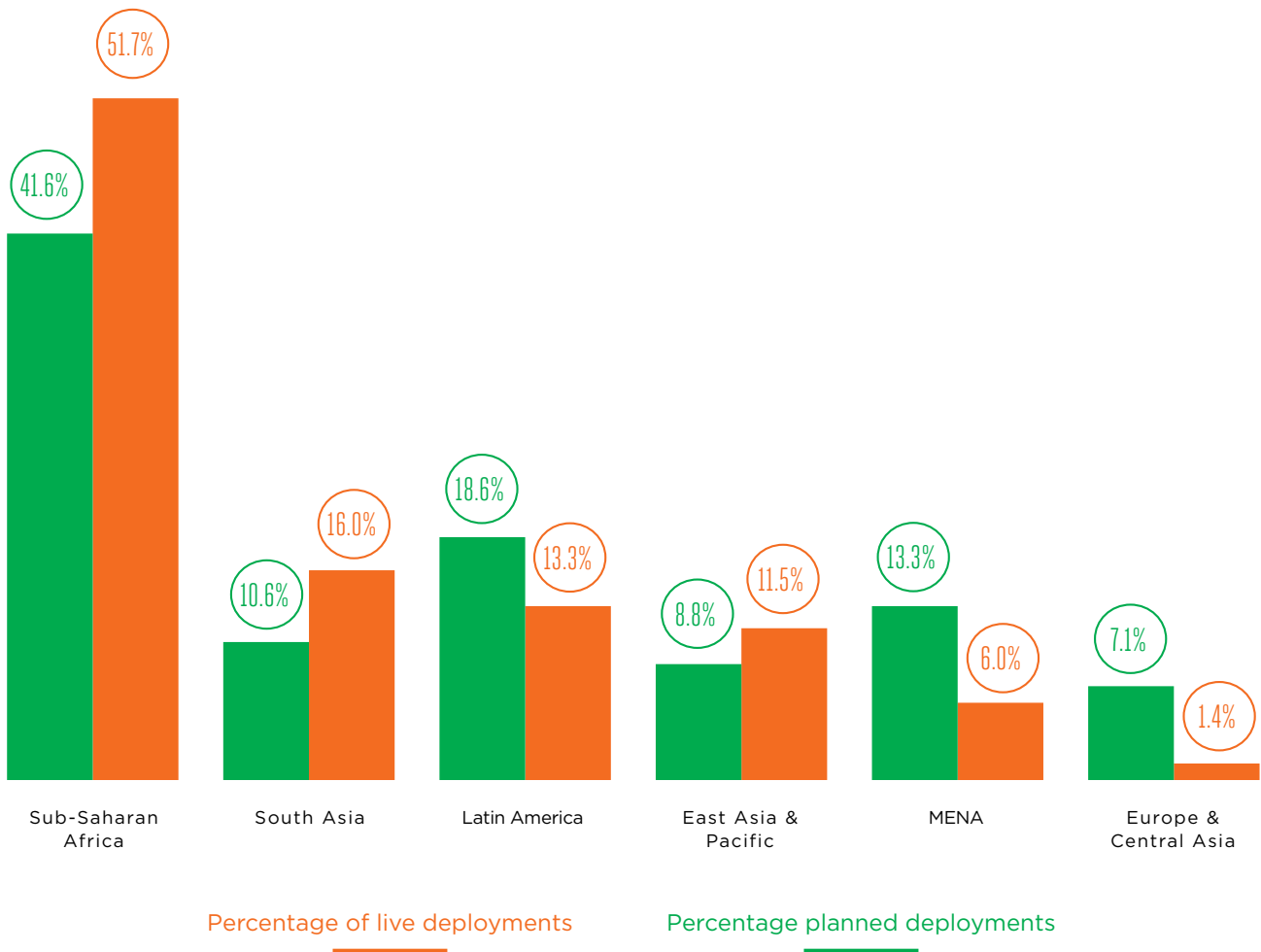
As well as enabling payments, mobile technology can be used to extend the reach of financial services such as insurance, credit and savings. Through effective relationships with banks and other similar institutions, mobile phones can meet a broader range of customers’ financial needs and thereby deepen financial inclusion.

However, mobile money is still at a relatively early stage of development in the North African region, especially compared to other developed regions including parts of southern Asia and Sub-Saharan Africa. According to the Mobile Money Deployment Tracker<sup>34</sup>, North Africa had eleven active mobile money deployments by mid-2014. The GSMA’s 2013 State of the Industry report indicates that as of December 2013, the broader MENA region was home to just 6% of the world’s live mobile money deployments, but more encouragingly had 13% of the planned deployments<sup>35</sup>.

34. <http://www.gsma.com/mobilefordevelopment/programmes/mobile-money-for-the-unbanked/insights/tracker>  
35. [http://www.gsma.com/mobilefordevelopment/wp-content/uploads/2014/02/SOTIR\\_2013.pdf](http://www.gsma.com/mobilefordevelopment/wp-content/uploads/2014/02/SOTIR_2013.pdf)

Source: GSMA

## Percentage of live and planned MMU deployments by region



While the region has seen some successful mobile money deployments, the full potential of mobile money remains untapped due to regulatory barriers in a number of countries. Regulation in many countries is bank-focused, with the result that in most of these markets only banks are allowed to provide mobile financial services. As discussed earlier in the report, interoperability between different services is also a challenge if the full potential of these services is to be realised. There are several countries in North Africa which already have more than one active mobile money services, and where progress on delivering interoperability would be an important step towards further financial inclusion.

