

strategy&

Formerly Booz & Company

***Putting GCC
transportation
and logistics in
the driver's seat***

**Technologies
for business
transformation**

Contacts

Dubai

Dr. Ulrich Koegler

Partner

+971-4-436-3000

ulrich.koegler

@strategyand.ae.pwc.com

Jean Salamat

Principal

+971-4-436-3000

jean.salamat

@strategyand.ae.pwc.com

Camil Tahan

Principal

+971-4-436-3000

camil.tahan

@strategyand.ae.pwc.com

Connect with the Ideation Center



twitter.com/ideationcenter



linkedin.com/company/ideationcenter



ideationcenter.com

Connect with Strategy& Middle East



twitter.com/ideationcenter



linkedin.com/company/ideationcenter



strategyand.pwc.com/me

Connect with Strategy&



twitter.com/strategyand



linkedin.com/company/strategyand



youtube.com/user/strategyand

About the authors

Dr. Ulrich Koegler is a partner with Strategy& Middle East. He is based in Dubai and is a member of the engineered products and services practice in the Middle East. He works at the intersection of national industrial development and corporate growth, strategy, and evolution, and has expertise in technological innovation and transformation in the Middle East.

Jean Salamat is a principal with Strategy& Middle East. He is based in Dubai and specializes in IT strategy formulation, digital transformations, lean IT, and performance management. His work focuses on the energy, utilities, and transportation sectors, and he has worked with clients in Canada, Europe, the Middle East, and the United States.

Camil Tahan is a principal with Strategy& Middle East. He is based in Dubai and is a member of the engineered products and services practice in the Middle East, where he specializes in the transportation, infrastructure, and industrial products sectors. He has worked with government organizations and large corporations in developing and implementing various transformation programs, along with digitization, growth strategy, operating model, and operational improvement projects.

Samer Bohsali also contributed to this report.

Executive summary



Freight transportation and logistics (T&L) is a critical industry for the Gulf Cooperation Council (GCC)¹ countries, yet its technology and infrastructure lag behind that of developed countries. Worldwide, new digital tools and applications are transforming T&L at all stages of the value chain. GCC companies have not seized this opportunity, nor capitalized on these technologies — which they must to remain competitive with global players. Digital is more than a tool to improve efficiency — it is a means to fundamentally rethink business models and better support national goals of creating more vibrant economies.

There are numerous emerging technologies relevant to GCC T&L players. Many of these technologies are still in the initial stages of implementation. They have a long way to go in terms of regulatory support and capability development within companies before they are commercially viable. Nonetheless, several are further advanced and should be at the top of GCC T&L companies' strategic agendas: big data and analytics, on-demand mobility, and blockchain.

We have observed that these digital solutions have the potential to reduce operating costs by 10 to 30 percent and reduce operational risk and breakdowns by up to 75 percent. Even more compelling is that these technologies allow T&L companies to develop new business models, based on services that dramatically improve customer engagement and unlock new revenue sources.

To capture these gains, GCC companies must move fast or risk ceding the first-mover advantage to their competitors. Already, some early adopters are implementing these technologies and retooling their operations and offerings, leading to operational and financial performance gains. To succeed, companies must apply a framework in which they rethink their strategic objectives and business model and then define a digital strategy to address their business needs.

