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TELECOMS INSIGHTS FOR THE MIDDLE EAST AND NORTH AFRICA

VOL II

Contents

Introduction

Welcome to the second edition of Analysys Mason's newsletter for the Middle East and North Africa (MENA). This edition features five articles that showcase our experts' views on a range of topics that are relevant to operators in the region. The articles in this newsletter cover:

Karim Yaici
Senior Analyst, Research

Over-the-top video services. STC's subsidiary and regional media aggregator, Intigral, launched 'Jawwy TV' in Bahrain, Kuwait and Saudi Arabia in 2018. This was an unprecedented move by a regional telecoms operator. We discuss STC's rationale for launching an OTT video service and explain how the operator can support its expansion plans.

Enterprise services. Operators in the Middle East emphasise the growing importance of business revenue to offset the limited growth in core connectivity revenue, but their activity does not appear to match their ambition. We look at the contrast between operators' enterprise activity in the Middle East and that in other high-income regions and argue that operators should do more to respond to the forthcoming enterprise revenue gap.

Digital customer experience. Many operators in the Middle East and Africa have made progress in digitalising customer experience, but their motivation is different from that in other parts of the world because of the limited penetration of digital natives such as Amazon and Netflix. In this article, we present the latest learnings and insights from our digital experience research in the Middle East and Africa.

Artificial intelligence (AI). Most operators in the Middle East are taking a low-risk approach to their AI strategy. They appear to be less inclined to expand the use of AI to applications beyond those related to customer care. We argue that operators should continue to make progressive and selective investments in AI to improve customer experience and should learn from the more-mature AI roadmaps of global operators.

IoT/M2M services. Only a few telecoms operators in the Middle East have LPWA networks that are commercially ready despite the numerous announcements made since 2016. If operators are serious about commercialising LPWA solutions, they will need to learn from more-advanced markets to improve their IoT strategies and address opportunities.

We welcome the opportunity to discuss your views on these and any other key industry topics.

I look forward to hearing from you.

Karim Yaici

STC is the first operator in the Middle East to launch a multi-screen video service accessible across the region

Karim Yaici, Senior Analyst, Research

STC is the first operator in the Middle East to launch a multi-screen video proposition accessible across the region

Jawwy TV is a paid video-streaming service that provides a rich library of Arabic, Turkish and English content in addition to live TV channels and football tournaments (Figure 1). The service is accessible via:

1. **an OTT set-top box** which was initially available to its dual-play 'Jawwy TV Home' customers in Saudi Arabia, but it plans to make it available in Bahrain and Kuwait. STC would also like to sell the standalone box directly to customers in other markets.

2. **a dedicated mobile app** that supports both Android and iOS devices. Direct carrier billing is currently only available across STC's telecoms footprint (Bahrain, Kuwait and Saudi Arabia). The mobile service has less content choice compared to a set-top box subscription e.g. fewer live channels, limited Starz Play collection and it only includes highlights of football matches.

MIn April 2018, STC's subsidiary and regional media aggregator, Intigral, launched 'Jawwy TV' in Bahrain, Kuwait and Saudi Arabia. This is the first OTT video service launched by an operator in the Middle East.

STC has started bundling Jawwy TV service with core communication offerings across its footprint to consolidate its position in the market. It has also a bold ambition to turn Jawwy TV into a key regional pay-TV provider and is looking for operator partners to resell the service outside its core markets.

	Feature
Partnerships	Blu TV (provider of Turkish series), Boomerang, Cartoon Network, Fox, OSN, StarzPlay and Wide Khaleeji (Gulf and Arabic series). It is looking to partner with Netflix and Shahid (MBC's catch-up TV service)
Content library	7000 VoD assets
Exclusive content	Saudi Premier League, the King Cup and the Saudi Super Cup only accessible its home subscribers.
Live channels	70 FTA (free-to-air) and 40 premiums channels on basic package (for set-top box access)
Subscription	USD7.99 per month for the app-based subscription. A minimum of SAR300 (USD80) per month for 'Unlimited Fixed Bundle + Jawwy TV' package for set-top box access
Payment method	Direct carrier billing, Apple Pay, Google Pay, debit and credit cards

FIGURE 1: JAWWY TV SERVICE FEATURES
[SOURCE: ANALYSYS MASON, 2018]

Jawwy TV enables STC to increase its share of the pay-TV market but also to consolidate its telecoms position across its footprint

STC made a bold move in the pay-TV video market with Jawwy TV considering that until now most telecoms operators in the region (including STC and its opco VIVA) have preferred to partner with OTT video players to bundle video content with their core communications and multi-play offerings (Figure 2).

