# **Deloitte.**



**Deloitte GCC Powers of Construction 2017**If it's fundable it's feasible

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Some of the key strategic initiatives which governments are grappling with involve the private sector taking a more active role in the economy, job generation for a rapidly growing labor force, increased localization, and attracting foreign investors through updated laws and the easing of restrictions.

#### GCC fiscal balance (In % of GDP)



Source: IMF

Whilst business conditions are tougher today and project activity has been slowing down since 2015, the construction industry in the Middle East region will sustain its workflow going forward. This will be driven by economic and demographic needs, initiatives associated with the Saudi Vision 2030, Abu Dhabi Economic Vision 2030, Dubai Plan 2021, and Qatar National Vision 2030, as well as tourism related projects, and the commitment from governments towards infrastructure investment.

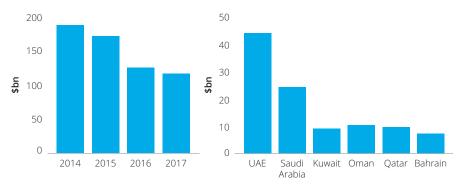
Regional governments remain focused on changing their development models and pursuing fiscal adjustment policies, while ambitious national transformation plans to strengthen economic resilience are work in progress. Some of the key strategic initiatives which governments are grappling with involve the private sector taking a more active role in the economy, job generation for a rapidly growing labor force, increased localization, and attracting foreign investors through updated laws and the easing of restrictions.

Fiscal adjustment will need to continue over the medium-term with measures to increase revenue, such as further energy price reforms or the value-added tax in the GCC, and controls on public spending. The International Monetary Fund (IMF) predicts that as a result of the oil price recovery, lowered spending, and the reforms implemented on energy prices, the overall GCC deficit is expected to reduce in 2017 to 4 percent of GDP, from 10 percent of GDP in the past two years. The fiscal balance in the GCC has been negative since 2014, but the deficit could be reduced to less than 1 percent of GDP by 2022 if the implementation of reforms is sustained, according to the IMF.

Project activity declined in 2015 and further decreased in 2016 to \$117bn of project awards. In 2017, the value of contracts awarded was \$108bn, led by the UAE with \$43.5bn and Saudi Arabia with \$24bn. The projects market has underperformed across different sectors and geographies except for Dubai, and in particular on the real estate side, where

#### GCC project awards 2014-2017 (\$bn)

#### GCC project awards in 2017 (\$bn)



Source: MEED Projects

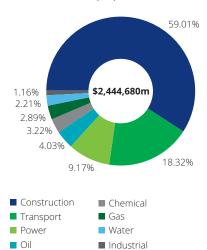
developers have the financial capability to fund projects and are less reliant on government budget spending on infrastructure. When looking at the market sentiment amongst contractors, there is consensus that Dubai is still the bright spot compared to the rest of the GCC markets, where there are significantly fewer construction opportunities.

A number of multibillion dollar schemes, including various metro systems, have contributed to the increase of total contract awards in the region over the past years, and these will likely stabilize to lower levels in the foreseeable future as various social infrastructure projects conclude over the next few years. Various GCC governments intend to have the private sector supporting the provision of costly traditional government projects through the use of public-private partnership (PPP), build-operate-transfer (BOT) or other financing models, which will have a positive impact on sector activity. PPPs, however, still seem to generate a certain level of skepticism within the market, outside the power and utility sectors which have a more established model. Supporting regulations and project bankability, and hence feasibility, should aim at further strengthening the legal framework and build up confidence for PPPs to gain some traction. The region needs to adjust to, and understand the need to, assess the whole life cost of assets for PPP to be a viable partnership and result in more pragmatic assessments of return on investment on all infrastructure and capital project investments.

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The regional projects pipeline appears solid with over \$2tn of projects currently in the planning stage, indicating there is still a need and demand. Construction, the largest sector with more than \$1tn of projects in the pipeline, is followed by transport with \$447bn, and power with \$224bn, according to MEED Projects. Dubai and Qatar, focused on Expo 2020 and the World Cup, will continue to be event-driven markets, whilst a number of large-scale mixed-use developments are being planned in Saudi Arabia.

Projects pipeline in the GCC by industry, as of December 2017 (\$m)



Source: MEED Projects

There are significant affordable housing requirements across the region, and more specifically in Saudi Arabia, Kuwait, and Bahrain, where housing schemes are being planned to build a large number of new units.

The outlook for Abu Dhabi is slow, with potentially two transport projects coming back to market, the Abu Dhabi Metro and Etihad Rail Network, which were put on hold in early 2016. Other projects in the study phase in the emirate are ADNOC gas developments and power generation plants. Dubai, a market underpinned by building a tourism Industry and delivering Expo 2020, with growing population demands, still has a solid level of project activity. The announced 2018 budget is the largest ever; 21 percent of it has been allocated to infrastructure investments as the emirate prepares for construction projects related to Expo 2020. Transport projects in the planning stage are the expansion of Al Maktoum International Airport being awarded in different more manageable package sizes, as well as extensions to the Dubai Metro and Dubai Tram to further connect the city and serve a growing population. Dubai Harbour, Dubai Creek Harbour and Dubai Holding's Marsa Al Arab near the Burj Al Arab hotel are some significant ongoing and planned mixed-use construction projects that will comprise residential areas and tourist attractions.

Kuwait, the strongest financially in the region, has a focus on public-private partnerships, particularly due to the benefit of bringing in private sector expertise. The major projects being planned are in the construction and transport sectors. Kuwait Authority for Partnership Projects is planning to develop a metro system within Kuwait City, as a PPP type of project that will cost around \$7bn. On the construction side, the Public Authority for Housing Welfare (PAHW) plans to build a \$14bn residential city with 35,000 housing units and other services, including clinics, banks, and commercial malls.

There are significant affordable housing requirements across the region, and more specifically in Saudi Arabia, Kuwait, and Bahrain, where housing schemes are being planned to build a large number of new units.

In Qatar the government continues its policy of prioritizing projects related to World Cup 2022, including the roads and public transport networks, stadiums and other commercial developments, such as Lusail City. Transport projects expected to be awarded by mid-2018 are the metro connection to the airport terminal, phase 2 of Doha Metro, which comprises the extension of four lines, and Hamad International Airport's main terminal extension. The Lusail City mixed-use development is currently under construction and will see some sub packages awarded next year.

Both Oman's and Bahrain's project markets are relatively small in size. Oman has been substantially affected by the oil price drop, but the one key ongoing project is the airport expansion. Due to be awarded in 2018 are an industrial economic zone budgeted at \$10bn, phase 1 of the Omagine mixed-use development comprising residential and commercial buildings, and a water desalination plant, a project funded by the GCC to meet the growing needs of water consumption in the Gulf countries. Bahrain's government is planning the construction of a 115km light rail network in the country connecting different cities and aiming to ease traffic congestion. The project is expected to be awarded towards the end of this year. Two mixeduse schemes due to be awarded in 2018 are Marsa Al Seef and Bander Al Seef, with respective budget values of \$2.5bn and \$2.7bn. Both will include residential buildings and various other amenities.

Saudi Arabia has undergone significant reforms during the past two years. Saudi Vision 2030 comes with a broad set of objectives to wean the country off its dependence on high oil prices. The Kingdom aims to increase the contribution to GDP from the private sector to 65 percent from the current 40 percent. There is a plan to privatize a number of public entities in the healthcare, services and energy sectors, as well as privatizing projects and having them delivered on a PPP basis. Construction of mixed-use schemes is being planned in the Kingdom, some of which are The Heart of Jeddah, a major economic development with business and residential areas and commercial facilities in the north of Jeddah. Rou'a Al Haram and Rou'a Al Madinah, each valued at \$10bn and part of Vision 2030, will include residential and commercial

space designed to increase the capacity for pilgrims and visitors to the Grand Mosque. Saudi Arabia's Public Investment Fund (PIF) is planning a project in the north-western region called NEOM, which aims to develop nine key economic sectors, including biotech, energy, mobility and digital science. The Ministry of Housing is studying a project funded by the government to build 100,000 housing units over the next seven years in Riyadh. Transport projects due in the next couple of years are other Jeddah metro lines, and the high-speed rail connecting Riyadh to Dammam with a \$14bn cost. There is a lot of large-scale opportunities for the Kingdom to be delivered in the foreseeable future, once the government will have completed a review and reprioritization of key projects.

