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Commit to the cloud

The radical transformation opportunity for telecom operators through the cloud

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EXECUTIVE SUMMARY

Telecom operators in the Middle East face significant growth and profitability challenges. However, cloud computing[1] and 5G are bringing a wave of opportunities for the industry. Thus far, there has been limited adoption of cloud computing by telecom operators because of the complexity of the endeavor, lack of expertise, regulatory burdens, security concerns, and limited presence of hyperscale cloud service providers (CSPs) in the region. These barriers are now dropping, and telecom operators have an opportunity to use the cloud to radically transform operations and improve their financial performance. It is time to commit to the cloud.

To unlock value from the cloud, telecom operators should implement three transformations in parallel:

1. Transform their networks to be cloud native and better integrate their networks and IT workloads.

2. Simplify and modernize IT architecture and operations.

3. Create capacity to innovate and rapidly deploy cloud-enabled use cases in market-facing and internal operations.

Collectively, these transformations create a comprehensive program that can lower the total cost of operations, boost revenue from core business, and help organizations access new revenue streams from adjacent businesses. These changes can result in improved return on investment (ROI). According to our estimates, every US$1 invested in the cloud can generate $5.4 in earnings before interest and taxes (EBIT) for telecom operators.

To capture this opportunity, telecom operators need to adopt a programmatic approach to designing and implementing their cloud journey. This approach should be intrinsic to their business strategy and should involve all key stakeholders across networks, IT, and business. They should also put the right capabilities in place, including deep knowledge of their own network infrastructure and IT systems, expertise in telecom-specific data sets and use cases, experience along the cloud value chain, and the ability to execute complex transformation projects.