STC wants to turn its media arm, Intigral, into a major regional pay-TV player. Intigral already provides the full video ecosystem, from the content's rights acquisition, transcoding to securing and delivery of the content through its own CDNs. It already provides turnkey solutions to telecoms, OTT and pay-TV operators such as du, VIVA, OSN, MBC and Starz Play.

More importantly, STC can leverage its OTT video offering to consolidate its position across its footprint where its challengers, Ooredoo and Zain, have inked partnerships with other OTT video players (icflix, iflix and Starz Play). It is also possible that STC will use Jawwy TV to support its efforts to enter the fixed market outside Saudi Arabia. Its subsidiary VIVA Kuwait offers Jawwy TV for free to its 4G-based broadband users. It also acquired fixed broadband provider QualityNet in November 2018, possibly to launch a triple-play package.

STC will need to focus on content and customer experience to differentiate its offering from established OTT players

STC has the ambition and the capacity to stimulate the demand for OTT video and turn Jawwy TV into an important regional provider:

- **Content differentiation:** STC has already invested in acquiring exclusive rights to Saudi football and signed partnerships with important content providers. It has also the financial and technical capability to source and/or produce original content.
- **Customer experience:** Intigral has invested in solutions that use compression techniques that adapt content to different delivery environments and has experience in developing intuitive user interfaces from working with different types of players in the value chain.
- **Pricing:** Jawwy TV is already priced competitively against other OTT players and it is cheaper than most pay-TV subscriptions. Outside its current footprint, Jawwy TV will primarily appeal to high-end users who are not sufficiently satisfied with current free or paid offerings and are not interested in piracy, so affordability might be less of an issue.
- **Payment:** this could be an issue given the relatively low proportion of the banked population, especially among young users. OTT providers have opted for direct carrier billing as the main means for payment. STC will have to convince other telecoms operators of the value of its video service and persuade them to become billing partners.

STC wants to increase its share of the pay-TV market in the MENA region[1] in an increasingly competitive OTT video market, its expansion ambitions can be realised if it manages to find operator partners to resell the service in the region, and to offer a superior customer experience and a sufficiently rich and original content that appeals to high-end users.

[1] For more details, please see Analysys Mason's pay TV and OTT video in the Middle East and North Africa: trends and forecasts 2018–2023

OTT service provider	Partnering telecoms operators	Subscription cost per month
icflix	Asiacell, du, Maroc Telecom, Ooredoo Kuwait, Orange Egypt, VIVA Bahrain, Zain Kuwait	USD7.99
iflix	Zain in Bahrain, Iraq, Jordan, Kuwait and Sudan. It aspires for more partnerships.	Zain customers get a 6-month complimentary access
Netflix	Virgin Mobile UAE, du	Part of a bundle. Standalone subscription starts at at USD7.9
Starz Play	du, Etisalat UAE, Maroc Telecom, Orange Egypt, Ooredoo Tunisia, VIVA Bahrain	USD9.5
Wavo	du (home broadband customers only), Ooredoo Kuwait, VIVA Kuwait, VIVA Bahrain	USD9.99

FIGURE 2: TELECOMS OPERATORS' PARTNERSHIPS WITH OTT VIDEO PROVIDERS IN MENA AND MONTHLY SUBSCRIPTION COST
[SOURCE: ANALYSYS MASON, 2018]

Questions?
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Operators in the Middle East must do more to support enterprise revenue growth

Tom Rebbeck, Research Director, Research

Incumbent operators in the Middle East face the same basic challenge in the enterprise market as operators in other high-income countries: limited growth in core connectivity revenue. However, the collective response of the operators in this region is different from that of their peers in Europe, North America and elsewhere.

Some of this disparity can be ascribed to inherent differences in the market that operators may not want or need to address, but we believe that other factors deserve greater attention. In particular, operators should do more to respond to the forthcoming enterprise revenue gap, and in turn, should place a greater focus on satisfaction levels.

Operators' efforts to capitalise on the enterprise opportunity in the Middle East lag behind those in other high-income countries

Operators in the Middle East appear to lag behind their counterparts in other high-income countries (such as Germany, the UK and the USA) in several areas of the enterprise opportunity. This is summarised in Figure 1 and is discussed in more detail below.

Importance of the enterprise segment: enterprise receives scant attention from operator groups

Enterprise is stated as a key area of activity for operators in the Middle East. Many regional operators emphasise the importance of this segment for growth in their annual reports. For example, Zain's 2017 annual report states that "B2B (Enterprise) is one of the most dynamic and innovative areas at Zain, and a growth engine for our operations."