Despite these challenges, there are signs of progress in a number of markets. For example, in Egypt several new services were launched in mid-2013, including by both Vodafone and Etisalat. In Jordan, the Central Bank has recently introduced a regulatory framework that allows non-banks, including mobile operators (through wholly owned subsidiaries) to launch mobile financial services under the Jordan Mobile Payments System (JoMoPay).

It is clear that with the right regulatory support and increased collaboration between all players, mobile money can make an important contribution to delivering financial inclusion across the Arab world.

## 3.6.2 Connected women: addressing issues of gender inequality in the Arab States

Gender inequality remains an issue across mainly low-to-middle income countries, including a number of those in the Arab States. Resource-poor women can play an important catalytic role in economic and social development of emerging and developing countries. Access to mobile services offers a well-documented contribution to women's improved livelihoods and empowerment in developing and emerging economies. There are a number of examples from across the region of services focused at addressing these issues:

- **Asiacell Alma Line:** in 2011, only 20% of mobile users in Iraq were women, one of the worst gender gaps of any mobile market and despite a number of campaigns aimed at addressing the gap. As a result, Asiacell designed to offer a new product aimed at the female population, rather than adjusting existing products. The new product included step-charging (50% reduction after the third minute); freedom to select off-peak hours; as well as discounted rates for off-net calls. In the first nine months after its launch, over 250,000 women signed up to the new service, which saw the proportion of women amongst all new activations for the operators reach almost a third of the total<sup>36</sup>.
- **Research from US Aid** highlighted the significant success of extending access to mobile services to women in Afghanistan<sup>37</sup>. The survey found that 80% of women had regular or occasional access to a mobile phone, while a range of new services had been launched specifically for women. These included a distance-learning literacy program, a family hotline facility, an SMS service for teachers and students to fast-track their progress in education, and mobile health applications during pregnancy.
- **In the West Bank,** almost one-third of the 2.5 million people are unemployed women who are unable to find work due to challenges associated with cultural norms, political instability, a stagnated economy, and cultural and religious restrictions. To combat these obstacles, Souktel created a peer networking service to connect women entrepreneurs through SMS.

"I feel more comfortable in talking about my business. I am more confident in myself. I connect with a lot of people in America. Actually I have a customer now in America... So, it's helpful for me."

**Sahar Dwaikat**

36. <http://www.gsma.com/mobilefordevelopment/wp-content/uploads/2013/02/120510-Asiacell-GSMA-mWomen-Case-Study-FINAL.pdf>

37. <http://www.gsma.com/mobilefordevelopment/wp-content/uploads/2013/06/USAID-Connecting-to-Opportunity-A-Survey-of-Afghan-Womens-Access-to-Mobile-Technology.pdf>

### 3.6.3 Disaster and crisis response

Mobile networks can play an important role in disaster response and crisis management, given their resilience and ability to facilitate critical communication between humanitarian agencies, affected populations and the international community. There are a number of examples of the role of mobile in crisis situations in the Arab States:

- The Gaza Strip is one of the most densely populated and violently disputed territories on earth. During times of crisis having access to accurate, reliable information is extremely difficult, in part because there is no 3G network in the area. For schools it is incredibly difficult to reach all of their faculty and students to warn them about emergency situations. So, in 2011, UNESCO asked Souktel to create an SMS alert system to warn parents when local schools are in danger.
- In addition, there is no national blood bank in the West Bank, and the health institutions lack the technology necessary to store blood donations. In times of crisis the emergency services need a way to contact large numbers of donors to communicate the urgent need for blood. Souktel, in partnership with the Red Crescent and West Bank hospitals set up a service to help improve the efficiency of blood drives in the area.

“The communities and schools were feeling exposed and isolated and there was a real need to prepare a response capacity in order to reduce the danger the children faced in school.”

**Derek Elias (UNESCO)**

“When I started receiving messages to donate blood, I came at once to donate. The SMS service is what made me come regularly, and I became a regular donor.” - **Donor**

“The service has improved communication with donors, and has made voluntary blood donation more efficient.” - **Administrator**

“Since we’ve been using these messages in our school there have been no casualties as a result of military action.” - **School official**



For people living in suburbs, towns and villages, the most cost effective broadband services are likely to be delivered by mobile networks.

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# 4 The role of regulation in the Arab States

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Across the world, governments are trying to fuel economic growth by helping citizens to become better educated and more entrepreneurial. Improving access to broadband can help fulfil both these public policy goals. People with fast connectivity can use the internet to find out valuable information, source suppliers, identify potential customers, harness computing resources, perform analytics and sell goods and services.

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Both businesses and individuals need reliable and robust connectivity to compete effectively in the rapidly expanding digital economy. As knowledge and information become vital economic inputs, students and entrepreneurs who do not have access to broadband will have one hand tied behind their back.

In most of the Arab States, it is too expensive to build out fixed line broadband services beyond urban centres. For people living in suburbs, towns and villages, the most cost effective broadband services are likely to be delivered by mobile networks. Even in the wealthier Arab States, fixed line penetration is fairly low. At the same time, the speed and efficiency of mobile broadband networks is improving dramatically as the industry deploys advanced 3G technologies, such as HSPA+, and 4G technologies, such as LTE, driving rapid adoption across Arab States.