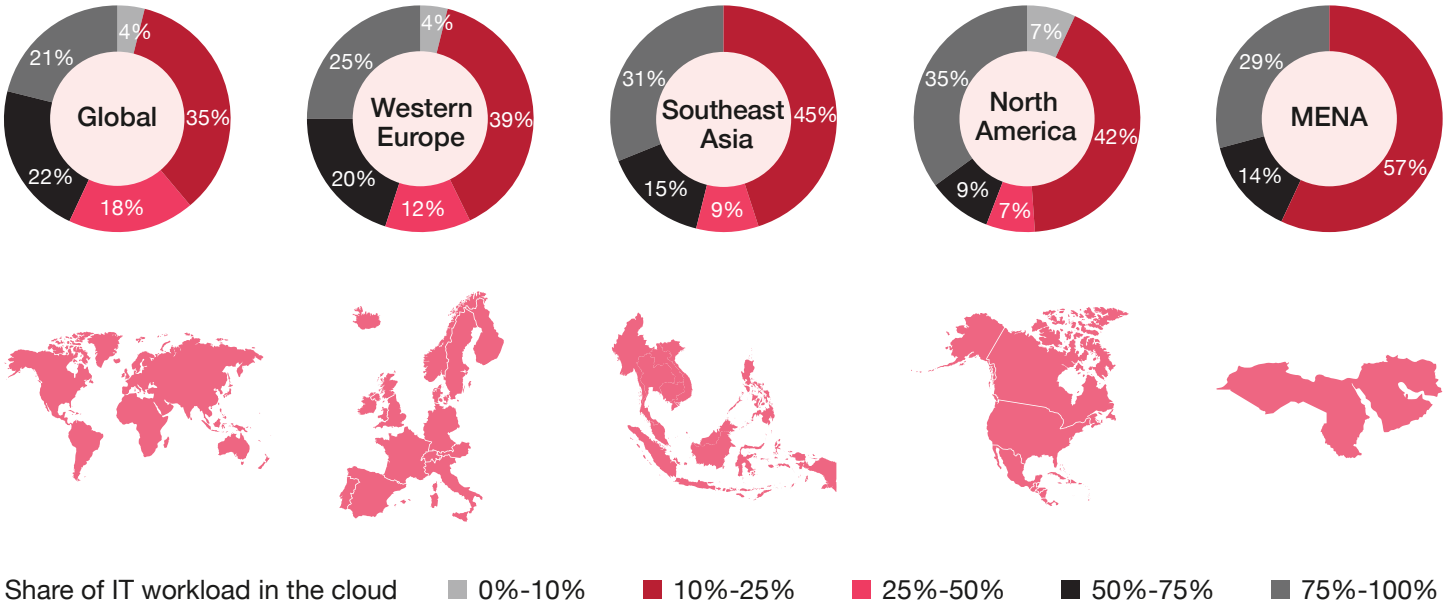
THE CLOUD OPPORTUNITY

Over the past 15 years, cloud technology has grown into a global market worth nearly $500 billion (as of 2022). Across all industries and cloud components, projections point toward a growth rate of around 20 percent through 2027.[2] Adoption by telecom operators of private, public, and hybrid cloud computing has varied globally, based on the complexity of existing technology, the required adherence to stringent performance and regulatory standards, and the very different economics of the public cloud compared with the private and hybrid cloud. Many telecom operators are still in the early stages of moving to the cloud and have only announced their intention to accelerate cloud adoption for IT and network components (*see Exhibit 1*).

EXHIBIT 1

Most MENA telecom operators have migrated less than 25% of their IT workload to the cloud

Share of each region's telecom operators according to how much of their IT workloads they have moved to the cloud (2021)



Note: MENA = Middle East and North Africa.
Source: Mark Newman and Dean Ramsay, "Lessons Learned on the Journey to Cloud Native," TM Forum Knowledge Report, October 2021 (http://tmforum.org)

In the Middle East, operators have been slower than the global average to adopt the cloud, for several reasons. These include the costs and complexity of the endeavor, strict regulatory and compliance issues, limited cloud infrastructure from local providers and hyperscale cloud service providers (CSPs), security concerns, and a dearth of talent. However, these barriers are falling.

During recent years, major global telecom operators in the region have conducted significant cloud transformations, thereby providing proof points regarding the value of the cloud. Governments in the region have also developed policies to enable cloud adoption and are focused on developing various digital economy sectors that create positive momentum for cloud adoption. Governments in Gulf Cooperation Council (GCC)[3] countries have also made significant commitments to attract hyperscale CSPs (*see Exhibit 2*). Additionally, telecom vendors are increasing adoption of cloud-based software, compelling telecom operators to adopt the cloud themselves and realize that they should replace legacy infrastructure with dynamically scalable cloud-based resources.

EXHIBIT 2
Hyperscale CSPs are entering GCC markets

Country	Hyperscaler	Current status
Bahrain	✓ Amazon Web Services	✓ Opened 2019
Kuwait	✓ GCP and Kuwait government	✓ Announced 2023
Oman	✓ Amazon Web Services (Local Zone) ✓ Oracle and Oman government ✓ Alibaba Cloud	✓ Announced 2022 ✓ Announced 2022 ✓ Announced 2021
Qatar	✓ GCP ✓ Azure	✓ Opened 2023 ✓ Opened 2022
Saudi Arabia	✓ Oracle Cloud ✓ GCP and Aramco ✓ Azure ✓ Alibaba and STC ✓ Huawei	✓ Opened 2020 ✓ Announced 2023 ✓ Announced 2023 ✓ Announced 2022 ✓ Announced 2022
United Arab Emirates	✓ Amazon Web Services ✓ Oracle Cloud ✓ Azure ✓ UAE G42 Cloud ✓ Alibaba Cloud	✓ Opened 2022 ✓ Opened 2021 ✓ Opened 2019 ✓ Opened 2018 ✓ Opened 2016