However, details about enterprise activities are scarce. None of the major operators in the Middle East (du, Etisalat, Omantel, Ooredoo, STC and Zain) report enterprise revenue or provide more than a passing comment on enterprise activities in their quarterly reporting.
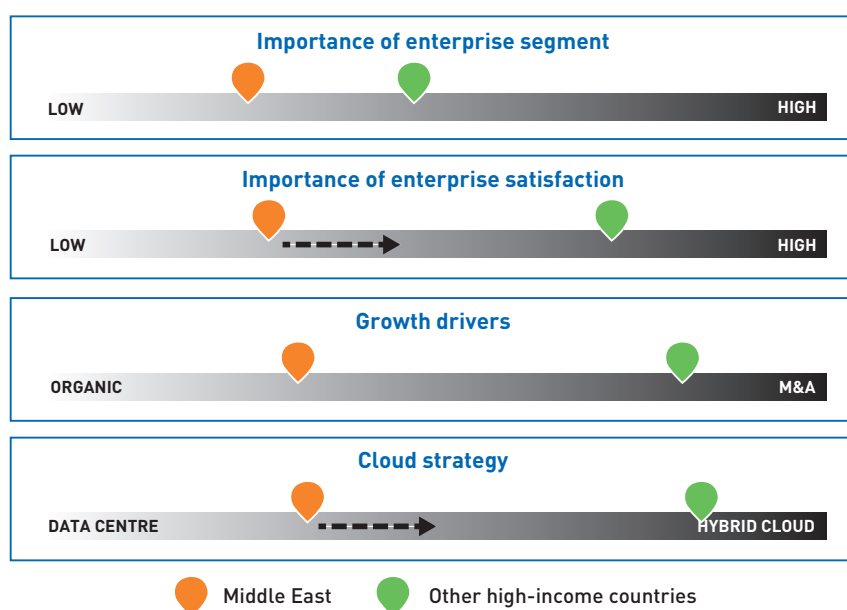
FIGURE 1: COMPARISON OF THE ENTERPRISE EFFORTS OF OPERATORS IN THE MIDDLE EAST AND THOSE IN OTHER HIGH-INCOME COUNTRIES [SOURCE: ANALYSYS MASON, 2018]

This is in contrast to operators in other high-income regions that typically dedicate at least one slide of each quarterly financial presentation to the enterprise segment, and often report the split of enterprise revenue (for example, incumbents in eight of the ten largest EU countries report enterprise revenue).

All of this is not conclusive of the lack of attention from operators; all major operators in the Middle Eastern have enterprise teams or divisions. In the UAE, both operators recently underwent restructuring to better address the business market; Etisalat Digital and du's ICT Division were created. Operators in the region may also be more reluctant than their overseas counterparts to share what they are doing with competitors. Overall though, the limited detail provided by operators in the Middle East means that they are vulnerable to suggestions that the business market is not as high on the agenda as they claim.

Importance of enterprise satisfaction: few operators systematically measure customer satisfaction

Operators in the Middle East are gradually paying more attention to customer satisfaction levels, but we understand that few are systematically measuring levels of enterprise satisfaction and trying to address common problems. This again is different from the activity of operators elsewhere, some of which (such as Macquarie Telecom in Australia) are using satisfaction levels as a differentiator. As we have written elsewhere, and as Macquarie Telecom has demonstrated,[1] improving satisfaction will help with retention, cross-selling and the reduction of outstanding debts. All of these factors are important at a time when connectivity revenue for most operators is flat, at best.

Operators in the Middle East may need to move more quickly in understanding and improving satisfaction, given its importance.

Growth drivers: acquisition is driving enterprise growth elsewhere, but not in the Middle East

We are not aware of any recent enterprise deals by major regional operators in the Middle East, other than a couple of relatively small acquisitions by Zain, of FOO and NXN. The contrast with other parts of the world is striking; for many operators, acquisition is becoming part of the standard model to gain growth. Acquisition has been part of the enterprise growth story in the Middle East historically (STC Solutions, the IT and systems integration division of STC, was founded on the basis of an acquisition) and there may

be reasons for the lack of recent activity (such as the lack of potential acquisition targets or the belief that solutions can be developed internally), but it is striking nonetheless.

Operators in the Middle East may need to explore acquisitions if they are to grow their enterprise revenue beyond connectivity.

Cloud strategy: it is more important for operators in the Middle East to own data centres than to offer cloud services

The focus for many operators internationally has been the provision of services, rather than real estate. CenturyLink is an extreme example but reflects the thinking of others. Its strategy has shifted from trying to become a global data centre provider by buying Savvis in 2011, to selling these assets in 2017 and, more recently, concentrating on becoming an accredited partner for IBM Cloud (in August 2018), AWS (September 2018) and Microsoft Azure (October 2018). Its focus is on working with enterprises to provide them with cloud services, rather than on infrastructure ownership.