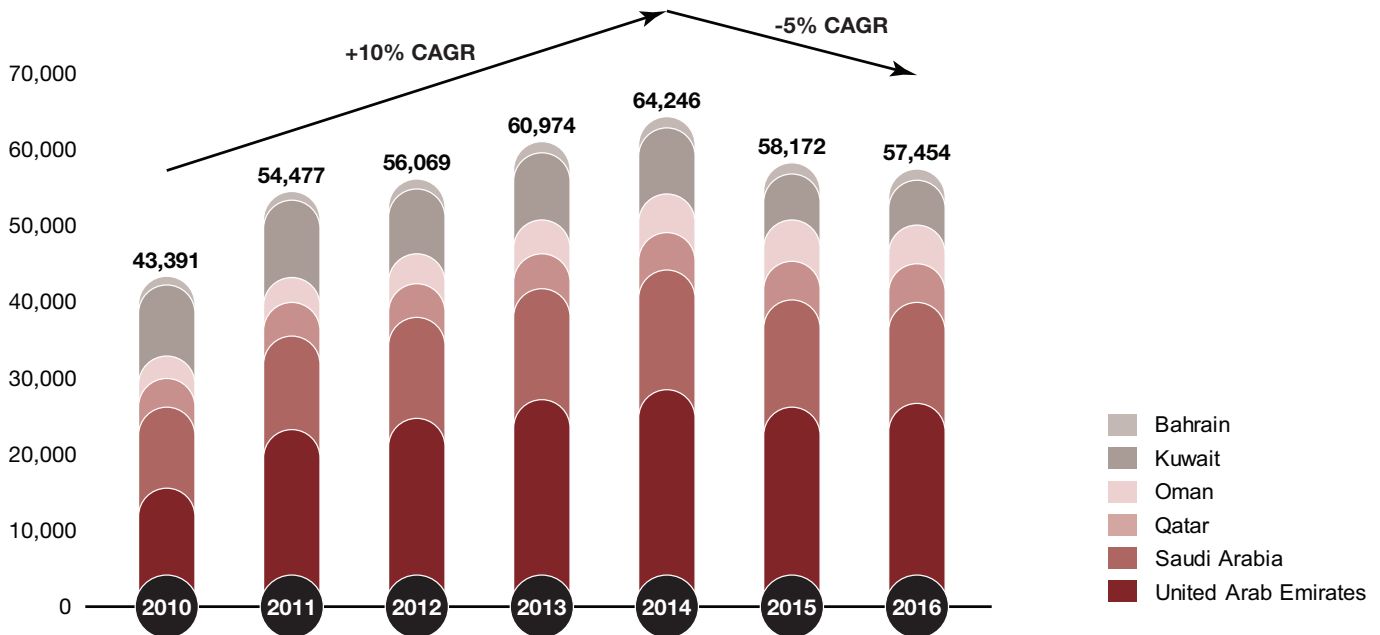
Challenges could lead to a critical opportunity

The T&L industry in the GCC faces a combined, existential threat of declining business and outdated infrastructure. At the same time, T&L companies have a critical, once-in-a-generation opportunity to implement digital technologies that can transform their businesses.

From 2010 through 2014, freight revenue in the region grew at a steady pace of about 10 percent. Since then, revenue has declined by about 5 percent a year, due to slowing economic activity in the region (see Exhibit 1). As oil prices remain low, businesses are scaling back projects, imports are down, and governments are spending less on the kind of infrastructure projects that require major freight shipments.

Exhibit 1
GCC freight T&L revenues are slowing

Total sales (in US\$ millions)



Note: T&L includes water transportation, warehousing, support activities for transportation, and postal and courier services.

Source: IHS Markit Comparative Industry 2018q1; Strategy& analysis

In addition, the region's T&L industry significantly lags behind its global peers in terms of technology. T&L is a latecomer to digitization, with many management teams still applying an analog mind-set. It is a traditional industry worldwide, dating back to the origins of commerce. The Strategy& Industry Digitization Index, which looked at how various sectors use data and analytics to improve operations, found that T&L is behind utilities. Based on our experience, GCC T&L companies are less digitized than their peers in more developed markets.

The slow progress thus far is not due to a lack of options. The industry is witnessing a wave of innovation across the entire value chain, as startups emerge with new, intelligent solutions to solve the challenges of moving goods across land and sea. To date, most GCC companies have not adopted these solutions — a critical failing that puts them at a steep competitive disadvantage, with no chance to recover.

The industry's cautious approach poses the risk that technology could be imposed on T&L because of the dynamics that are reshaping other sectors. If T&L companies continue to take the back seat in exploring and investing in new digital solutions in alignment with their overall business objectives, then they could instead end up with unplanned and inefficient technology retooling that is designed for the benefit of other firms. For example, in March 2018, Authentag, which provides inventory management services, announced that it will introduce a blockchain-based ledger system for the pharmaceutical industry to provide tracking and verification services for products. Successful trials for similar systems could force the T&L sector to adopt them to cater to the business needs and requirements of its large corporate clients, whether or not these technologies fit with any particular T&L company's needs.

The policy environment, however, should encourage the digital transformation of GCC T&L. Governments in the region are making large-scale investments in digital to promote sustainable economic growth. Saudi Vision 2030, for example, seeks to increase the private sector's role in the economy and diversify away from dependence on oil. Critically, it aims to improve logistics throughout the country. The United Arab Emirates (UAE) has an even stronger focus on T&L. The UAE Vision 2021 sets goals for innovation, including making digital technology one of seven primary national sectors, and it aspires to make the country first overall in the global rankings of air transport and port infrastructure, and among the top 10 in terms of logistics. For these broad initiatives, investing in T&L is a short-term goal and a means of hitting more ambitious economic targets. Moreover, digital investments in the region are low risk as they involve retooling and redesigning minimal amounts of legacy IT infrastructure.