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Policymakers and regulators can make it easier for individuals to access mobile broadband by taking steps to encourage investment by the private sector. At a high level, governments should seek to establish an open and consultative regulatory environment that gives investors certainty and confidence that they are competing on a level playing field and are not going to be waylaid by arbitrary service requirements.

In this section on the role of regulation, four major ways in which policymakers in the Arab States can support the provision of mobile broadband are considered. These are:

- **Releasing sufficient spectrum**
- **Improving network economics**
- **Curbing counterproductive taxation**
- **Supporting financial inclusion**

## 4.1 Releasing sufficient spectrum

As demand for mobile broadband continues to rise rapidly across the Arab States, it is vital that regulators make more harmonised spectrum available to mobile operators on reasonable terms. Operators need access to spectrum bands that will significantly enhance capacity (i.e. high frequency) bands and coverage (i.e. low frequency) bands to ensure fast mobile broadband services can be enjoyed in both rural and urban areas, and deep inside buildings.

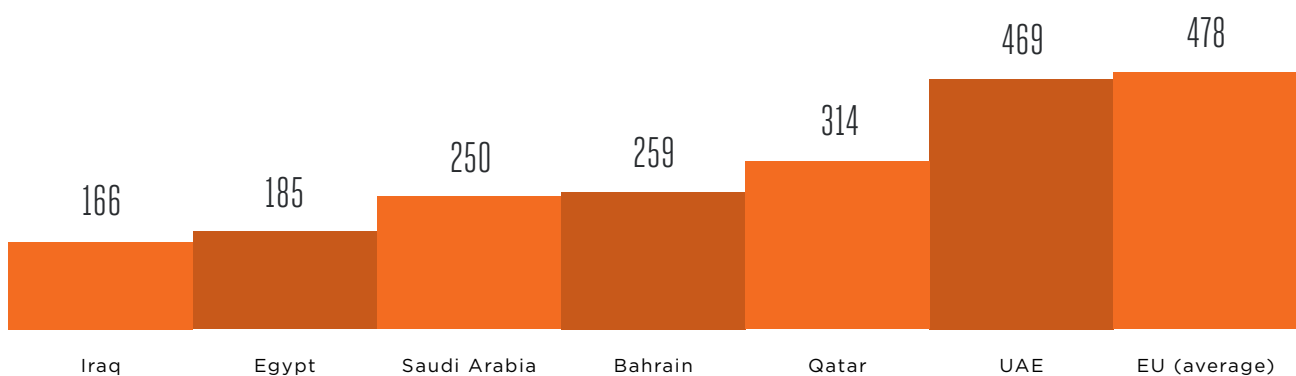
Operators in some Arab States are already nearing a point where they will have insufficient capacity to meet peak demand for connectivity, which could result in both businesses and consumers experiencing sluggish services and network outages. In Saudi Arabia, for example, mobile operators urgently need more spectrum to accommodate massive demand for mobile broadband, which is used by many homeowners for all their internet access. The kingdom has allocated far less spectrum

to mobile services than the UAE and the European Union. Ideally, Saudi Arabia should follow the spectrum allocations and band plans adopted by other countries in ITU Region 1 – Europe, Africa and the Middle East. But the Saudi Ministry of Defence appears to hold significant chunks of the spectrum bands that have been allocated to mobile services in other ITU Region 1 countries, such as the 800MHz band (790 – 862MHz) and the 2.6GHz band (2500 – 2690MHz).

Source: GSMA Intelligence

### Assigned FDD spectrum in selected markets

(MHz)



In June 2013, the Saudi Ministry of Defence awarded a US\$92 million contract to a US company to supply an integrated command, control and communications system, utilising US Band 14 radio equipment. The use of US Band 14 for military systems could create significant interference issues with commercial LTE networks in the upper part of 700 (Band 28) and lower part of 800 (Band 20) both in Saudi Arabia and throughout the Gulf States.

Spectrum shortages are not confined to the Gulf States. Mobile operators in Egypt are also in dire need of access to more spectrum. Egypt has less

spectrum assigned to mobile operators than other comparable countries, and it has a fraction of the amount assigned in most developing, let alone developed, countries, according to a study by Plum Consulting for the GSMA.

The GSMA is calling on the Egyptian regulator to make as much spectrum available as possible, as quickly as possible, particularly in the 700MHz and 800MHz bands, which are well suited to expanding mobile broadband coverage.

## 4.1.1 Reasonable licensing terms

In some Arab States, governments have sought to generate large fees from the allocation of spectrum licenses. This approach can be counterproductive. If mobile operators have to spend large sums on spectrum licenses, they will have less funds to spend on improving and extending their networks or they will have raise prices to fund their investments. In effect, excessive spectrum license fees can curb the positive socio-economic impact of mobile broadband.