Other operators have a similar strategy: KPN is explicitly taking a 'public cloud first' approach, on the basis that if it is not promoting that strategy to its existing customers, other service providers will.

In the Middle East, the stress is different; cloud services are gaining prominence, but the shift is gradual. AWS is expected to open its first data centre in Saudi Arabia and Microsoft Azure is building its presence in the region (albeit on Etisalat infrastructure, at least initially), meaning that the pressure from others offering cloud services will only grow. The increase in the local capability of these global players will also mean that operators can no longer rely on data sovereignty rules to protect their offering.

Of course, operators in the Middle East do not need to follow what their counterparts are doing elsewhere. There may be good reasons to explain why they are taking a different approach (for example, lower levels of competition may take the pressure off customer satisfaction). However, incumbent operators looking for enterprise revenue growth may need to increase enterprise activity, and the developments elsewhere should provide a useful guide.

[1] See Figure 1 and https://macquarietelecomgroup.com/news/what-is-net-promoter-score-nps/

Questions?
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Operators in MEA can define regional digital experience benchmarks by adopting a 'mobile-first' approach

John Abraham, Principal Analyst, Research

Telecoms operators worldwide are focused on transforming their businesses in order to become digital service providers (DSPs). Each operator has unique requirements and must take a personalised route to digital transformation. One of the core aspects of this transformation is a change in the way that operators engage with their customers across various customer touchpoints. Operators' strategies for these transformations must include:

- well-defined digital experience objectives with long-term plans for their execution

- an understanding of the competitive landscape so that digital functionality can be prioritised

- an ability to assess and measure their progress as they take digital initiatives.

The drivers for operator transformations in the Middle East and Africa (MEA) are different from those in other parts of the world. This is because in other regions, the customer experience on digital channels has been defined by digital natives such as Amazon, Google and Netflix. However, the presence and penetration of these players in MEA has been limited; this gives operators in MEA the opportunity to define and set local benchmarks and establish customer expectations. This article outlines Analysys Mason's learnings and insights from our digital experience research on operators in MEA.

Operators should adopt a 'mobile-first' approach because customers increasingly prefer to engage via mobile channels

Smartphone penetration and usage is increasing in the Middle East and in certain markets of Africa. Adopting a mobile-first approach allows operators to engage and connect with their customers anytime and anywhere. However, most operators lack clarity on the functional capabilities and characteristics that they must enable on their digital channels. The short-term focus on the channel has been to enable customer service functionality, but operators need to consider supporting all major customer engagement functions in the future. These include marketing and sales functions, such as access to personalised offers and the ability to sign-up for new services on the smartphone app.

Our research shows that operators are taking initiatives to enable a digital experience for their consumer customers

Our Digital eXperience Index (DXi) research covered 7 countries and 17 operators in the region. Our analysis shows that operators are making progress in enabling engagement capabilities on digital channels. Our findings from the DXi assessment in 2018 indicate that a large number of operators in the region have entered the 'transforming' phase of their digital journey. They have a defined long-term vision for digital experience, and are taking steps to deliver on this vision. In comparison, those in the 'beginning' phase are still focused on implementing standalone digital initiatives to achieve specific business objectives (creating a web presence to enable self-care functionality, for example).

However, a few operators in the region are focusing on leading-edge developments, such as enhancing the digital experience across the entire customer journey, and deploying virtual assistants to enable customers to self-serve. For example, Ooredoo Oman has designed a customer journey for SIM-card purchases within their smartphone app. Similarly, Zain Kuwait has launched the zBOT virtual assistant to support customer service queries. The virtual assistants for both Zain Kuwait and Ooredoo Oman are available on their respective smartphone apps. This is key to mobile-first journeys because most of the virtual assistants deployed by operators worldwide are only available on their websites. Very few operators have enabled them on their smartphone apps.