Source : Strategy& analysis

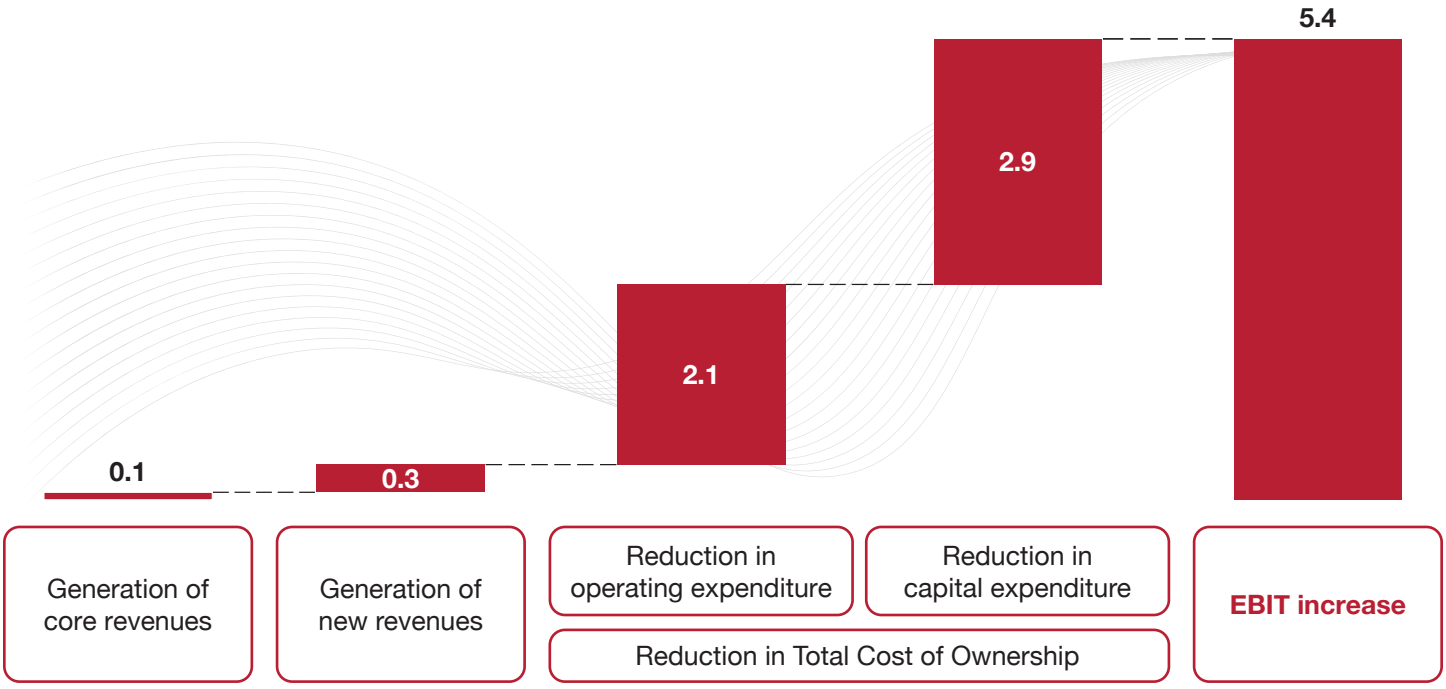
As a result, cloud adoption is accelerating in the region across all industries. The forecast is for the total cloud technologies market in the region to nearly triple in value by 2027 and reach $9.8 billion, demonstrating faster growth than the global average. Telecom operators are expected to make up 8 to 10 percent of this total value.[4]

These developments are happening in conjunction with the transition to 5G. The deployment of 5G continues to require considerable investments and is forcing the telecom industry to monetize its infrastructure more effectively than it has for previous network deployments. For that reason, telecom operators face an increased urgency to find value. We believe that cloud implementation offers telecom operators an opportunity to improve operational performance and boost profits.

To capture this opportunity, telecom operators need a programmatic approach to designing and implementing their cloud journey. This approach should be intrinsic to their business strategy and should involve all key stakeholders across networks, IT, and business. Such an approach is particularly important given that the value from cloud investments does not come purely from the arbitrage created by IT or network workload migrations as capital expenditures shift to operating expenditures. Rather, value from cloud adoption derives from the agility and scalability that it introduces into business operations and services development. A holistic, multi-domain cloud transformation strategy can lead to increased core business revenue, unlocking of new revenue, and savings on total cost of ownership (TCO). In aggregate, every $1 invested in cloud computing can generate an additional $5.4 of incremental earnings before interest and taxes (EBIT) for telecom operators (*see Exhibit 3*).