The proposal for high reserve prices (US\$307 million) for 2.1GHz spectrum licenses in Iraq, for example, risks deterring operators from investing in the country. The proposed reserve price places a higher value on spectrum in Iraq than in Singapore, which has a far higher GDP per capita and consequently a much higher ARPU for mobile operators. The GSMA

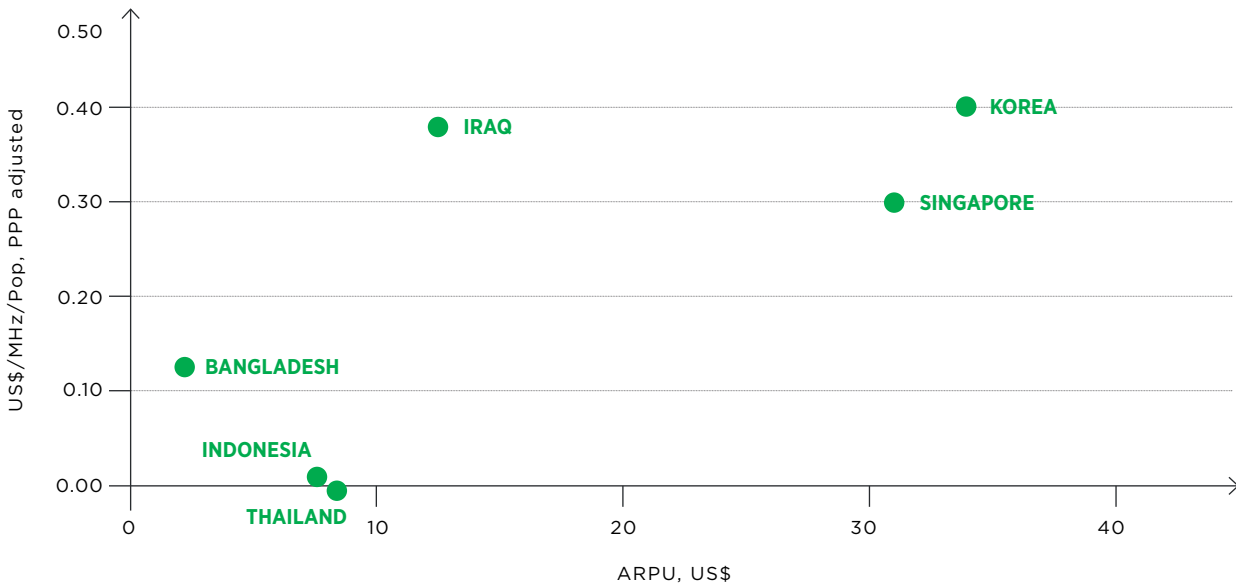
is calling on the Iraqi regulatory authority to work with the existing operators to ensure the auction design is fair, transparent and appropriate for the specific market circumstances.

If Iraqi mobile operators are permitted to invest, on reasonable terms, in spectrum, fibre infrastructure and international connectivity, the number of high-speed mobile internet connections in Iraq could exceed 30 million by 2025, according to a September 2013 report by the Boston Consulting Group (BCG). In this scenario, BCG estimates the telecommunications sector could stimulate an additional US\$102 billion of GDP, 270,000 new businesses, and 530,000 full-time jobs in Iraq from 2013 to 2025.

Source: GSMA Intelligence Spectrum Database

## Iraq: Proposed spectrum pricing - 2.1GHz

(2100 MHz Reserve Prices \$/MHz\*Pop vs ARPU)



### 4.1.2 The Digital Dividend bands

Frequencies below 1GHz are ideal for mobile broadband, offering good geographic coverage, improved in-building coverage, reasonable capacity and availability in large blocks for efficient delivery of services. There is now clear consensus in the Arab States (and much of the rest of the world) that the mobile industry needs to be able to harness the 700MHz and 800MHz bands being freed up by the switchover from analogue to digital television. A harmonised approach to licensing these so-called Digital Dividend bands will enable the industry to benefit from economies of scale and its customers to benefit from a broad selection of affordable and interoperable mobile devices, tablets, and peripherals.

To reap the full benefits of the Digital Dividend, the Arab States should adopt the 800MHz band plan that is widely used in Europe, alongside the lower duplexer of the 700MHz band plan that is gaining traction in Asia Pacific and in Latin America. Crucially, this approach is compatible with the

Asia-Pacific Telecommunity (APT) band plan which will ensure consumers benefit from a wide selection of low cost devices as well as international roaming. The adoption of conflicting band plans in the Arab States will cause fragmentation leading to interference, increase equipment costs and create significant delays in equipment availability.

At the same time, spectrum-licensing policies should not be too prescriptive and restrictive. The mobile industry supports a spectrum licensing approach that allows any compatible, noninterfering technology to be used in mobile frequency bands. The Arab States should amend technology-specific licences to allow new technologies to be deployed, enabling operators to serve more subscribers and provide each subscriber with better, more innovative services per unit of bandwidth. Enabling spectrum licence holders to change the underlying technology of their service, known as refarming, generates positive economic and social outcomes and should be allowed.