Overall, digital experience remains a work in progress for all operators in the region

For all operators covered in this research, delivering a rich customer experience on digital channels remains a work in progress. None of the operators currently offer all of the key engagement functionality through their smartphone app. However, they are undertaking initiatives to move forward in their digital journey.
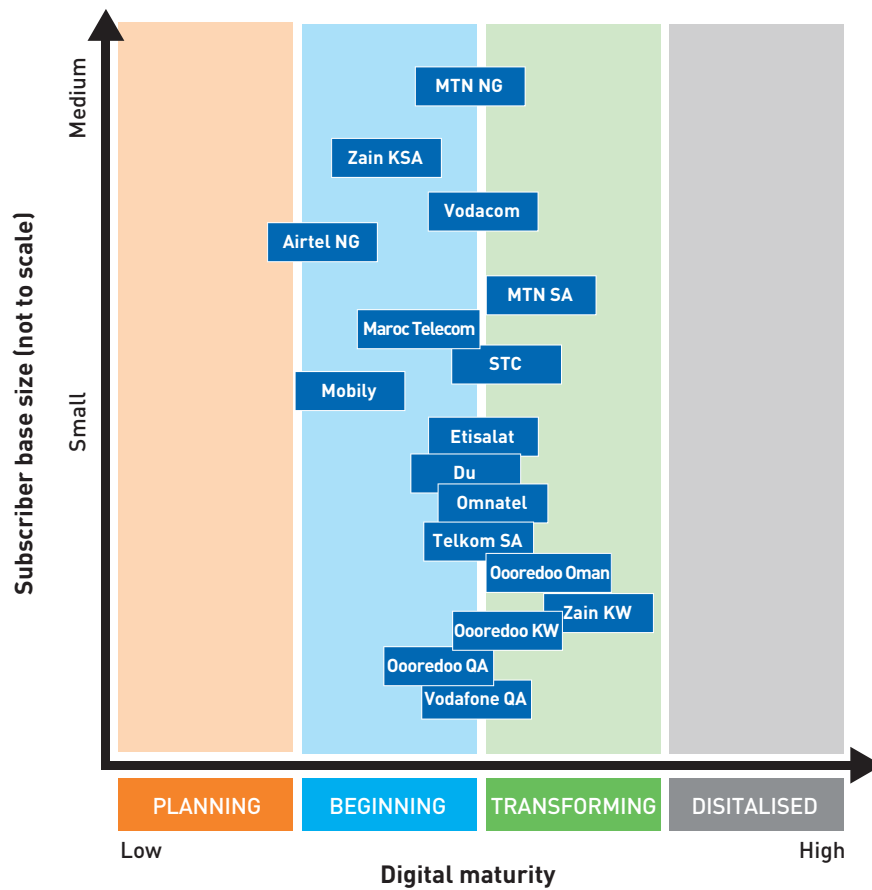

FIGURE 1: ANALYSYS MASON'S DIGITAL EXPERIENCE INDEX, MIDDLE-EAST AND AFRICA, 2018
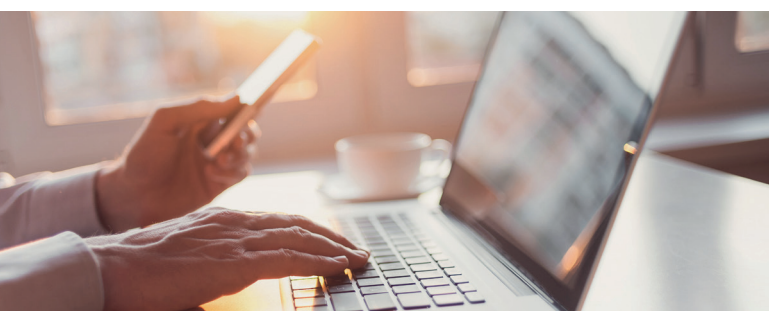[SOURCE: ANALYSYS MASON, 2018]

Questions?
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The more-mature AI roadmaps of global operators can serve as models for regional players when formulating their AI strategy

Karim Yaici, Senior Analyst, Research

Most operators in the Middle East and North Africa (MENA) are taking a low-risk approach to their AI strategy, which allows them to continue to assess the role that they wish to play in the AI value chain. They appear to be less inclined to expand the use of AI beyond applications related to customer care.

We argue that operators should continue to make progressive and selective investments in AI to improve customer experience and to apply it to areas outside those of the core business.

Operators have used AI for network planning and data analytics, but they are increasingly looking to automate customer support

AI has been used by most regional operators for network planning as well as customer analytics. Some are now also exploring ways in which the technology can be applied to the automation of customer support functions and the introduction of AI-powered chatbots (Figure 1).

The hype around AI is creating pressure to adopt the technology quickly, but regional operators appear to have been very cautious about investing in and applying AI. The current initiatives do not sufficiently prepare the operators to eventually support their respective national development strategies in which AI is set to be the engine for economic growth and digitalisation.

Regional operators need to take a pragmatic view on how to develop AI and integrate it into more customer touchpoints

It is widely accepted that AI can help telecoms operators to become more 'digital-ready', increase the efficiency of their processes and improve customer experience. The leading regional operators could do more with AI to increase the sophistication of their current customer care channels and support a broader portfolio of customer-facing services (for example, TV content and smart home and smart city services).