EXHIBIT 3

Every US$1 of annual investment creates $5.4 in earnings before interest and taxes



Note: EBIT = Earnings before interest and taxes.
Source: Strategy&

A HOLISTIC, MULTI-DOMAIN CLOUD TRANSFORMATION

Achieving superior returns from the cloud requires telecom operators to implement three transformations in parallel. These transformations must be connected, with clear value-exchange mechanisms established among them. Operators should:

1. **Transform their networks to be cloud native and better integrate their networks and IT workloads**

   Telecom operators should embrace the cloud and the virtualization (or containerization)[5] of their networks as they deliver new 5G, edge computing (processing of data within a device itself rather than the cloud), the internet of things (IOT, the network of connected devices), and software-defined wide area network (virtual computing architecture) services. Positive outcomes include improved customer experience, closed-loop automation (which automatically improves the network experience), and orchestration of network operations for rapid service delivery. Moving to zero-touch operations, which require no human intervention in network operations, can result in reduced operating expenditure and faster deployments. Done right, we believe that network transformation can cut the network TCO (including hardware and labor costs) by 30 to 40 percent and improve site deployment rates by two to four times.

2. **Simplify and modernize IT architecture and operations**

   As they progress on migrating application-specific and organizational data workloads to the cloud, telecom operators should modernize their IT architecture and operations to fully exploit the scale and benefits of the cloud. In doing so, telecom operators have to make critical choices about their cloud approach, such as whether to use public, private, or hybrid cloud systems and whether they want a single or multiple cloud vendors. Telecom operators also need to prioritize in terms of which cloud initiative generates the most value. Through these choices, telecom operators should simplify their often very complex application portfolio by a minimum of 20 percent. Such a transformed application portfolio in the cloud has significant potential to improve application resilience and availability. IT cloud transformation can deliver agility and scalability, allowing for application release velocity to improve by two to three times and allowing for a 25 to 35 percent reduction in the costs of applications, infrastructure, and managed services.

3. **Create capacity to innovate and rapidly deploy cloud-enabled use cases in market-facing and internal operations**

   Telecom operators can unlock value through creating cloud centers of excellence. These centers can rapidly and efficiently generate innovative use cases linked to the core business along with targeting new business opportunities. For business-to-business (B2B) services, operators can expand revenue through 5G, IOT, and advanced edge-computing use cases. Cloud technology enables offerings such as gaming and other low-latency content services and over-the-top (OTT) capabilities for business-to-consumer (B2C) services. Cloud analytics capabilities can allow operators to better serve customers and increase their lifetime value to the company—all at lower cost-to-serve. It is thus critical that business teams be involved from the start in cloud strategy development and be responsible for key performance indicators (KPIs) for cloud value realization together with the technology and network teams.

LESSONS ON CLOUD IMPLEMENTATION

Middle East telecom operators can learn six lessons from companies around the world that have progressed further on moving to the cloud.

Apply a comprehensive strategy

Technology and business should drive the cloud transformation together. Companies should start by identifying clear business objectives that they can translate into a comprehensive cloud strategy. In addition, they should develop a coherent business case considering value-creation areas and costs across all three domains. This strategy should be clearly communicated and driven, and its execution measured through specific C-suite KPIs.

Look beyond cost reduction

Companies should consider wider value potential from the cloud, such as incremental revenue creation and a reduction in the time it takes to get products to the market. Although the TCO and the conversion of capital expenditures into operating expenditures are important benefits of the cloud, the returns go further than cost reductions.

Transform the entire technology stack

The cloud represents an opportunity to shift telecom operators' technology toward more open architectures with increased agility and resilience. Companies should apply a holistic approach and assess transformation of the entire stack. They should make use of leading cloud practices in DevOps (the ability to deliver applications quickly), automation, security, and other areas, if they are to extract the full benefits of transformation and perform a value-led prioritization. They should avoid piecemeal approaches that generally lead to underwhelming results and a lack of clarity about potential impact.