## 4.1.3 Future spectrum needs

Although harnessing the Digital Dividend is crucial, this spectrum will not be sufficient to meet the burgeoning demand for mobile broadband and resultant data traffic growth across the Arab States. In the near-term, regulators across the region need to identify additional spectrum for mobile broadband at the national level, while also working together at an international level by identifying new spectrum bands for mobile at the forthcoming World Radiocommunication Conference in Geneva in November 2015 (WRC-15). Through the GSMA,

mobile operators are calling for four new bands to be allocated to mobile services and harmonised worldwide:

- **Sub-700MHz UHF (470-695/8MHz)**
- **2.7-2.9GHz**
- **L-Band (1300-1518MHz)**
- **C-Band (3.4-4.2 GHz)**

Source: GSMA Intelligence Spectrum Database

### New bands for mobile

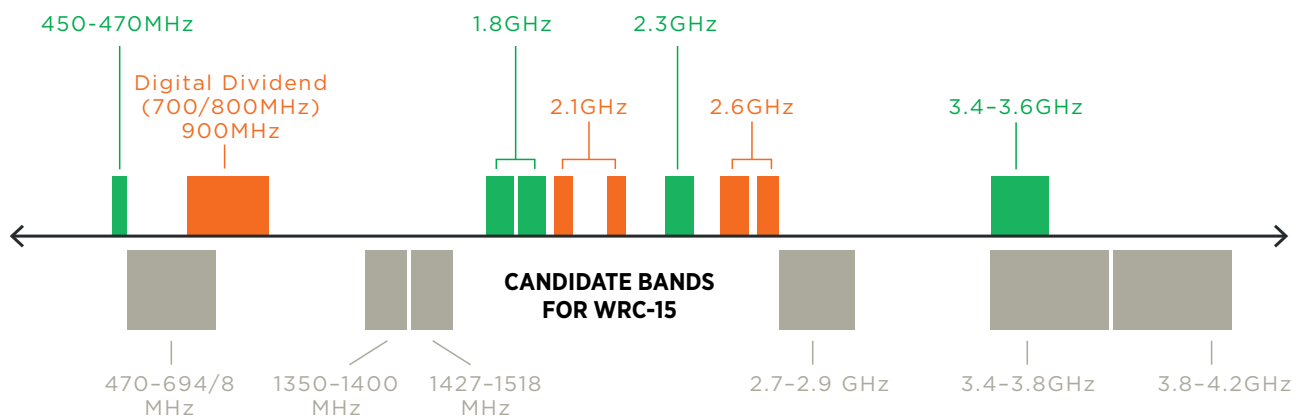
**GSMA has agreed widespread mobile operator support for 4 new mobile allocations**

- Sub-700MHz UHF (470-694/8MHz)
  - 2.7-2.9GHz
- L-Band (1350-1518MHz)
- C-Band (3.4-4.2GHz)

**These bands can be harmonised globally to drive lower cost equipment/services**

- Pursuing other bands risks creating a fragmented market negatively impacting equipment choice, price, roaming ability and could create international interference issues

#### RADIO SPECTRUM: IDENTIFIED MOBILE BANDS



Spectrum identified and allocated at WRC-15 will begin to be licensed in the 2020-2025 timeframe, when the IoT will be well established and billions more devices, vehicles and machines connected to mobile networks (see Section 4.2). If WRC-15 fails to identify and allocate significant additional spectrum for mobile broadband, operators will be unable to meet the demand for mobile data services from a wide range of industries, including the automotive sector, healthcare, content providers and home automation.

Mobile operators in Saudi Arabia and the UAE will need to have access to 1,226MHz of spectrum and 1,118MHz of spectrum respectively to meet an anticipated demand of 10GB of data traffic per user

in 2020, according to the middle scenario in a GSMA model developed by Coleago Consulting. Today, mobile operators in Saudi Arabia have access to less than 300MHz of FDD spectrum<sup>38</sup>, while their counterparts in the UAE have access to less than 500MHz of FDD spectrum.

Even if some Arab governments do not actually license the spectrum identified and allocated at WRC-15 in the 2020 to 2025 time period, they will ultimately benefit from the economies of scale generated by countries that move early. A successful WRC-15 will give equipment suppliers around the world the clarity they need to develop new devices and base stations in good time to meet demand.

## 4.2 Improving network economics

### 4.2.1 Voluntary network sharing

As competition intensifies and revenues come under pressure, mobile operators are looking to manage their resources as efficiently as possible. In practice, this means utilising spectrum-efficient technologies, such as 3G and 4G, and deploying small cell technology to manage traffic demand in areas of high subscriber density. In some cases, mobile operators are also looking to share parts of their network infrastructure with other operators, reducing capital spending and operating costs for both parties.

In March 2014, senior leaders from eight major mobile operator groups, covering 551 million mobile connections across Africa and the Middle East, announced a plan<sup>39</sup> to cooperate on network infrastructure sharing initiatives in recognition of the profound impact of mobile broadband and internet services on the citizens of the two regions. The participating operators made this commitment in order to provide internet and mobile broadband access to unserved rural communities and drive down the cost of mobile services for all sections of

the population. Etisalat, Orange, Vodafone, Ooredoo, STC and Zain are among the participating operators with a presence in the Arab States.

Although it is essential that regulators sustain a competitive telecoms market, they should also enable mobile operators to share network resources. Voluntary network sharing arrangements between mobile operators can reduce costs by enabling data traffic to be carried cost-effectively, while expanding coverage and capacity and delivering more affordable services to customers.

38. FDD or Frequency Division Duplex spectrum is the kind of spectrum most commonly used by mobile services  
39. <http://www.gsma.com/newsroom/gsma-and-operators-mobile-access-affordability-across-africa-and-the-middle-east/>

The most commonly shared elements are known as passive infrastructure, such as land, rights of way, ducts, trenches, towers, masts, dark fibre and power supplies, all of which support the active network components required for transmission and reception of signals.

Regulators can facilitate voluntary network sharing by easing planning controls to encourage shared fibre transmission facilities, including preferential access along roads and other state-owned property. Furthermore, registered providers (including third party tower companies) should be permitted to construct and acquire passive infrastructure and then sell access to operators.