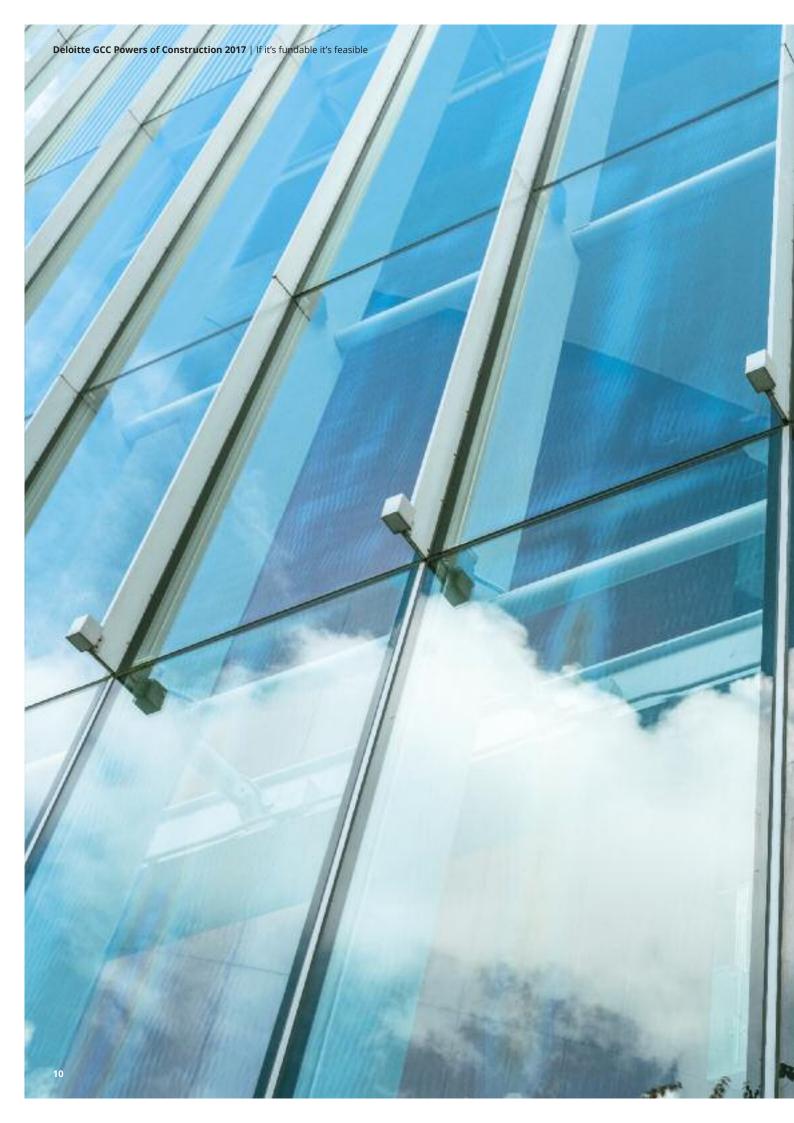
The privatization of some key state-owned entities, such as the plans to issue an initial public offering (IPO) for part of Aramco and more recently ADNOC, is a phenomenon that most economies go through as they start to mature and change to a more private sector-led economy.

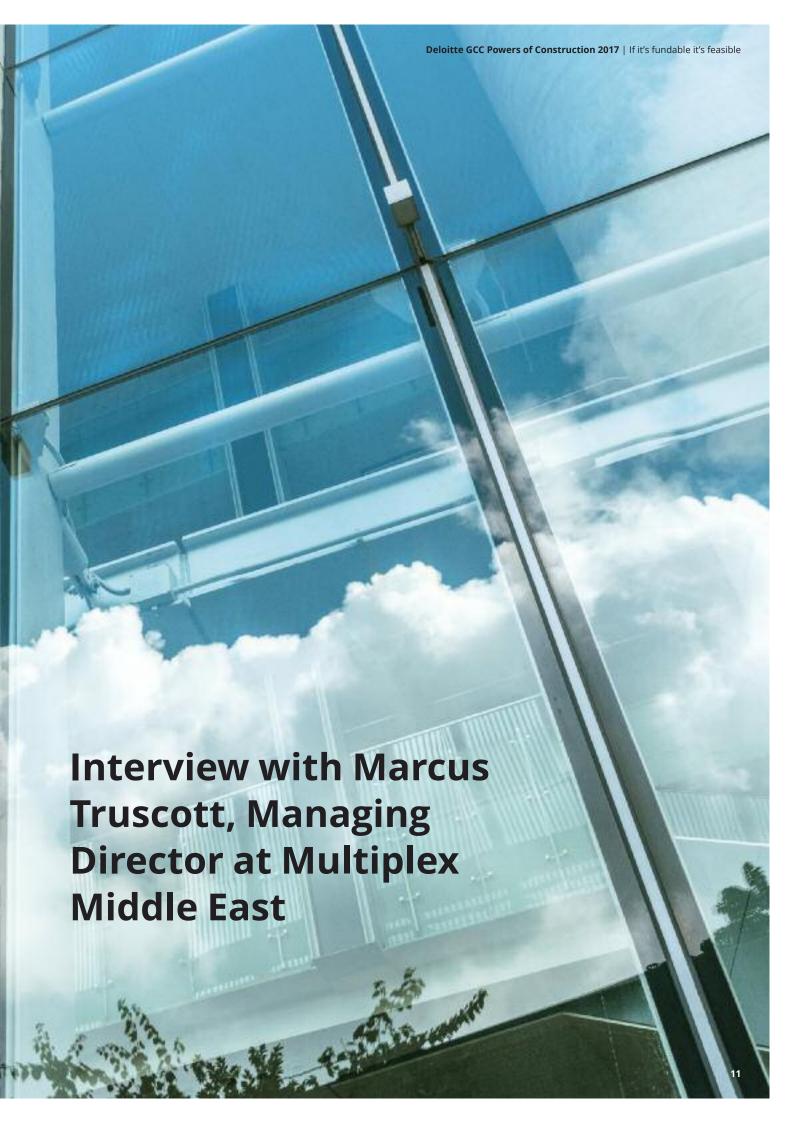
As we know, GCC geographies differ in their infrastructure needs, and their stages in development and investment in key infrastructure and social infrastructure. All of the countries have state-led economies, where governments are reliant on natural resources which they remain focused on diversifying.

GCC governments, conscious that the oil dependent model is not sustainable, continue to implement reform agendas with various initiatives to lower the burden on public budgets and transition to a diversified economy with a moreskilled workforce.

The privatization of some key stateowned entities, such as the plans to issue an initial public offering (IPO) for part of Aramco and more recently ADNOC, is a phenomenon that most economies go through as they start to mature and change to a more private sector-led economy. Fundamental to the success of this transition will be the private sector involvement. The use of public-private partnerships, attracting foreign direct investment and privatization of stateowned assets are key elements to achieve the GCC leaders' visions for socio-economic reform and fiscal balance.

by **Cynthia Corby**, Audit Partner and Infrastructure & Capital Projects Leader, Deloitte Middle East





Multiplex is a leading international contractor with more than 55 years of building experience and significant presence in the Middle East since 1997. At a time when the region and the industry have been subject to significant change, the company has performed solidly and completed more than 50 major projects since their establishment in the region. Projects include the W Hotel in Doha, Emirates Towers (commercial tower), The Index and Gate Buildings in DIFC, JW Marriott Marquis Hotel and the Address Boulevard in Dubai, Eastern Mangroves and the Westin Golf Resort & SPA in Abu Dhabi. Multiplex operates and delivers in all aspects of the property cycle, and continues to play to their strength, which is major commercial construction. With an established presence both in the UAE and Qatar, the company continues to pursue opportunities in other GCC countries.

We spoke to Marcus Truscott, Managing Director at Multiplex Middle East, who shared his views on the industry at present, some of the key challenges being faced and the future outlook. Marcus expects to see some positive

change happening towards the end of 2018, when market conditions are likely to improve and all participants, including employers, contractors and funders will contract in a more measured way.