Business objectives first, technology second

The constant flood of new technologies can be confusing for T&L executives. However, as powerful as these tools can be, they are merely tools that are most useful when applied to a specific purpose. Rather than trying to choose from an ever-changing menu of available technologies, T&L leaders must first determine their business objectives, and then determine the right application of technology to get there.

Overall, digital solutions offer two main benefits to T&L: increased operational efficiency and the fundamental redesign of business models. Greater efficiency is significant, particularly as the industry faces growing financial pressure and, in the short term, lower freight volume. Of greater importance is that T&L companies can fundamentally redesign their business models, improve the customer experience, and better engage with customers. This change will be as radical for T&L as the shift in media was from playing videocassettes to streaming movies on a smartphone.

There are three main ways that new technologies can transform T&L businesses:

Redesign existing business models and processes

First, companies can redesign traditional business models and processes through digital. Companies across all industries now collect real-time performance information and use advanced analytics and business intelligence to make smarter decisions. For the T&L industry, we have seen, these improvements can reduce operational costs by 10 to 30 percent through efficiency gains, while minimizing operational risks and reducing asset breakdowns by up to 75 percent.

Rather than trying to choose from an ever-changing menu of available technologies, T&L leaders must first determine their business objectives, and then determine the right application of technology to get there.

For example, in shipping, the Danish conglomerate Maersk implemented a fleet-monitoring system that allows the company to optimize routes and schedule maintenance based on real-time information, resulting in a 10 to 15 percent reduction in fuel costs. Maersk's freight forwarder, Damco, recently launched Twill Logistics, a digital service that offers online quotes for shipment management and document handling, among other services. Similarly, the cruise line Royal Caribbean installed onboard sensors that track elements such as trim, speed, propulsion machinery, navigation data, and other factors to fine-tune operations and make small, preventive repairs to avoid being blindsided by unexpected failures. By minimizing downtime and enabling the company to get the full usage out of components, the system delivers a cost savings for the fleet of about US\$12 million a year.

Improve customer experience

A second business innovation powered by digital solutions is to redesign existing business models, improving customer satisfaction and loyalty. For example, Flexport, a U.S.-based freight forwarder, bundled all freight carriers into a single database, which it offers free to companies that want to better organize and track their shipments. Flexport's service is akin to Amazon's "One-Click" model — it allows enterprise clients to set up automatic re-order cycles and plan future shipments, thus reducing their volumes of inventory. It also digitized much of the paperwork process, and it runs algorithms, allowing the system to become smarter over time. Flexport has also introduced its own freight forwarding service, which can sift through routes and rates to find customers the best terms, as a result of first-hand access to the relevant data. The company takes a 15 percent cut of every shipping container it moves. It currently moves \$1.5 billion in merchandise value each year among 64 countries.

Transporeon is another example. The company built a network that links more than 1,000 shippers, 65,000 carriers (including T&L providers, third-party logistics players, freight forwarders, and brokers), along with more than 100,000 users worldwide. The network is available on a "software-as-a-service" model (SaaS, in which software is licensed and accessed remotely) in more than 100 countries and 24 languages. By using Transporeon's tool, shippers can manage the request for proposal process, source suppliers, and automate auditing and billing. According to Transporeon, the tool lowers process costs by as much as 30 percent, freight costs by nearly 20 percent, and waiting times for carriers by 40 percent.

Invent new engagement or business models

Finally, T&L companies can use digital technologies to launch entirely new means of creating value. For example, a company called Freightos developed an inventive new business model: a web-based marketplace for international freight shipping. Freightos aggregates quotes for services from thousands of freight forwarders, allowing shipping customers to see what is available in terms of price, service levels, and transit times, and then book instantly through the site.