Infrastructure sharing can be arranged in a number of ways, such as bilateral agreements between mobile network operators to share specific towers, strategic sharing alliances, formation of joint infrastructure companies between mobile operators or via independent companies that provide towers and other passive infrastructure.

While regulatory authorities in most countries are supportive of passive infrastructure sharing arrangements, unnecessary restrictions are in place in many Arab States, particularly with respect to independent tower companies. Whereas tower companies have brought major economies of scale to mobile operators in Sub-Saharan Africa, they are not allowed to operate in many Arab States

Regulatory authorities (or the responsible government department) should permit independent passive infrastructure companies to operate without sector-specific authorisation. Alternatively they should establish a simple registration scheme for such companies that provides for oversight of planning-related matters, while making a clear distinction with the licensing framework applicable to electronic communications network and service providers. However, regulators should not mandate passive infrastructure sharing.

## 4.2.2 Ensuring a level playing field

**In many Arab States, key pieces of telecoms infrastructure, such as national wholesale networks and international gateways, are owned by state-controlled monopolies. By charging artificially-high wholesale prices or creating unnecessary bottlenecks, such monopolies can curb uptake and usage of mobile broadband services.**

It can be difficult for mobile operators in many Arab States to gain access to international landing stations at reasonable prices, inflating the cost of international internet access for both individuals and businesses. To ensure companies in the Arab States can trade effectively across national borders, policymakers and regulators need to increase competition in global gateways and submarine cables.

In general, mobile operators need to have the flexibility to establish their own infrastructure where it makes commercial sense to do so. In Egypt, for example, the GSMA is calling for mobile operators to be able to lay their own core and backhaul networks, which would spur the incumbent, Telecom Egypt, to reduce prices to an efficient level, as it will need to compete within the buy-or-build decision process. If they could build their own core and backhaul networks, Egyptian operators could also respond to changes in demand demographics more quickly, increasing capacity where it is needed.

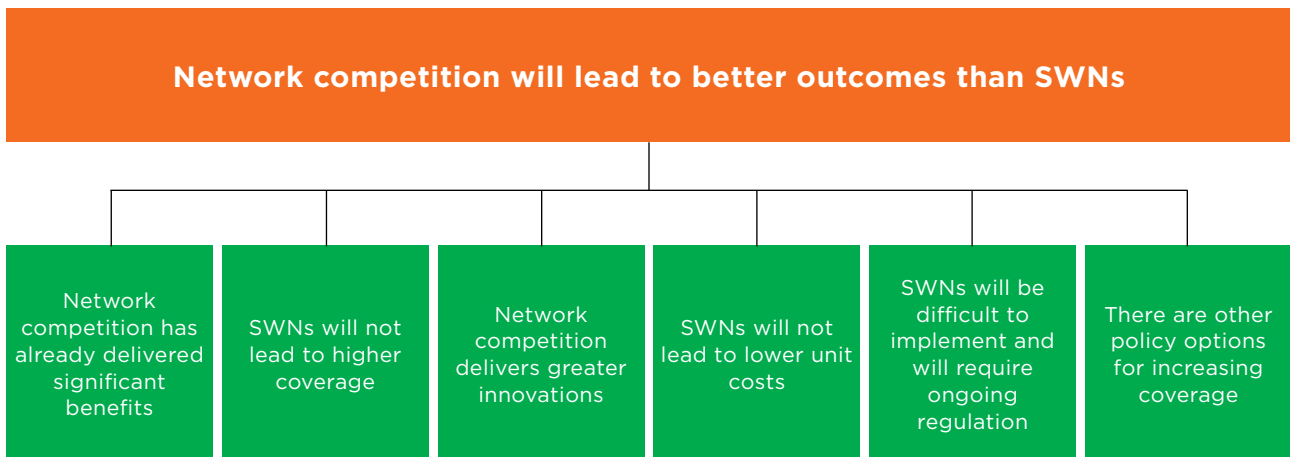
Governments in some countries are advocating the use of ‘single wholesale networks’ on the basis that focusing resources on a single network will lead to greater coverage. However, mandating the use of a single network prevents the country from realising the many positive benefits of market forces.

As a monopoly, a single wholesale network will always have incentives to reduce its outputs, including network coverage, and keep prices high. Although regulation can be used to try to ensure the single whole network mimics the outcomes of a competitive market, such an approach is inevitably less efficient than actual network competition - regulators lack the real-time information or the incentives available to competing networks.

Monopolies also have little incentive to innovate in terms of the introduction of new technologies and services, other than to try and maintain their monopoly positions. Regulation can try and encourage monopolists to innovate with respect to cost efficiency, but regulation is very unlikely to full replicate the impact of competitive forces.

In some countries, there have been proposals to establish a single wholesale network alongside the existing networks. In such a scenario, some form of public intervention is likely to be required to artificially ‘favour’ the new network and ensure that it captures traffic. This kind of intervention would inevitably lead to higher unit costs for the whole industry.

In essence, mandating the use of single wholesale networks is fraught with pitfalls – as summarised in the diagram below – and should be avoided.



In summary, regulatory frameworks should be designed to support a level playing field across all aspects of telecoms infrastructure, thereby encouraging competition and investment. The Arab States need to avoid creating inefficient state-owned monopolies that can result in the ‘politicisation of regulation’ and market distortions.