When speaking about the company and their goal, he says they are not just limited to on-time and on-budget delivery of projects but exceeding clients' expectations, adding genuine value to projects by leveraging their experience and knowledge from their global network. On each project, appointing dedicated team leaders who think like owners, champion the project and guide progress. "When others say it cannot be done, we deliver."

He believes key to their success to date is taking a long-term view, partnering with clients and communities to create enduring benefits for all stakeholders. Multiplex has a proven ability to deliver large-scale and complex landmark buildings and commercial structures.

He thinks their clients choose them for their innovative excellence, with the key being that innovation and creative thinking are usually the result of a

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collaborative approach with clients and project management consultants (PMCs.) Multiplex believes that consultation and collaboration significantly improve the progress and quality of projects, and, as such, they work together with their clients and delivery partners from the outset, including them within the team. This usually gives them a clearer understanding of clients' objectives, makes it easier to anticipate challenges and remain flexible to deal with complex and dynamic situations.

Over the past five years they have looked at diversified projects, such as schools and malls, and continue to play to their strengths that reside in commercial construction. They are selective in choosing the projects to bid for and will only proceed where they believe the project will be profitable, whether small or large scale. Over fifty percent of their contracts are design and build (D&B), being this their preferred delivery route as they have proven over time that their design teams spend more time on build-only projects.

On industry challenges, he mentions the major ones are delayed certifications, delays in approvals of variations and claims, and significant changes to design that continue to occur in the construction phase. The requirement of unconditional performance bonds by project employers continues to present a key risk to contractors, and often meaning that the contractor manages this risk whilst dependent on supply chain performance to ensure milestones are met and projects delivered.

When asked about the company's strategy and long-term focus, Marcus said they are focusing on three areas:

concentrating on every stage of the project life-cycle, upstream control of critical elements through rigorous analysis of risks and opportunities, and closing the gap between concept and work process amidst the variability of behavior and performance within the industry. Marcus recognizes the value of planning every phase of a project, and the importance of tempering the focus based on both the client and project needs in order to minimize risk and maximize value.

One of Multiplex's strengths lies in appropriately applying these principles into a fully integrated management system known as 'BOS' - the Multiplex Operating System. This system encompasses not only key certified systems but also those disciplines that are the cornerstone of their business, including customer relations, operations (design, programming, logistics) marketing, people, accounting, safety and sustainability. Multiplex has all of these systems working cohesively, meshing as appropriate in order to deliver efficient, consistent, and seamless highperformance outcomes for clients.

A highly-skilled staff base also gives them the ability to better deliver their projects with a loyal workforce which reduces the learning curve and builds critical skills across all jobs. The senior management team members have been in the company for over a decade, and the labor force is trained in training camps the company has set up to ensure all labor develops the requisite skills to maximize productivity and efficiency. They also provide long service incentives to their staff and a labor education fund for their dependents, which they believe improves productivity and loyalty to the company.

Contractors are happy to be pushed on time and delivery, but need to be backed up with timely approvals of variation orders and a sensible assessment of the time and cost impact of changes.

Their corporate governance processes are robust and encompass local and global credit committees, client due diligence and the PMCs. It is key in this economic cycle to assess the feasibility of the project in order to appraise the paymaster's ability to raise capital and funding, and hence secure timely payments for the contractors. Marcus also highlights the importance of cooperation amongst PMC's, and says that a good PMC has the drive to complete the project, is proactive, collaborative, and focuses on progress and delivering on time. Contractors are happy to be pushed on time and delivery, but need to be backed up with timely approvals of variation orders and a sensible assessment of the time and cost impact of changes.

In a rapidly changing technological environment, the construction industry is one step behind many others in terms of technology adoption. On this arena, Marcus thinks 3D printing will shape the industry in the future and mentions thin margins to be an inhibitor towards technological advancement. The company promotes innovative building methods, which have provided very efficient and effective building processes. They introduced building information

modelling (BIM) on every project several years ago. They have also developed a bespoke 'jump formwork" system, which has increased the speed of construction significantly. Multiplex is also committed to looking for sustainable ways to work and deliver projects and are using bio fuel instead of diesel and more recently solar energy for power & water regeneration projects.

Multiplex remains focused on their approach, their diligence and their building systems working cohesively, in order to deliver efficient, consistent, and seamless high-performance outcomes for their clients in this demanding economic environment where demands revolve around acquiring more for less.

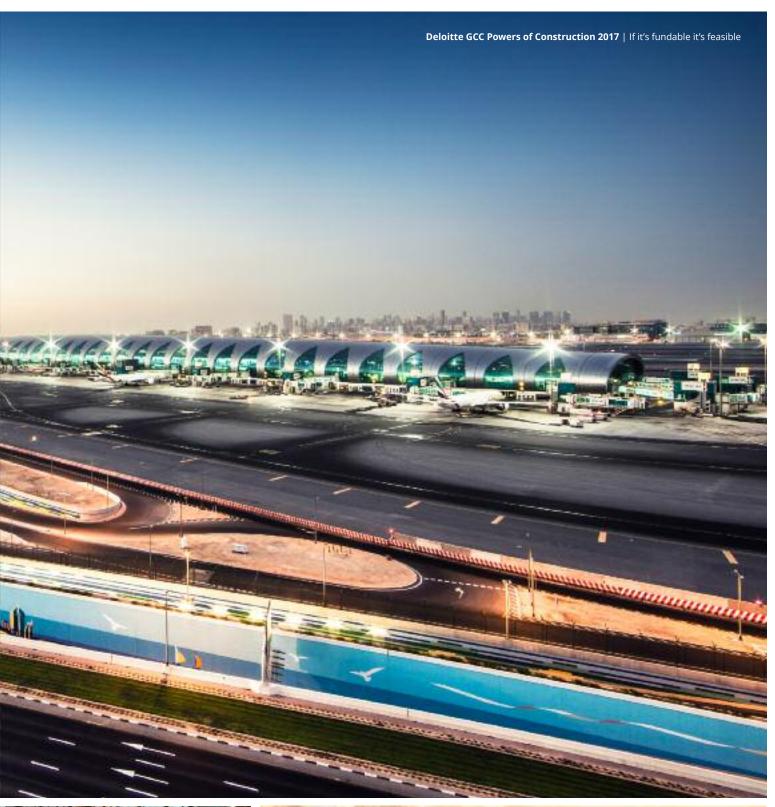
**Marcus Truscott**, Managing Director of Multiplex ME

# Investing in innovation in the world's largest airport













At Dubai Airports having a long-term view is an absolute necessity and each progressive year gives us the opportunity to track progress and reaffirm our strategic approach. While we are mindful of short-term fluctuations to regional and global traffic volumes due to socioeconomic factors, we must also consider macro-economic factors and emerging trends that will shape our world 10 years or more from today. All of these elements are ultimately factored into the investment strategy which ensures the provision of timely capacity to accommodate growth. That in turn enables the continuation of the sector's significant contributions to the local GDP and employment levels, which are estimated to rise to \$53.1 billion or 37.5% of GDP and 754,500 jobs or 29.5% of employment by 2020, according to Oxford Economics.

As a case in point we can look at 2017 results where we achieved some 89 million passengers despite numerous challenges to growth, including laptop bans, visa restrictions, geo-political issues and the resulting fluctuations in consumer confidence and demand. In

2018 traffic across both of our airports, DXB and DWC, is projected to exceed 91 million. In the long-term Dubai's geocentric location, open skies policy, which promotes traffic expansion, and the city's continued emergence as a leading center for trade, commerce and tourism will continue to spur traffic growth. By 2025 we will see passenger traffic levels rise to 120 million.

Accordingly, we are solidifying plans to accommodate increased passenger numbers and growing cargo volumes. While we continue to invest sufficiently in cost-effective connection services and infrastructure, scale cannot and will not be our sole focus going forward. Our DXB Plus program, for example, is designed to generate capacity of an additional 28 million passengers per year without building anything. Technology and process will boost DXB's capacity to 118 million by 2023. In a nutshell, we are investing in innovation to extract optimal value out of our most important asset. Historically the industry's approach to capacity expansion has been all about investing in bigger and bigger facilities to accommodate more and more

passengers. Current legacy thinking has also produced a series of vertical solutions for our customers to pass through horizontally – during which they are massed together into queues. This is not modern thinking. Today's most successful companies start with the customer. Examples of this abound. Uber, Amazon, Facebook and eBay all take what customers hate about taxis, shopping, communication and selling things – and eliminate all the hassle from their chosen industry.