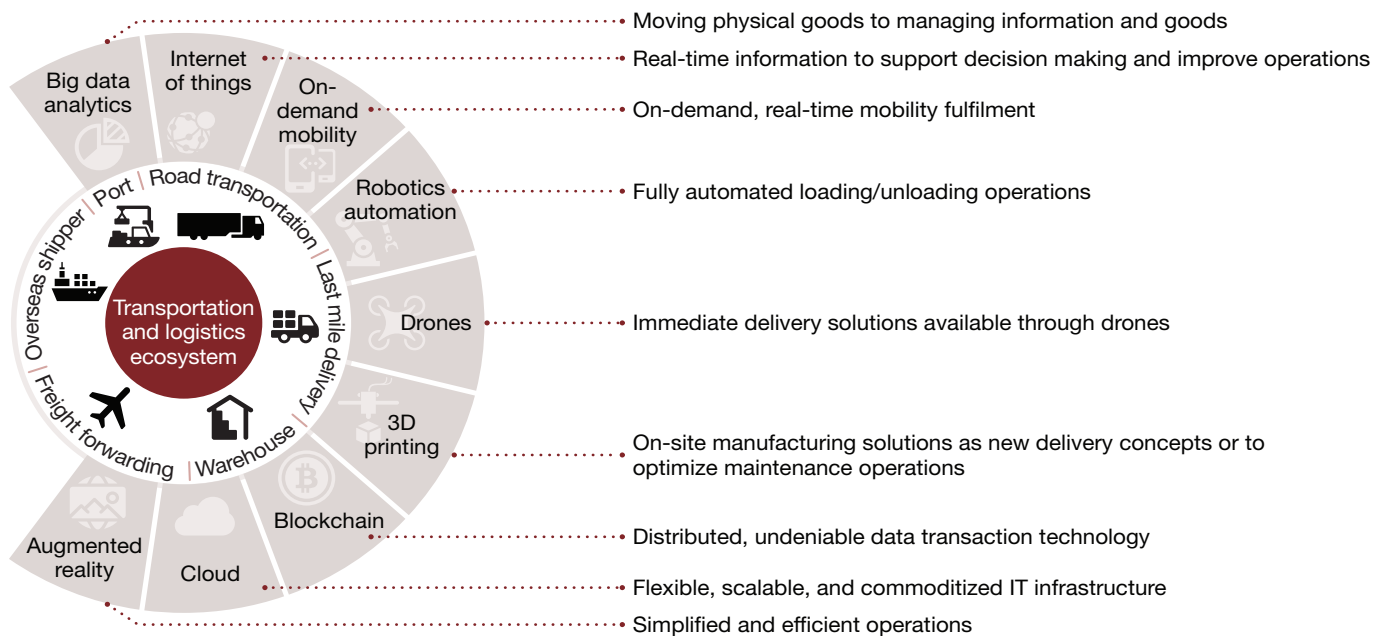
Another good example is C.H. Robinson, a North American third-party logistics provider that developed a SaaS platform called Navisphere, which delivers better customer service while also generating revenue. The platform gives customers greater transparency into their supply chain, down to the level of individual stock keeping units (SKUs). By analyzing historical data with machine learning and artificial intelligence algorithms, Navisphere can identify supply chain threats such as weather, traffic, or geopolitical events, assess their impact, and recommend mitigation measures.

Technologies to know

Most T&L executives rose through the ranks during a time when digital technologies did not even exist. They often do not know where to start when faced with many rapidly developing new technologies. Based on our analysis of the region's T&L market, we believe there are nine important digital technologies for major T&L freight companies in the region (see Exhibit 2).

Exhibit 2

There are nine essential digital technologies that major freight T&L players can adopt



Source: Strategy&

Although all of these technologies are increasingly adopted and drawing considerable investments across various sectors and industries, we believe that the majority should not be high priorities for T&L companies in the GCC. This is primarily because these technologies are in the early stages of implementation and do not yet have regulatory support or because companies lack the internal capabilities to capitalize on them.

However, a subset of these emerging technologies is already disrupting the regional T&L freight industry. We believe this subset will have the greatest impact in the industry over the next several years, and thus should be at the top of the management agenda for companies in the region.

Big data and analytics

The most foundational new technology is big data and analytics. Companies can reduce costs, improve their performance, and potentially transform their business model by capturing more data, and more detailed types of data, and running them through algorithms to yield insights. Rather than simply moving goods, big data and analytics help companies better manage information, and thus create greater value for their customers.

German freight company DHL Express, which has the largest market share in the GCC, is a good example. DHL Express's use of big data and analytics has led to greater transparency for management, a dramatic improvement in processes and performance, and increased customer loyalty and retention.