## 4.3 Curbing counterproductive taxation

There is growing evidence that the structure and level of taxes and fees imposed by some governments are having a harmful impact on mobile services adoption. A 2012 study by the GSMA investigated the relationship between taxes and mobile broadband in emerging markets. The study estimates that an one percentage point reduction in the taxation burden on mobile broadband would result in an increase in mobile broadband penetration of up to 1.8 percentage points and an increase in GDP of 0.7 percentage points over five years. With a rise in GDP, the broad tax intake across the economy should increase.

Recent research suggests counterproductive taxation is holding back uptake and usage of broadband in some countries in the North Africa and Middle East region. Three Arab States – Egypt, Jordan and Tunisia—were among the 19 developing economies studied in-depth in the GSMA’s Mobile Taxes and Fees – A Toolkit of Principles & Evidence report, which was published in April 2014. The report found that, in more than half of the countries studied, the tax burden on mobile services is greater than 30 per cent of operators’ gross revenues and had generally increased over time.

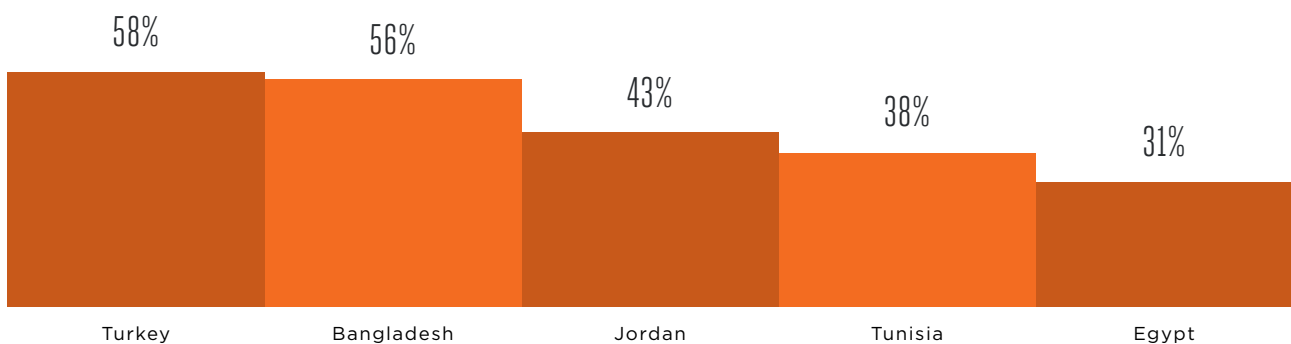
In many cases, the mobile industry has to pay special taxes and fees in addition to those levied on other sectors of the economy. On average, 40 per cent of the total taxes and fees burden on mobile services

are sector-specific and do not apply to other sectors of the economy. In a number of markets, it appears that these sector-specific taxes do not apply to companies providing Voice over Internet Protocol (VoIP) or other communications services over the internet. This disparity could distort competition and damage the business case for investment in mobile broadband networks.

Jordan and Tunisia ranked third and fourth respectively among the 19 countries in the study in terms of the tax burden on mobile services, while Egypt was ninth. In all three countries, US\$3 in every US\$10 of mobile revenue was transferred to the government in the form of taxes, regulatory fees or other charges.

Source: GSMA; Deloitte Analysis

### Tax as a proportion of total mobile revenues - selected countries



The trend in mobile taxation varies country by country. In Jordan, for example, the tax burden on mobile services has grown an average of 7.7 per cent a year between 2008 and 2012, even though the tax burden on the overall economy has fallen by 6.6 per cent a year in that time.

In Egypt, the tax burden on mobile services has fallen by an average of 1.8 per cent a year between 2008 and 2012, but the report found that Egypt still levies at least 10 different regulatory taxes and fees on mobile services. These sector-specific taxes and fees account for 36% of the overall taxation burden carried by Egypt’s mobile services sector.

In the Gulf States, royalty-style taxes on mobile operators’ revenues are widely imposed. In Saudi Arabia, for example, 15% of the net revenues from mobile services are paid in tax. These royalty-style taxes are rare in other developed markets as they artificially inflate the cost of telecoms services for consumers and businesses, damaging the broader economy. In addition to these taxes, operators in the Gulf often have to pay additional regulatory fees such as spectrum and licensing fees. Saudi operators are also subject to the Zakat (a wealth redistribution tax), corporate tax and social security contributions.

Country	Telecom-specific royalty taxes
<b>Bahrain</b>	Annual license fee of 1% of gross annual turnover attributable to licensed activity
<b>Kuwait</b>	No telecoms specific tax
<b>Oman</b>	Mobile: 12.5% (Oman Mobile), 7% (Nawras), 7% (Samatel) of revenues and 1% of licensee gross revenue as a contribution to TRA for Samatel only
<b>Qatar</b>	Royalty 12.5% of local earnings before tax (EBT) License fees 1% of revenues on all telecom operations
<b>Saudi Arabia</b>	CSP tax is 15% of net revenues for mobile services Annual license fee of 1% of revenue
<b>UAE</b>	50% of EBT for Etisalat, 15% of EBT for Du

Source: Deloitte study for the GSMA

As well as increasing prices for consumers and businesses, high levels of taxation can affect the investment decisions of mobile operators, changing their incentives to invest and altering their ability to raise capital to finance it. A review<sup>40</sup> of over 400 different studies found that, on average, a one per cent increase in the rate of tax on capital led to a four per cent decrease in the level of foreign direct investment (FDI).