As an industry, we need to foster an environment which is genuinely collaborative. An environment that uses a common language, has common objectives and does not hide behind boundaries. We need to eliminate weak links. The most intrusive processes in travel revolve around documentation, validation and security. And these occur multiple times during the course of a single journey. The processes on the ground are the weakest part of the aviation supply chain. Legacy thinking would lead to the conclusion that the industry must strengthen the weaker links. Forward thinking would suggest that we eliminate them all together.

The power of the customer to select the most convenient components of their end-to-end journey must drive the design of airport infrastructure, processes and technology. The definition and adoption of global industry standards for initiatives such as a single biometric footprint will transform the customer experience, by enabling a one-time capture of data which can then be used at multiple points in the customer journey in a seamless and non-intrusive way.

Our DXB Plus program, for example, is designed to generate capacity of an additional 28 million passengers per year without building anything. Technology and process will boost DXB's capacity to 118 million by 2023.

Imagine an airport with no check-in, no immigration, and discrete, non-intrusive security, all enabled by a single identity database, securely held in the cloud and available to those who currently need physical evidence of our identity as we travel. The possibility then emerges to re-order the entire travel process around customer service rather than around the convenience of everyone else in the supply chain. And if we extend our thinking around making the links between ground and air more efficient, then maybe we don't need an airport terminal at all. The prospect of eliminating that infrastructure and the capital investment required is another example of the value an integrated approach would bring.

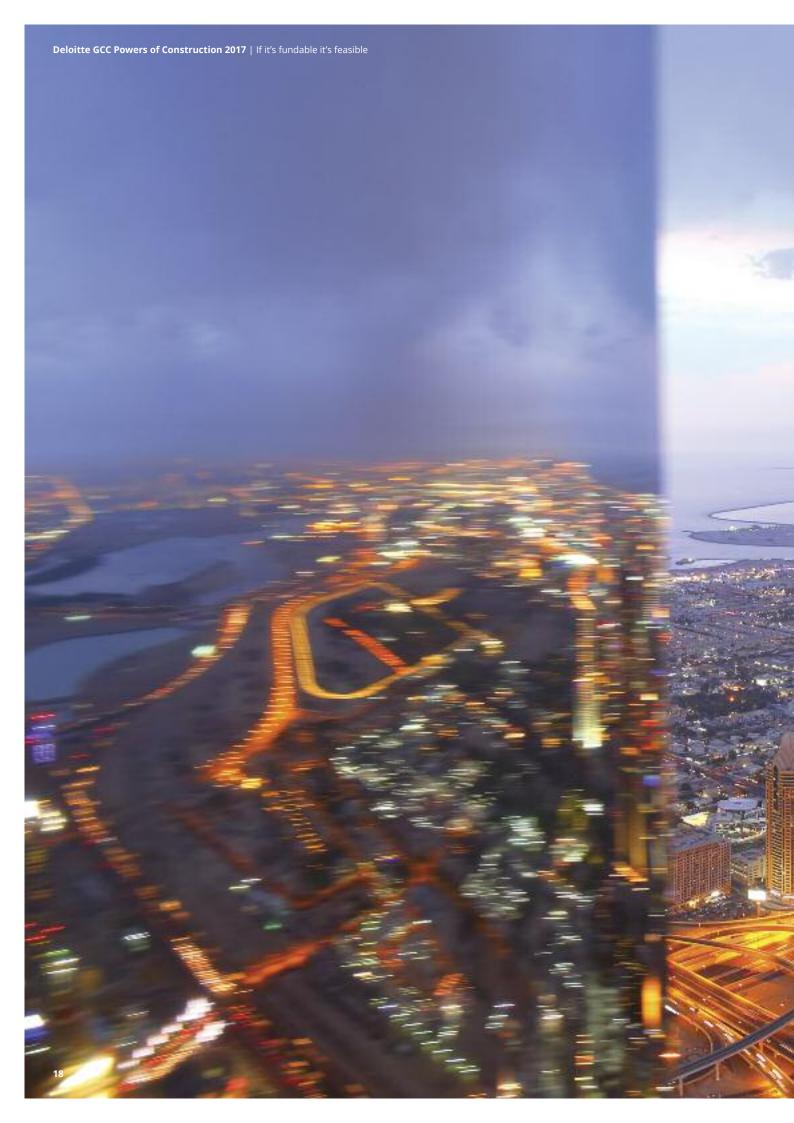
Why not make the start of that journey at multiple points of convenience near where people live or work? Why not disaggregate the airport terminal and build multiple smaller, convenient entry points into an airport transit system that can take customers from their homes or places of work directly to their plane? It would enable the bypassing of all the changes of mode, baggage issues, queues, multiple documentation and security checks and long walking distances – all the things we hate when we travel.

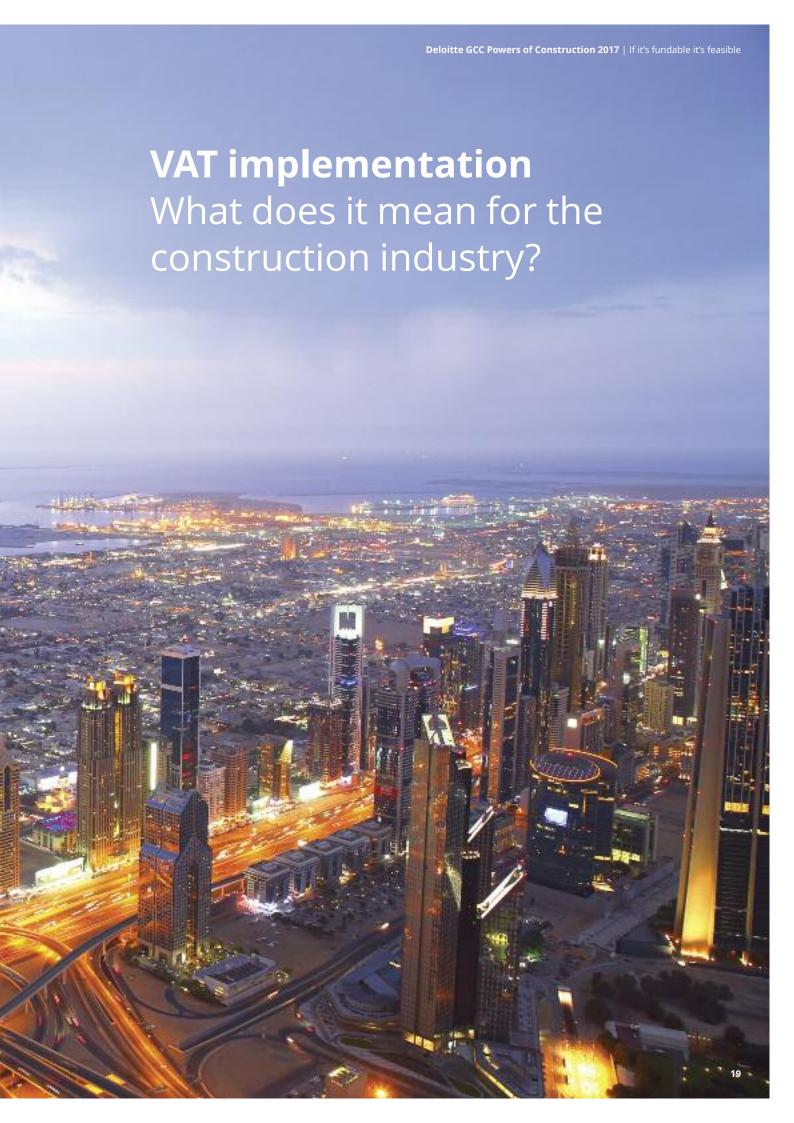
Personal mobility is also in the midst of a revolution. Fast airport links will no longer be part of a mass transit system. Pods will be able to take customers from their chosen point of entry directly to their plane in a matter of a few minutes – without leaving their seat. A seamless, door-to-door solution will make the entire journey experience faster, more relaxing and more efficient. It lies within our grasp.

Personal mobility is also in the midst of a revolution. Fast airport links will no longer be part of a mass transit system. Pods will be able to take customers from their chosen point of entry directly to their plane in a matter of a few minutes – without leaving their seat.