Do not be constrained by the capabilities and reach of hyperscale CSPs

The regional presence of hyperscale CSPs should not constrain the transition to the cloud. Telecom operators can seize value in a local private network environment as well. Given that cloud transformation is a multiyear endeavor, it is important to develop capabilities and know-how in a private network before moving into a complex hybrid, multi-cloud environment. Furthermore, telecom operators should maintain flexibility and control over crucial network functions to offer differentiated services to their customers. They should avoid becoming overdependent on a particular hyperscale CSP.

Work with the right partners

Cloud transformations require a consortium of partners with clear roles and specific areas of expertise. It is imperative to evaluate partners carefully and determine the most effective engagement models. When selecting partners, operators should plan for long-term engagement, with partners that are committed and aligned with the overall vision.

Apply agile ways of working

Workforce capabilities and workplace culture should change along with any large-scale transformation. Successful cloud transformations involve more than technology: They require changing how people work. Operators need to institutionalize agile ways of working internally and with partners. They also need to take advantage of standardized, automated cloud platforms that enable accelerated time-to-market and increased productivity.

THE CLOUD TRANSFORMATION JOURNEY

Given the complexity of cloud transformations, telecom operators need a well-structured and planned approach, consisting of several steps. Throughout the transformation, telecom operators need to establish the right governance structure to ensure value delivery without surprises or service disruptions.

Design the cloud strategy and road map

Telecom operators need to define their cloud road map, identify the core business drivers for the cloud, and translate these business drivers into underlying technology requirements. In parallel, they should assess their technology and network landscape to define the scale and scope of the transformation—utilizing this to design the future cloud environment, key landing zones, and prioritized use cases. They should identify and contract the right cloud transformation partners. They should create and communicate a company-wide cloud transformation vision with which everybody is aligned.

Obtain quick wins

After the road map planning phase, telecom operators need to move into implementation mode, starting with quick wins across the network, IT, and the business. These wins enable operators to demonstrate impact and create momentum within the organization. They should migrate high-priority and low-risk applications and workloads to the cloud. They should simplify selected applications and test network function virtualizations.

Transition network and IT

Based on early successes, the next step is to bring the broader cloud migration strategy to life, modernizing the network and IT. The focus in this step should be on pushing for automation, decoupling services, improving efficiency and virtualization, and reinventing the way operators build applications and infrastructure. Operators should ensure that they possess the right capabilities and appropriate risk mitigation plans.

Unlock new business value

Telecom operators need to programmatically unlock value through implementation of prioritized use cases aimed at generating new business opportunities in the B2B and B2C markets, build analytics capabilities with the cloud, and improve customer management and value. They should drive further organization-wide efficiency improvements enabled by the cloud.

Manage and run

Finally, telecom operators should establish teams and build the capabilities to manage and run the transition to the cloud. Such teams can ensure efficient cloud operations including transaction monitoring, performance monitoring, incident management, patching, reporting, and tracking value realization.

CONCLUSION

Telecom operators in the Middle East have faced barriers to the adoption of the cloud in the past. However, as those obstacles fall and cloud capabilities become more accessible in the region, the opportunity for value realization from the cloud is significant. A holistic, multi-domain cloud transformation strategy can lead to increased core business revenue, unlock new revenue, and produce significant savings on the TCO. As pressures on growth and profitability continue, it is time for Middle East telecom operators to commit to the cloud.

ENDNOTES

1. *The cloud* in this report refers to computing infrastructure managed by a third party. *The private cloud* is third-party computing infrastructure provided and managed by in-country providers. *The public cloud* is third-party computing infrastructure provided and managed by hyperscale cloud service providers. *The hybrid cloud* is when organizations use both the private cloud and the public cloud.

2. IDC Semiannual Public Cloud Services Tracker—Forecast H2 2022, IDC (https://www.idc.com/getdoc.jsp?containerId=IDC_P29737).

3. The GCC countries are Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and the United Arab Emirates.

4. Mordor Intelligence, "Telecom Cloud Market Size & Share Analysis—Growth Trends & Forecasts (2023–2028)" (https://tinyurl.com/3jjf7pau).

5. Telecom network virtualization separates the physical hardware and network functions from the software that controls them. The network runs on general-purpose hardware, which can allow for cost reductions. Containerization is similar to virtualization.

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