Country	Operator	Initiatives
Kuwait	Zain	Zain's customer service chatbot uses AI to automatically respond to enquiries. It works on Zain's app and website and is available in both Arabic and English.
Oman	Ooredoo	The AI-driven chatbot 'Saeed' provides support to Ooredoo's customers. It is a web-based solution only and is available in Arabic and English.
Qatar	Vodafone	In 2016, Vodafone Qatar launched Hani, a chatbot powered by the AI platform, [24]7.ai. The current status of the Hani initiative is unclear.[1]
Saudi Arabia	STC	STC uses AI predominantly for complaints resolution and self-service. Machine learning (ML) is used to optimise the targeting of marketing campaigns.
UAE	Etisalat	ML and advanced analytics are used to deliver personalised offers to customers.

FIGURE 1: EXAMPLES OF AI/ML-DRIVEN CUSTOMER SERVICE INITIATIVES FROM TELECOMS OPERATORS IN MENA
[SOURCE: ANALYSYS MASON, 2018]

We have identified three main strategies that operators can use to integrate AI into customer touchpoints (Figure 2). These strategies can be adopted by regional operators to help them move beyond initial experimentations, depending on how much risk they are willing to take and how much value they would like to extract from the use of the technology. These strategies are based on a recent review of seven operators with leading customer-facing AI initiatives.[2]

We believe that most regional operators should first apply AI to core customer-facing functions, and then identify the most promising use cases elsewhere. The selected use cases will depend on market conditions, customers' acceptance and expectation of automation and technical constraints. This recommendation is based on the following considerations for MENA operators.

- **Service reach.** Regional operators are currently working to streamline customer interactions and this is likely to continue to be the most suitable area for AI innovation. The application of AI to consumer and enterprise propositions is a medium- to long-term objective.

- **Device and platform ambition.** Operators in MENA are unlikely to build their own service ecosystems (that is, independently from those developed by Amazon and Google) or pursue a smart hardware strategy.

- **Channel reach.** Local operators are keen to reduce the volume of support calls while increasing the number of customer interactions. Therefore, we believe that they are likely to exploit existing AI ecosystems as additional channels.

- **AI investment.** Operators such as du, Etisalat and STC have expressed interest in investing in AI. However, we believe that this will be in the form of adopting low-risk implementations of AI with proven use cases rather than doing in-house technological development.

Operators need to get the basics of customer experience right before moving onto areas outside their core services

The application of AI also provides operators with many opportunities to improve different areas of their businesses and to generate additional revenue. Some of these opportunities are the following.

- **Improve marketing functions by shifting from general outbound campaigns to contextual precision marketing.** For example, a North American operator has used precision marketing to help reduce churn rates for its mobile prepaid services.

- **Build a more-intelligent content recommendation engine for video and TV propositions.** For example, Comcast is using AI to help determine what kind of content consumers might like.

- **Monetise customer data.** Operators have largely been unsuccessful in monetising raw customer data, but the use of AI could add more insights and value to businesses and public institutions.

Regardless of how aggressively and quickly regional operators want to deepen AI's involvement in consumer-facing services, it is important to ensure that the introduction of a layer of automation and intelligence is not detrimental to the quality of the customer experience.

Current trials and deployments of AI should help to strengthen operators' domain expertise, refine their ability to provide a superior and consistent customer experience and demonstrate the value of the technology to external parties. This is particularly important if operators want to support national development programmes that have made AI a key pillar of the vision.

[1] Vodafone's main machine learning research and development centre is in Egypt.

[2] For more details, please see Analysys Mason's AI in customer-facing telecoms operator services: case studies and analysis.

AI strategy	Description	Examples
Conservative: AI in core functions only	Selective investments with a focus on a few use cases which have a big effect on customer experience.	Vodafone
Ambitious: AI supports strategic services	AI supports the current service ecosystems and device value chains in which the operator has a strong presence.	Comcast, Deutsche Telekom
Aggressive: AI-centric vision	A strong AI- and data-driven vision across a broad range of services; this requires large investments.	Orange, SK Telecom, Telefónica