In Dubai, we have a unique opportunity to take the next step in the evolution of the airport experience with our shared, connected customers. So, as we review last year's progress and this year's projections, the long-term aspirational goal of revolutionizing the travel experience continues to propel us forward ever mindful of the service improvements and return on investment this would bring.

by **Paul Griffiths**, CEO of Dubai Airports





With its unique practices and arrangements, the construction industry faces a number of challenges and complications with respect to the application of VAT in the GCC.

With a significant focus being on development in the region, and with large-scale commercial, residential, and infrastructure projects ongoing, it has been critical for the authorities to develop specific rules to ensure that the VAT system is fit-for-purpose by the time of the introduction of VAT on January 1, 2018. With this objective, however, come special rules to benefit the industry, and with special rules, comes a complexity that creates an environment of risk that needs to be mitigated through the adoption of appropriate controls and processes.

With the deadline for the introduction of VAT in Saudi Arabia and the UAE having recently passed, and while for other GCC member states it is still looming, we look at the main challenges for this transitional period, and beyond it, below, with some suggested options for addressing them.

#### Lead times on major projects

Lead-in times for major construction projects can be extremely long and a large number of the major projects due to be delivered over the next few years will not have had VAT factored into them on the cost, revenue, or commercial side. A significant number of contracts understandably do not include VAT clauses designed to protect the supplier and/or customer, where ideally these would be expected in jurisdictions where VAT is in place.

As a result, parties to such contracts are faced with few options. Either they rely on any transitional provisions that may be included in the relevant domestic VAT law, or they renegotiate their agreements to put an appropriate clause in place, or the supplier is forced to take a hit to the profitability of the contract. While the

latter may benefit the customer, it can also cause problems for commercial relationships.

Saudi Arabia has introduced some grandfathering provisions that allow zero-rating to continue for contracts entered into before May 30, 2017 but only until the contract expiry or December 31, 2018, whichever occurs first. The UAE has indicated that it will allow businesses to charge VAT in addition to the price in cases where the contract is silent about VAT and the customer can recover VAT in full. Obviously, there are terms and conditions for both, but it provides some relief.

In Saudi Arabia, any contracts agreed after May 30, 2017 are obviously still at risk, as the transitional provisions will not apply. The same is true for contracts that were signed prior to May 30, 2017, and which will continue. So a major area of potential risk still exists for any contracts agreed before the implementation of VAT but which will be executed or delivered after it.

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### Property developer commercial challenges

For reasons apparent below, we have dealt with residential real estate development separately from commercial real estate.

The development and charging of VAT on the supply of commercial buildings creates an additional cost to taxable

persons only if they are unable to recover VAT in full, such as because they also perform exempt or non-business activities. Suppliers should be sensitive to this during price negotiations.

In the context of commercial leases, landlords may wish to consider different incentives for tenants that make exempt supplies (e.g. financial institutions). That said, many larger institutions that make significant exempt supplies can employ other strategies to address the blockage on VAT credits. For example, they might incorporate separate taxable supplier entities to act as the landlord in respect of property used by the exempt supplier so that they can manage the timing and cash flow impacts of the VAT as a cost to them.

While this does not have the effect of ridding them of the VAT burden altogether, it can have the effect of altering or delaying the timing of the negative effects of VAT on businesses that cannot recover VAT as an input tax credit

#### **Barter and incentive transactions**

Property transactions often involve considerations other than, or in addition to, money and this can cause complex VAT problems. For example, an exchange of property interests such as the surrender of an old lease in exchange for the grant of a new lease, or a sale and leaseback transaction, may take place without a clear exchange of money. These are barter transactions and it is important to analyze the VAT implications for each party and to ensure there are no unexpected VAT costs. Failure to recognize these transactions could result in penalties.

Issues often arise when the two parties either ignore the transactions, as they do not go through the accounts, or they account for them at different values. This is an easy target for the authorities in such situations.

Similarly, it is relatively common for property developers, particularly in the retail, office, and industrial markets, to offer rent-free periods and other incentives to prospective tenants. This can trigger a VAT liability for the tenant and the landlord if it is determined that something additional has been supplied in return for the incentive, for example, building works.

Furthermore, some jurisdictions seek to deem a market value for rental during a 'rent-free' period, requiring the landlord to account for VAT, especially if it is not a lease between arm's-length parties. This is regardless of whether the 'rent-free' period is effectively subsidized by the higher rental received during the remaining term of the lease.

#### **Mixed-use properties**

For companies engaged in the supply of both exempt (residential) and taxable (commercial) properties, the impact could be significant, as there will typically be complicated calculations for the recovery of proportionate input tax credit for each accounting period. Any mistakes in the calculations will make VAT an additional cost for the business, impact its competitiveness, and may give rise to penalties.

The development, construction, and supply of commercial, industrial, and retail properties and infrastructure is subject to VAT at the standard rate.

#### **Construction work**

The provision of construction services, including materials, will be subject to VAT at the standard rate. Subcontractors are also likely to be impacted because of the manner in which construction contract work is usually certified prior to payment being made. This can cause confusion as to when there will be a need to account

for work completed – the date of the original invoice, the date of certification, or the date of the amended invoice, based on the values certified. As services are usually required, for VAT purposes, to be accounted for when completed, we would generally suggest that this is treated as when the work is certified, and the final invoice is issued, rather than when the initial invoice/claim is made, for the simple reason that it is only at this stage that the 'completion' of services is confirmed.

#### **Residential property**

The development, construction, and supply of commercial, industrial, and retail properties and infrastructure is subject to VAT at the standard rate. The treatment of the supply of residential real estate is different for a variety of policy factors.

In the UAE, the first supply of residential premises is zero-rated if it occurs within three years of completion of the premises. As long as that first supply is a sale, this allows the VAT incurred during the construction process to be recovered and the VAT has no impact on the costs of construction. As a result, the VAT passes through the chain to be deducted by the developer.

Where the first supply is a lease, every subsequent supply, whether a lease or sale, will be treated as exempt. The developer is not able to recover VAT incurred during the construction, as there are claw-back provisions on the VAT on the construction costs. Instead, the developer needs to recover the additional cost of the VAT as well as its margin if possible when the property is sold or leased. This makes it essential that the first supply be by way of sale rather than lease.

In Saudi Arabia, in contrast, the supply of residential real estate is standard rated, and it is simply the supply by way of lease that is exempt. This means that VAT will be a real cost for enterprises that lease residential property, and this needs to be factored into their returns.

What is clear from the above is that the ability for a construction company to pass on the full impact of VAT to property developers depends on whether developers will be able to claim a full VAT credit. A developer's VAT recovery position will be determined by reference to the VAT treatment of the real estate transactions that the developer enters into.

#### **Cash flow**

One of the biggest concerns for the whole property sector will be planning its cash flows. The sector, which often operates on thin margins, could be under pressure in terms of meeting the additional requirement of paying 5 percent VAT on the purchase of goods or services each month or quarter on an accruals basis.

Conceptually, this should be offset by claiming refunds of such VAT from the relevant government where the net amount of VAT due payable/refundable dictates. However, the payment of those refunds, in practice, could take a substantial amount of time, which will still impact on cash flow.

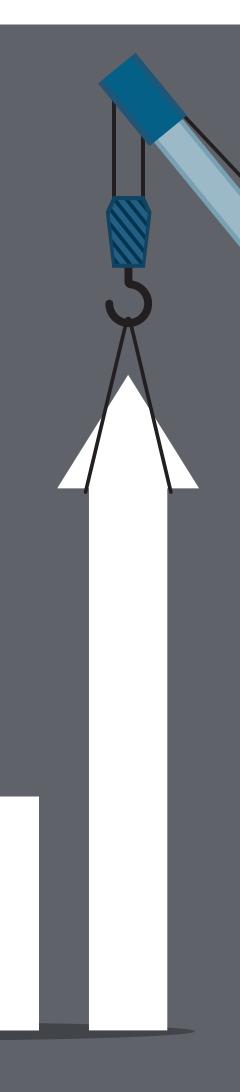
Hopefully, by now businesses will have performed a comprehensive impact assessment to determine the additional cash flow requirement and the impact on working capital to identify additional funding if necessary.