The company delivers goods for customers such as technology and pharmaceutical firms, consumer packaged goods companies, and individual consumers. DHL Express has transformed its entire value chain through the use of data. In the past, there was little transparency or collaboration among different aspects of the value chain. The company was unable to forecast accurately long-term demand, or to respond to spikes or drops in short-term demand. Its assets, including manpower, were often either idle or stretched too thin, and the company had few customer interactions, leading to minimal brand equity.

In response, DHL Express implemented a project, leveraging big data and analytics, to connect those disparate parts and allow them to function more effectively as a coherent whole. The company now optimizes routes in real-time, based on the delivery sequence of cargo, traffic conditions, and customer demands. Sensors on the trucks, for example, collect data on traffic conditions and send them to the analytics systems. DHL Express also "crowd-sources" pick-ups and deliveries among its drivers, allowing available carriers to scale up and handle increased volume on their regular routes.

By aggregating overall freight data and other information, DHL Express can generate more effective long-term forecasts. These allow the company to fine-tune operations among different entities, anticipate risk, and better utilize assets. It even sells market-based information to small and medium-sized businesses, based on insights that its data yield. The company also gauges its own performance by soliciting input from customers, to assess satisfaction levels, predict which customers are likely to jump to competitors, and develop new services.

Rather than simply moving goods, big data and analytics help companies better manage information, and thus create greater value for their customers.

On-demand mobility

The second priority technology for T&L freight companies in the GCC is on-demand mobility. This is the capability to get data securely and reliably into the hands of those who need it — whether through smart phones, tablets, or other mobile platforms. After all, data only have value if decision makers can access them when and where they are making critical decisions.

Some startups are launching in the region based on the concept of on-demand mobility. For example, a company called Load-Me.com has created a transportation marketplace in the GCC. The goal was to give shippers greater transparency on freight costs and streamline some of the often unnecessarily long and complicated processes involved in booking freight transport in the region.

Load-Me.com in essence creates an online community of shippers, logistics professionals, and drivers, allowing them to work directly with each other. It gives real-time information about shipments that need transport, trucks, and other logistics services across the region. As a result, it has increased competition and lowered freight costs. It has also dramatically simplified the process of booking freight.

Blockchain

The third digital technology with the greatest potential for disruption in the regional T&L industry is blockchain. In basic terms, blockchain allows organizations to record transactions online in a secure way, by encrypting them and distributing them across a wide network of computers. The financial and healthcare industries are increasingly using blockchain because it protects sensitive information inexpensively. For the GCC freight industry, blockchain is a way to connect carriers and shippers directly without the need for distributors or other intermediaries.

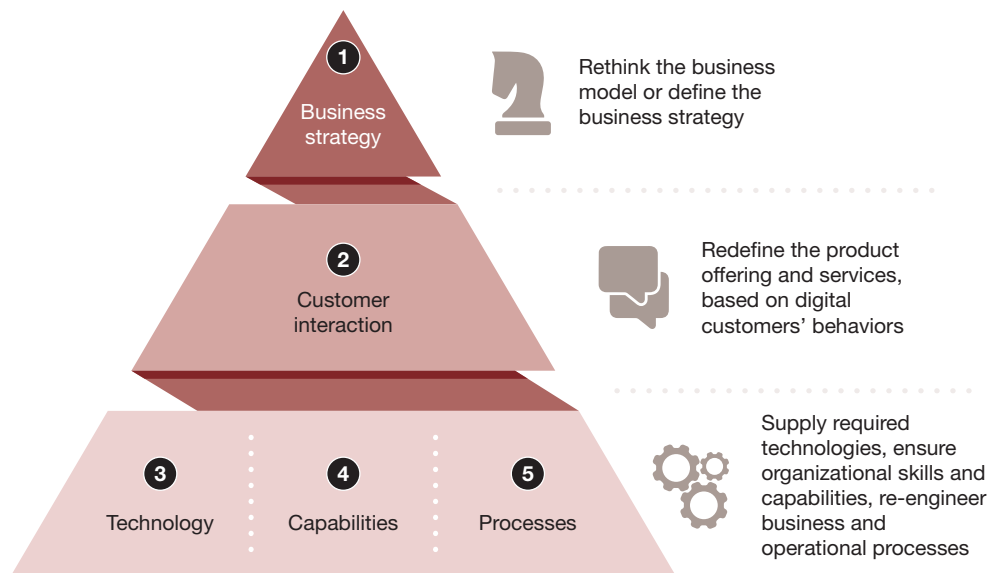
For example, a Silicon Valley-based startup called Skuchain created a blockchain-based application specifically for the T&L industry. By removing the middleman role of distributors and reducing shipping complexity, Skuchain simplified shipping and reduces logistics costs. By creating a means to track shipments securely throughout each step of their journey, Skuchain puts smaller and less-experienced carriers, such as those in the Middle East, on an equal footing with larger, established players.