FIGURE 2: STRATEGIES THAT CAN BE USED BY TELECOMS OPERATORS TO INTEGRATE AI INTO CUSTOMER TOUCHPOINTS
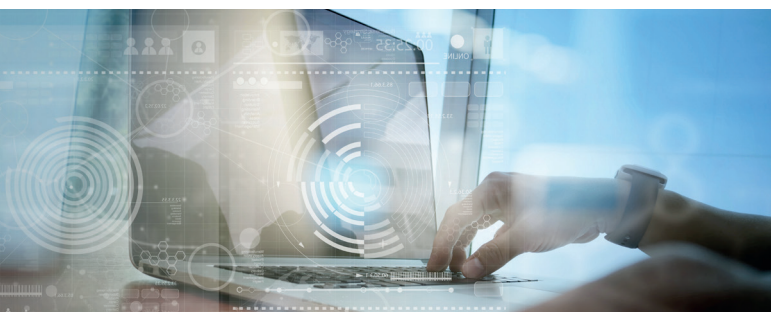[SOURCE: ANALYSYS MASON, 2018]

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Operators in the Middle East should learn from more-advanced markets to accelerate the adoption of LPWA services

Karim Yaici, Senior Analyst, Research

IoT services providers in the Middle East have announced at least 16 low-power, wide-area (LPWA) networks since 2016. However, we believe that only three start-ups (and no established operators) offer commercial LPWA network services as of December 2018. This is in stark contrast to other regions such as Western Europe, in which 17 established telecoms operators run two thirds of the region's 35 commercial LPWA networks.

The delay in commercialising LPWA services in the Middle East may not affect operators' ability to address the demand for IoT services in the long term, but it highlights the relatively low priority of IoT in the region. If operators are serious about commercialising LPWA solutions, they will need to think about how to accelerate their launch. We review LPWA deployments in the Middle East and discuss what operators can learn from more-advanced markets in order to address opportunities.

The availability of LPWA services remains limited in the Middle East

Analysys Mason's LPWA tracker shows that 5 of the 16 LPWA networks that have been announced in the Middle East since 2016 are at a pre-commercial stage (all of which belong to established telecoms operators).[1] Only 3 of the 16 are believed to be commercially available to end users (all of which are owned by start-ups) (Figure 1).

LoRaWAN and NB-IoT are the most-frequently adopted technologies by local providers. Only EITC (du) and Etisalat have adopted more than one technology. Outside the Middle East, the leading operators (including AT&T, Telefónica, Verizon and Vodafone) have adopted multiple LPWA standards. This approach enables operators to meet the requirements of different use cases and to reduce the risks of selecting the wrong technology.

The demand for LPWA is small due to limited awareness and commercial availability, but there is potential for strong growth

Operators in the Middle East have been slower to roll out and commercialise LPWA services than those in more-mature markets because of the perceived low market demand for IoT and because priority was given to other services such as 4G. The IoT ecosystem is also underdeveloped in the region as operators' partners lack the skills to build LPWA solutions.

Most enterprises in the Middle East have limited awareness and understanding of IoT. There are still significant barriers to IoT, even in the UAE, which is considered to be one of the most advanced nations in terms of IoT. According to our survey of enterprises, over 60% of enterprises in the UAE are unsure about, unaware of or not interested in IoT. The limited number of high-profile contracts also does not help to instil confidence in the technology, although this situation is slowly changing.[2]

However, we believe that demand will slowly grow as the number of proof points increases. Analysys Mason forecasts that the number of LPWA connections in the Middle East and North Africa will increase from under 1 million at the end of 2018 to 33.6 million in 2022. Tracking (for example, of bicycles and high-value assets) will represent more than 40% of the market. In addition to smart city applications, which have already been piloted, other opportunities will be in the agriculture (for example, livestock tracking and flood threat monitoring), gas and oil (for example, pipeline monitoring) and utilities (for example, smart meters) sectors.

LPWA's long-range connectivity and low-power technology will be particularly useful in consumer wearables, which can be used, for example, to track people or pets or monitor health. The take-up of smartwatches could increase, but this may rely on large device manufacturers and operators in the region adopting LTE-M.

Operators can encourage LPWA adoption by commercialising simple solutions and by supporting the developer community

Operators that have or are planning to launch LPWA networks commercially need to think about how to act based on learnings from more-advanced markets. Options to consider include the following.

- **Launch some simple products.** AT&T and Verizon are both offering the Samsung SmartThings Tracker, a simple LTE-M device. AT&T is offering the device plus 1 year of connectivity for USD74.99.

- **Experiment with simple pricing models.** Operators can use existing IoT pricing models such as volume discounts and freemium models to assess the appetite for early LPWA applications. They should also publish a list of prices, as most IoT providers in the USA have done, rather than provide pricing details on application.[3]

- **Provide support to developers.** KPN in the Netherlands, for example is sponsoring the IoT Academy that provides training and information for developers that are interested in building solutions on its LoRaWAN network. Swisscom has also supported developer days.