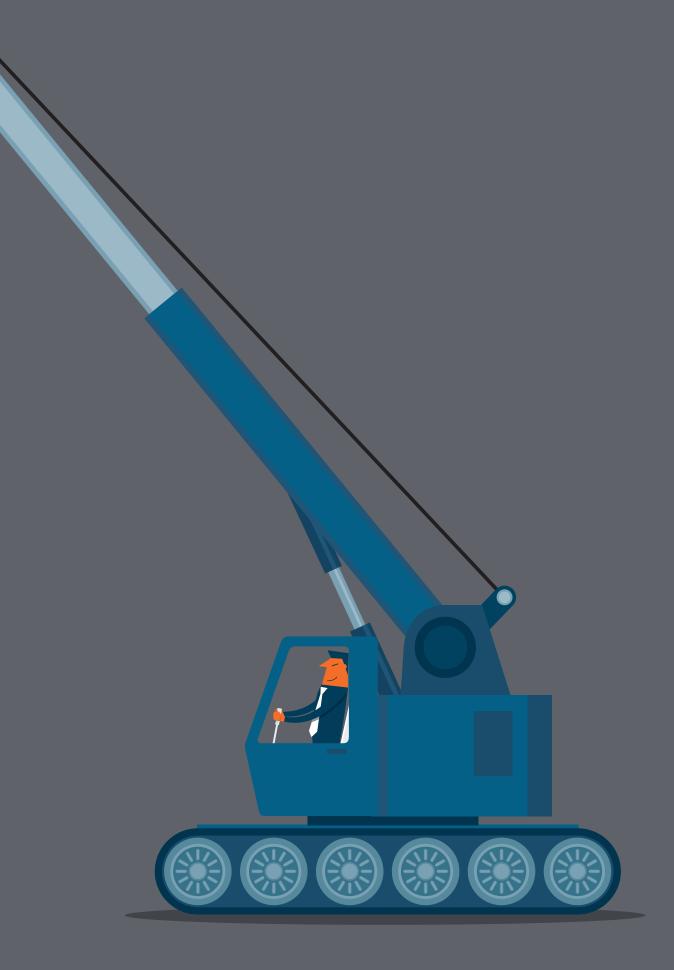
#### Conclusion

It is clear that this article is only scratching the surface of the complex practical, technical, and commercial issues facing the construction industry.

It is essential that developers and construction contractors seek assistance in navigating their way through the process, as there are many competing objectives and outcomes that could trip up the unwary.

by **Bruce Hamilton**, Partner Indirect Tax, Deloitte Middle East Real estate development funding squeeze Myth or reality?





In the UAE, whilst there may be isolated cases of individual banks facing liquidity shortages, the overall picture is of a banking system which has experienced increased deposit taking from both the public and private sector.

In the current economic environment, there is a prevalent notion that bank lending has been constrained from both a real estate development perspective and general corporate lending landscape. The recurring themes typically revolve around a perceived credit squeeze and lack of liquidity in the bank market. This article seeks to understand the extent of any liquidity constraints in the GCC's two largest real estate development markets, namely the UAE and Saudi Arabia.

Loans and deposits data trends in the UAE and KSA seem to depict a picture which is at odds with some of the anecdotal viewpoints.

Figure 1. UAE loan to deposit levels (AED billion)

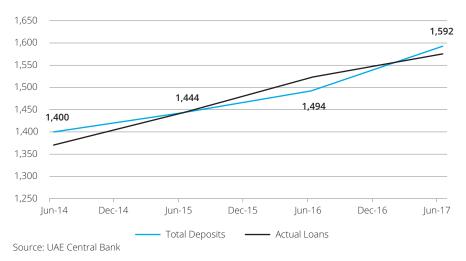
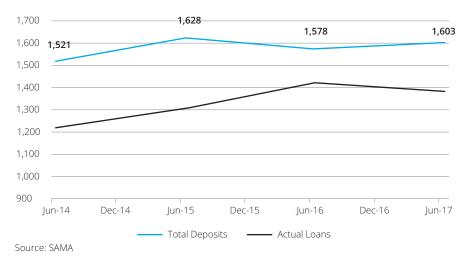


Figure 2. KSA loan to deposit levels (SAR billion)



In the UAE, whilst there may be isolated cases of individual banks facing liquidity shortages, the overall picture is of a banking system which has experienced increased deposit taking from both the public and private sector. The central bank data below (Figure 1) reflects asset build-up in line with deposit growth over the last three years.

In Saudi Arabia, the bank market is far more robust and liquid; although the Government sapped liquidity levels through bonds placed with local banks, it later replenished deposits by way of international bond sales. Whilst overall lending activity has tapered slightly (see Figure 2), banks have added an estimated SAR 200 billion in assets to their balance sheets since the beginning of 2015.

Indeed, central bank data suggests that the overall bank market in both countries is capable of maintaining and building deposit levels as well as deploying much of this liquidity back into the market. Notwithstanding this banking liquidity, it is clear that the investment appetite of GCC economies is currently subdued, and investment into local real estate markets by government, private local developers and international investors is cautious and less aggressive than before.

#### **Banking credit policies**

In order to appreciate the full extent of the impact of the general liquidity and macro environment on the behavior of banks, we need to consider the credit policies employed. The following table is a brief overview of the real estate development financing credit policies that banks were implementing during the era of \$100 per barrel of oil in the UAE and KSA.

Business Plan	<ul> <li>Fully funded business plans (equity + debt required = total capex, contingency provisions and project working capital)</li> </ul>
Land purchase	To be paid out of equity in full prior to loan approval and or drawdown
Loan to construction value	• Limited to 65%-70%
Debt servicing during construction	<ul> <li>Must be serviced during construction from either additional equity contributions or unencumbered cash flows from operations outside of the particular development project</li> </ul>
Recourse	<ul> <li>Yes, to project owners in the form of personal and or corporate guarantees</li> </ul>
Security	<ul> <li>At least 100% cover of the loan amount</li> <li>In some cases, especially in KSA, lenders required between 1.25x and 2x cover depending on the nature of the development and loan request</li> </ul>
Pricing	<ul> <li>Typical margins above interbank rates ranging from 380 basis points to 450 basis points during construction</li> <li>Stepping down to an average of 350 basis points during the amortizing period of loans</li> </ul>
Tenor	• 5 years through to 12 years including construction periods

Source: Deloitte Corporate Finance Advisory Limited

The reality is that the same table also applies to banks today. Indeed, in times of higher market risk, one would reasonably expect credit committees to require (1) lower loan to construction values (2) additional security (3) tighter tenor profiles and (4) more aggressive margins.

Our experience is that, whilst there is an overall heightened level of caution when appraising lending opportunities, overall credit terms are largely the same in the current environment for well-structured and appraised credit applications.

#### Where most borrowers fall short

We often see potential borrowers failing to secure funding because they do not meet the above lending policies.

Most common areas where borrowers fall short are:

- 1. Requesting much higher loan to construction values
- 2. Requesting banks finance part of the cost to purchase land
- 3. Project business plans are not fully funded reflecting potential future funding shortfalls during construction
- 4. Proposals not having the required equity commitment levels and/or alternative unencumbered cash flow to service debt until the particular project is in a position to generate its own cash flow and meet covenants

In the last twelve months, both in the UAE and in KSA, we have assisted borrowers in attaining approval for

Bank debt is not the only form of debt that is available to borrowers; there are other forms of debt that cost more than bank debt and if used correctly can help borrowers fund their projects.

funding requests (circa AED 3 billion deal flow) that are on better terms than the general credit policies stated above due to the commitment, transparency and overall "deal readiness" that was forthcoming from these borrowers.

We have witnessed bilateral deals for loan amounts that would typically be financed by a club or syndicate of banks and in some cases with much higher loan to construction values than are the norm.

Our experience is that lenders are competing heavily with each other to secure good quality, well-prepared business plans, borrowers and mandates.

Indeed, lenders typically have a number of complaints, which we feel are a recurring theme:

- There are a limited number of quality lending opportunities in the market;
- Borrowers expect banks to take equity risk with minimal, if any, commitment coming from borrowers themselves;
   and
- Loan pricing requests are typically reflective of AA rated investment grade returns rather than the actual risk that loans are requested to fund.