Data only have value if decision makers can access them when and where they are making critical decisions.

A framework for digital transformation

T&L executives and management teams need a structured approach for how to implement digital technology because it represents a radically new way of working for many T&L companies. Regardless of which technology they choose to prioritize, there are five critical elements to consider (see Exhibit 3).

Exhibit 3
T&L companies need a framework for digital transformation



Source: Strategy&

Business strategy

First and foremost, companies need to rethink their business model or define their business strategy. For some T&L players, emerging digital tools will mesh with their current business model and lead to incremental gains in performance. For example, port operators in the GCC need to think about how digital tools can lead to greater transparency, streamlined operations, a faster flow of cargo and data, and improved pricing. For other types of players, the technology will completely disrupt their business, allowing them to develop entirely new models.

Customer interaction

Next, companies need to think about how digital solutions allow them to interact with customers in new ways and what kinds of information and services those customers want. For companies that offer last-mile delivery services, these kinds of interactions could include unconventional delivery technologies. DHL Express has started using autonomous quadcopter drones to deliver small packages to customers on Juist, an island 12 kilometers from the German North Sea coast. Improved last-mile customer interactions could also include a 24/7 call center, website, mobile app, and social networks, so that customers can always check the status of a delivery and resolve any issues.

Technology

The choice of technology is a key decision, and it will vary depending on the role a T&L company plays in the value chain. Freight forwarders will likely start with big data and analytics tools that allow them to optimize routes based on real-time conditions, benefit from predictive maintenance (rather than reactive repairs), and collaborate across their entire supply chain, including air, land, and sea assets.

Capabilities

Just about all T&L companies in the region will need to invest in upgrading their digital skills in key areas such as cybersecurity and data mining. Some companies may establish new organizational functions to house all digital capabilities (including, potentially, a chief innovation officer or chief digital officer). Perhaps most important, companies need to remain on active lookout for new developments in technology, so they can stay current.

Processes

Finally, in line with the rest of the enablers mentioned above, companies will need to reengineer key business and operation processes to capitalize on the new tools, in areas such as cargo-tracking, pricing, and cross-docking.

Companies need to rethink their business model or define their digital business strategy.

Conclusion

To date, many T&L companies in the GCC have resisted investing in technology, but that wait-and-see mind-set now threatens to render them irrelevant. Digital tools and applications are advancing rapidly, and T&L companies in other markets are already capitalizing on them. T&L executives in the GCC need to start taking action today. If not, they will serve as a drag on the region's economic aspirations, rather than an engine to help achieve them. More important, a failure to embrace digital will put T&L companies themselves at a permanent disadvantage — one from which they will not recover.

Endnotes

¹ The GCC countries are Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and the United Arab Emirates.

Strategy& is a global team of practical strategists committed to helping you seize essential advantage.

We do that by working alongside you to solve your toughest problems and helping you capture your greatest opportunities.

These are complex and high-stakes undertakings — often game-changing transformations. We bring 100 years of strategy consulting experience and the unrivaled industry and functional capabilities of the PwC network to the task. Whether you're

charting your corporate strategy, transforming a function or business unit, or building critical capabilities, we'll help you create the value you're looking for with speed, confidence, and impact.

We are part of the PwC network of firms in 158 countries with more than 236,000 people committed to delivering quality in assurance, tax, and advisory services. Tell us what matters to you and find out more by visiting us at strategyand.pwc.com/me.

www.strategyand.pwc.com/me

© 2018 PwC. All rights reserved. PwC refers to the PwC network and/or one or more of its member firms, each of which is a separate legal entity. Please see www.pwc.com/structure for further details. Mentions of Strategy& refer to the global team of practical strategists that is integrated within the PwC network of firms. For more about Strategy&, see www.strategyand.pwc.com. No reproduction is permitted in whole or part without written permission of PwC. Disclaimer: This content is for general purposes only, and should not be used as a substitute for consultation with professional advisors.