Operators should prioritise launching their LPWA networks to start monetising their network investments. However, the delay in launching these networks allows them to learn from the experiences of early adopters. Once the network has been launched, operators should focus on 'easy wins' with simple LPWA connectivity solutions, given the limited commercial awareness of IoT in the region, before considering moving into more-complex IoT propositions.

[1] That is, the network is built but commercial services have not yet been launched.

[2] For example, Etisalat secured a contract to supply and install IoT-enabled fire alarms to 300 000 villas in the UAE in partnership with the Civil Defence in 2018. We believe that the service has not yet been launched as of January 2019.

[3] None of the established operators listed in Figure 1 have a web page dedicated to promoting LPWA services or providing pricing information.

Country	Provider	Type of provider	Access technology	Year announced
Iran	Parsnet	Start-up	Sigfox	2017
Lebanon	Libatel	Start-up	LoRaWAN	2017
Saudi Arabia	Machinestalk	Start-up	LoRaWAN	2018
Saudi Arabia	STC	Established operator	NB-IoT	2018
UAE	EITC (du)	Established operator	LoRaWAN	2016
UAE	EITC (du)	Established operator	NB-IoT	2016
UAE	Etisalat	Established operator	NB-IoT	2016
UAE	Etisalat	Established operator	LTE-M	2016
Kuwait	Zain	Established operator	NB-IoT	2016
Lebanon	Ogero Telecom	Established operator	LoRaWAN	2017
Oman	mOmkin (a JV, 55% owned by Omantel)	Established operator	Sigfox	2016
Oman	Ooredoo	Established operator	LoRaWAN	2018
Qatar	Vodafone	Established operator	NB-IoT	2016
Saudi Arabia	Mobily	Established operator	LTE-M	2016
Saudi Arabia	Zain	Established operator	NB-IoT	2017
UAE	iWire	Start-up	Sigfox	2018

Commercial   Pre-commercial   Announced

FIGURE 1: ANNOUNCED, PRE-COMMERCIAL AND COMMERCIAL LPWA NETWORKS IN THE MIDDLE EAST.
[SOURCE: ANALYSYS MASON, 2018]

Questions?
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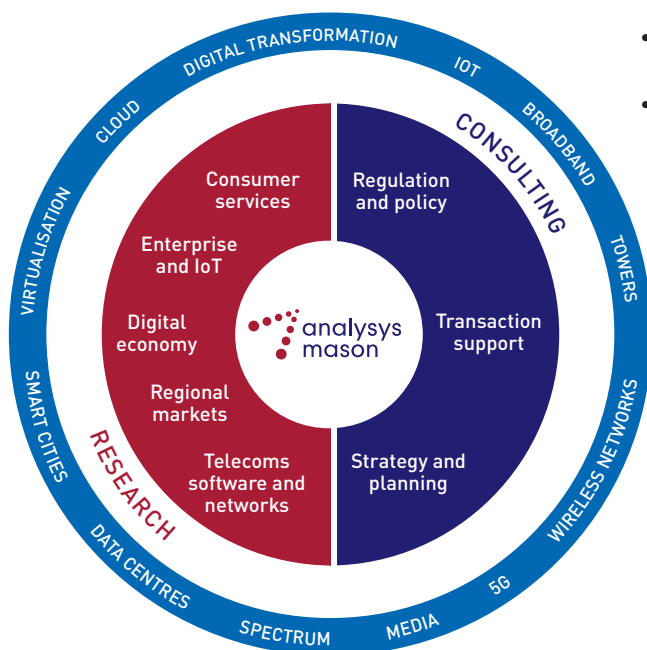
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At Analysys Mason, we understand that clients in the TMT industry operate in dynamic markets where change is constant. Our consulting and research has helped shape clients' understanding of the future so they can thrive in these demanding conditions.

Consulting

- We deliver tangible benefits to clients across the telecoms industry
- Communications and digital service providers, vendors, financial and strategic investors, private equity and infrastructure funds, governments, regulators, broadcasters and service and content providers
- Our sector specialists understand the distinct local challenges facing clients, in addition to the wider effects of global forces
- We are future-focused and help clients understand the challenges and opportunities new technology brings.

Research

- Our dedicated analyst team tracks and forecasts the services accessed by consumers and enterprises
- We offer detailed insight into the software, infrastructure and technology delivering those services
- Clients benefit from regular and timely intelligence, and direct access to analysts.

❝ Analysys Mason is the global specialist adviser on telecoms, media and technology (TMT). Since 1985, Analysys Mason has played an influential role in key industry milestones and helping clients through major shifts in the market. We continue to be at the forefront of developments in the digital economy and are advising clients on new business strategies to address disruptive technologies. ❞

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