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Critically, very few borrowers understand the risk and cost allocation across the different stacks of capital. The below table is a basic overview of this risk and cost allocation:

	Annual cost	Risk profile
Bank debt – senior lenders	4%-6%	Typically fund mature operating businesses with steady cash flows. Repaid in priority and rank to other forms of capital, with security in place. Do not enjoy equity upside.
Higher yielding non-bank debt	7%-10%	<ul> <li>Repaid only after senior lenders are repaid.</li> <li>Carry a second charge on security behind senior lenders.</li> <li>More flexible terms compared to banks with regards to amortization and debt servicing requirements.</li> </ul>
Mezzanine debt	12%-18%	<ul> <li>Fund gaps between equity and senior debt requirements.</li> <li>Often with limited security but with noted share pledges.</li> <li>Enjoy limited, contracted equity upside.</li> <li>Very flexible terms compared to banks, such as minimal or no amortization and flexible debt servicing and/or interest roll-ups.</li> </ul>
Equity	+20%	<ul> <li>Repaid only after all other forms of capital have been paid/ serviced.</li> <li>Makes the highest return as this form of capital takes the highest risk.</li> </ul>

Source: Deloitte Corporate Finance Advisory Limited

All too often we see potential borrowers for real estate development projects fall short of either the prerequisite equity commitment levels, or they do not provide banks with the tangible comfort that lenders require. The result is that banks are, more often than not, being asked to take equity risk at senior debt cost of capital. Indeed, other credit terms (e.g. security, amortization, tenor etc.) that borrowers ask for are not usually aligned to the risk/return profile banks are designed to satisfy and the role they are expected to play in the capital structure.

#### International lenders

This article is focused on local banks and their ability to support funding local real estate development. There are international banks that have supported local borrowers in the past directly or against Export Credit Agency support mechanisms backing importation of foreign capital goods and employment of foreign construction companies. Western as well as Asian banks have taken such exposure in the past, and may still support certain transactions in the future.

Importantly, international banks are generally less competitive in local currency loan pricing than the local banks, and are usually more conservative than local banks with respect to local real estate exposure and credit policy.

## Potential future tightening of credit policies

Some local banks are already carrying high levels of real estate-related exposure, and may allocate surplus liquidity to other sectors moving forward. New accounting standards that are planned to be implemented in the near future may require local banks to

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reclassify corporate loans that are secured by real estate assets as "real estate sector" loans, which might hinder some local banks from taking more exposure to the local real estate market.

#### **Conclusion**

We started this article by posing a question around the state of the current local bank lending market. Our experience is that there is appetite from banks to lend to real estate development projects that are well structured from a funding perspective.

Our view is that borrowers need to approach their business plans, funding requirements and ambitions with realism and suitable levels of equity commitment to ensure there is sufficient "skin in the game", so as to allow senior lenders to satisfy their role in the capital structure.

by **Kosta Georgiadis**, Head of Debt Advisory, Deloitte Middle East





The Kingdom of Saudi Arabia's engineering & construction (E&C) sector is in the throes of a once-in-a-generation disruptive change which is precipitating radical innovation. The long-term sustainable future of many major businesses within this market segment is being shaped by their ability to create new and modern built-asset solutions that customers want to buy and/or invest in whilst optimizing the operational performance and efficiency with which such products and services are delivered. It could be said that the essence of the Kingdom's Vision 2030 plan has well and truly taken root, and that the race to establish market relevance under a revised demand and supply compact is most definitely on.

Few would disagree that the basic economic fundamentals that underpin KSA's E&C market remain sound, albeit temporarily constrained, and that the sector has a major role to play in contributing significantly to the overall growth and prosperity of KSA as a nation whilst extending and diversifying its economic activity in neighboring and new markets alike. However, many would acknowledge that the successful realization of any future strategic ambition will undoubtedly depend on the rate and pace at which the industry can realistically modernize and transform itself, or more pointedly normalize to a level of competitive parity with similar international markets.

KSA's rapid transition to a competitive market paradigm is being led by one unescapable reality, that the traditional rule book for capital project delivery within the Kingdom is being progressively superseded by modern standards that have become commonplace within many

international markets, and that the foreseeable trend will have an ever increasing number of major stakeholders exploring ways of leveraging leading industry practices to gain competitive business advantage.

This is hardly surprising when one considers that the major economic and social drivers guiding the KSA markets search for improved project delivery performance, in many ways echo historical conditions in other parts of the world. Of particular consequence is the extent to which these conditions precipitated a complete cultural and systemic step-change in the way these markets elsewhere went about correcting the inefficiencies of their outdated capital project delivery and contracting approaches.

contracting culture. The market was characterized by very poor project delivery performance, which was often accompanied by wasteful and very costly actions of dispute.

The failure of the Channel Tunnel Project (10 workers killed, 80 percent over budget, two years late) created a major industry inflection point and contributed significantly to the British government's decision to demand change.

With the support of the country's construction industry leaders (*Sir John Egan – Rethinking Construction, 1998 and Sir Michael Latham – Constructing the Team, 1994*) a new order was ordained which realized a fundamental stepchange in the overall approach to capital project delivery.

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The E&C sector in KSA maintains a rather traditional composition, which in many ways resembles that of Britain up to the mid to late 1990s. During this period the market was severely depleted of adequately skilled resources due to decades of underinvestment in infrastructure, economic pressure, and poor industrial relations, which in itself supported an environment of predatory tendering accompanied by an adversarial

What became known as the 'Egan & Latham era' produced a new philosophy that incorporated the tenets of enhanced partnership, smart procurement & supply chain management, collaborative working arrangements, integrated data management practices, equitable risk sharing, and 'open-book' contracting with performance-based incentives.

Equally, this era saw the rapid advancement of technology enable project delivery systems, which sought to help bridge the capacity and capability gaps through the deployment of sophisticated digital platforms. The rather unfortunate side effect, and continued legacy, of this widespread technology adoption is that many of the available solutions are often directed at a datacentric rather than information-centric agenda, which to this day continues to frustrate the industry, to the extent most of the recognized technology providers have not yet cracked the proverbial nut as far as the E&C sector's core data objective is concerned i.e. reliable knowledge that supports decisionmaking.

A further extension of this precedent is that many industry stakeholders continue to maintain the belief that mass automation will allow a discreet costeffective team of skilled, often inexperienced, resources to successfully deliver substantial portfolios of extremely complex pieces of built-assets - the net result being that these organizations deploy significant resources to develop equally complex enterprise and project management technology platforms with associated applications that are poorly designed, configured, and implemented. This provides senior management with an array of confusing and in many cases conflicting statements on the overall performance of their capital project portfolio - quite often speeding up the rate at which bad news is delivered.

Credible, trustworthy information is a prerequisite for the successful delivery of any major capital program or project, and without it failure is guaranteed. The notion that complex project delivery

challenges can be simply overcome through the reconfiguration and/or upgrade of existing enterprise resource planning (ERP) and enterprise program/project management (EPPM) technology platforms is flawed. Complex capital projects demand significant financial resources, and require significant contributions from all critical business dimensions, e.g. policy, standards, people, processes, systems, tools, etc., all of which need to be expertly guided by a strong and credible leadership – a holistic challenge that requires a holistic solution.