Taxation is a complex area and, in developing markets, the establishment of an effective tax policy has to contend with numerous practical difficulties including widespread informal activity, limited institutional capabilities and political pressure to avoid taxing special interests. Even so, governments in the Arab States should seek to follow a number of principles that are generally recognised as contributing to an effective tax system. These are:

- **In general, taxation should be broad based: Taxation alters incentives for production and consumption, and so economic distortions will generally be minimised where the burden of taxation is spread evenly across the economy and effectively enforced.**

- **Taxes should account for sector and product externalities. The case for taxation to address negative externalities, such as those arising from tobacco consumption, is well recognised. The same logic should also apply in the case of sectors and products with positive externalities. Taxation policy should encourage investment in sectors, such as mobile, that create positive externalities in the wider economy.**
- **The tax and regulatory system should be simple, easy to understand and enforced: A lack of transparency over taxation systems and liabilities may deter investors and is also likely to increase enforcement costs for government.**
- **Different kinds of taxes have different economic properties: There is a general consensus that, for most products, a broad-based consumption tax will be less distorting than taxation on income or profits.**

In summary, governments in the Arab States should look to remove sector-specific taxes, reduce the complexity and uncertainty of mobile taxation and carefully consider taxation of new and emerging services. An expansion in mobile connectivity could pave the way for a whole new generation of life-enhancing products and services, ranging from health monitoring to remote learning and mobile money (see sections 4.2 and 4.3). However, these services are typically very price sensitive, particularly as they first emerge, meaning that inappropriate taxation may seriously delay and possibly prevent their benefits being achieved. Within a framework that seeks to rebalance the system towards harmonised and broad-based taxation, policymakers should consider transitional arrangements to enable the effective growth of these services, provided that competitive distortions are not created in the process.

40. Mooij and Ederveen (2005), 'Explaining the Variation in Empirical Estimates of Tax Elasticities of Foreign Direct Investment'

## 4.4 Supporting financial Inclusion

Mobile operators in many countries are rolling out services that enable consumers to use their mobile phones to transfer money to other individuals and make payments to businesses. Underpinned by effective and proportionate mechanisms to manage the risks, these mobile money services can significantly expand financial inclusion by lowering transaction costs, expanding access to financial services in areas beyond the reach of traditional financial providers, and improving convenience for customers. As they already have secure digital networks and airtime distribution networks in place, mobile operators can enable people to transfer money and make payments very cost-effectively.

In both North Africa and the Gulf States, there are large numbers of unbanked people that operate in a cash-based shadow economy (see section 4.6 for more on this). By enabling these people to join the formal economy, mobile money services can help governments pursue their objectives of financial stability, integrity, and consumer protection, and drive economic and social growth.

Smart policies and regulations are key to enabling the development of sustainable and scalable mobile money services. Regulators in the Arab States do not need to start from scratch. A number of countries in all regions have developed frameworks that have enabled mobile money services to flourish. Arab governments could adapt these frameworks to the local context in their countries<sup>41</sup>. Among the Arab States, Jordan has published a regulatory framework that formalises the entry of non-banks, including subsidiaries of mobile operators, as financial services providers, while Egypt is considering similar measures.

In each case, the regulatory framework should be underpinned by an open dialogue and consultative process between the regulator and the private sector. Regulators need to understand the distinctive characteristics of mobile money, including client behaviour and needs, the characteristics of products and services, the implementation challenges that providers face, and the potential solutions they can employ.

The mobile money services market also needs to be underpinned by an open and level playing field that encourages new entrants and innovation. Anecdotal evidence, commercial lessons, and international regulatory principles all show the value of opening the market to providers with different value propositions. In the countries where non-bank mobile money providers are regulated, prudential and market conduct requirements have effectively mitigated the risk of mobile money customers losing the money they have stored in the system. The challenges of anti-money laundering and combating the financing of terrorism (AML/CFT) compliance can be addressed by promoting proportional risk-based know-your-customer (KYC) procedures. There are also cost-effective regulatory solutions in place to develop and set up distribution networks and accelerate customer adoption.

The vast majority of the fastest growing deployments are in markets where the regulator allows both banks and mobile operators to offer mobile money services. Note, that mobile money services should not be regarded as a replacement for banking services. Instead, they help people to gain access to the formal banking system. To that end, regulators should encourage partnerships between banks and mobile operators. In this case, the regulated financial activity can stay with the bank and the mobile operator can provide the distribution networks to reach unbanked customers.

41. Countries that allow operators to offer mobile money services and have implemented a proportional oversight framework covering both prudential and market conduct requirements include: Bolivia, Brazil, Burundi, Democratic Republic of Congo, Fiji, Kenya, Liberia, Madagascar, Malawi, Malaysia, Morocco, Namibia, Paraguay, Peru, the Philippines, Rwanda, Somaliland, Sri Lanka, Tanzania, Tonga, Uganda, Zambia, Zimbabwe, and the eight members of the West African Economic and Monetary Union (WAEMU), amongst others.





For the full report on Mobile Economy:  
Arab States 2014 please visit the GSMA website at  
[www.arabstates.gsmamobileeconomy.com](http://www.arabstates.gsmamobileeconomy.com)

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