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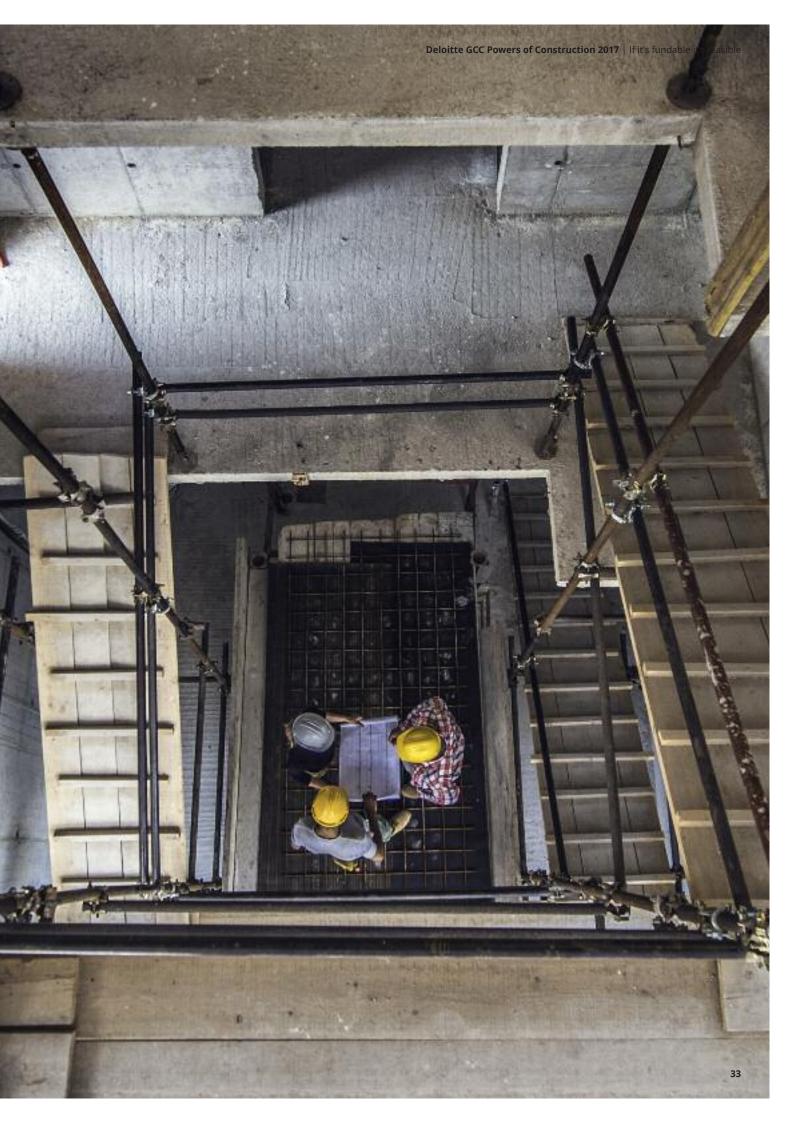
Over the past at least 15 years there have been a number of stand-out examples of successful mega-projects (Heathrow Terminal 5, London 2012 Olympics, London Crossrail, National Highways Agency, etc.) that have set new global benchmarks for capital project delivery. The distinguishing characteristics of all these exemplar projects is a prioritized agenda that places significant emphasis on well-articulated vision statements with clear executable objectives, accompanied by robust delivery strategies supported by sound policy, strong and accountable leadership empowered to make decisions based on reliable data, transparent governance structures that avoid authority bottlenecks, well integrated

delivery teams, active risk management, a focus on early scope definition supported by robust change control, and a consistent requirement to work with best of breed delivery partners with proven capability.

The KSA E&C sector is primed and ready to take advantage of the lessons learned from other global centers of excellence, and the first adopters who are able to package these solutions for the domestic market will undoubtedly have the upper hand in what will become an increasingly competitive industry. Suffice to say...who dares wins!

by **Sheldon Morris**, Vice President of El Seif Engineering Contracting





The disclosure objective of IFRS 15 is to establish the principles that an entity shall apply to report useful information to users of financial statements to understand the nature, amount, timing and uncertainty of revenue and cash flows arising from a contract with a customer, including qualitative and quantitative information.

Everyone demands transparency. In business, transparency is pivotal for an effective decision making. And in an industry like construction, the bases of the significant estimates and judgments are almost always left undisclosed to the users of the financial information as the current accounting standards do not require a significant level of disclosure in these areas.

In May 2014, the International Accounting Standards Board (the "Board") issued IFRS 15 Revenue from Contracts with Customers to replace the current standards on revenue recognition, including the construction industry's "accounting manual", IAS 11 Construction Contracts. The standard introduces a 5 step model to revenue recognition from Contracts with Customers, which to a certain extent is more prescriptive compared to previous requirements. It also requires entities to provide

extensive, and in some cases, commercially sensitive disclosures in their financial statements.
These comprehensive disclosure requirements were the International Accounting Standards Board's response to criticism that IAS 11 and IAS 18 revenue recognition disclosures were inadequate. The disclosures requirements under the new standard will impact all entities – including contractors. IFRS 15 is effective for annual reporting periods beginning on or after 1 January 2018.

The disclosure objective of IFRS 15 is to establish the principles that an entity shall apply to report useful information to users of financial statements to understand the nature, amount, timing and uncertainty of revenue and cash flows arising from a contract with a customer, including qualitative and quantitative information. However, greater transparency may be perceived differently by different users - whilst shareholders, lenders and competitors get greater insights into the contractor's business, the information may be considered commercially sensitive by management.

In the table below, we have reproduced the significant disclosure requirements and also highlighted some of the key challenges we believe contractors will face in collating the information and the possible commercial sensitivities that may arise as a result of this disclosures in an industry where this level of transparency is commercially very sensitive and would be a new concept.

#### Significant disclosure requirements<sup>1</sup> Disaggregation Contract balances Performance obligations Transaction price allocated to of revenue the remaining performance obligations Entities shall disaggregate revenue Entities shall disclose: Entities shall disclose: Entities shall disclose the (a) when the entity typically satisfies recognized from contracts with (a) the opening and closing significant accounting estimates customers into categories that balances of contract assets its performance obligations and judgments made in depict how the nature, amount, and contract liabilities; (b) the significant payment terms; determining the transaction price, (c) types of warranties and related allocating the transaction price to timing and uncertainty of revenue (b) revenue recognized in the and cash flows are affected by the performance obligations and reporting period obligations. economic factors. - that was included in the determining when performance contract liability balance at the obligations are satisfied. beginning of the period; and - from performance obligations satisfied (or partially satisfied) in previous periods. Potential challenges Contractors should exercise Have contractors considered Have contractors considered Contractors should exercise judgment to categorize their the current capability of their whether their contracts include a judgment and be able to accounting systems? Is the revenues. Some of the categories significant financing component, can include, but not limited to the system able to extract the paying particular attention to following: quantitative information unusual terms in the contract in - market or type of customer required? relation to advance payments and (i.e. government or private) collection of certified amounts? performance obligations. - type of contract (i.e. fixed-price Have contractors considered the This consideration is likely to need to upskill their existing require significant judgment and or re-measurable) Do contractors have written a greater collaboration between geographical region (i.e. country finance function? policies describing: tender, project and finance teams or region) in order to obtain the relevant

Have contractors considered the current capability of their information systems? Are they able to monitor their contracts based on the applicable category to facilitate the disaggregation process?

information to assess this requirement.

demonstrate the viability of their forecast on when they expect to recognize the revenue related to unsatisfied or partially unsatisfied

- the methods used to recognize revenue (description of the output or input methods used, how are these methods applied)?
- how variable consideration is estimated and whether this is constrained or not;
- how highly probable revenue will be defined and described to comply with the requirements for recognizing variable revenue;
- how obligations for warranties, decennial liabilities and other similar obligations are measured;
- the judgments made in evaluating when a customer obtains control of the project? Have contractors considered the current capability of their accounting systems to facilitate the extraction of this information considering the number of contracts maintained?

#### Potential commercial sensitivities

Does the requirement expose the contractors' market share to the readers of the financial statements, including its business strategy while on the other hand allowing key stakeholders insights on how the business is being managed?

Does the requirement highlight information that could allow readers of the financial statements to decipher the amount of excess billing compared to the performance obligation satisfied as at reporting date and long-outstanding satisfied performance obligations not yet billed or collected?

Will the disclosure of significant financing components included within contracts hinder any future negotiations with customers and financers? Furthermore, will this provide competitors with insights into the entity's business model?

\* Disclosures on unsatisfied performance obligations should not be confused with the order book, as these two can actually differ (for example, IFRS 15 disclosure may exclude cancellable executory contracts as per IFRS 15 paragraph 12, or IFRS 15 disclosure will reflect constrained revenue, which may be markedly lower than what is really expected). Some entities may choose to make separate "order book" disclosures, which should be reconciled to the IFRS 15 disclosures

Does the requirement expose the contractors' budgets, targets and future cash flows related to its ongoing and confirmed projects in pipeline (excluding cancellable wholly unperformed executory contracts) to the readers of the financial statements?

Will this requirement provide a benefit to the stakeholders by informing them if the entity will be able to continue to operate in the foreseeable future due to the disclosed expected revenue on its existing contracts?

Sources: https://www.iasplus.com/en/standards/ifrs/ifrs15

With the advent of the effective date of IFRS 15 on 1 January 2018, there is currently no room to deliberate. Contractors have much to consider including:

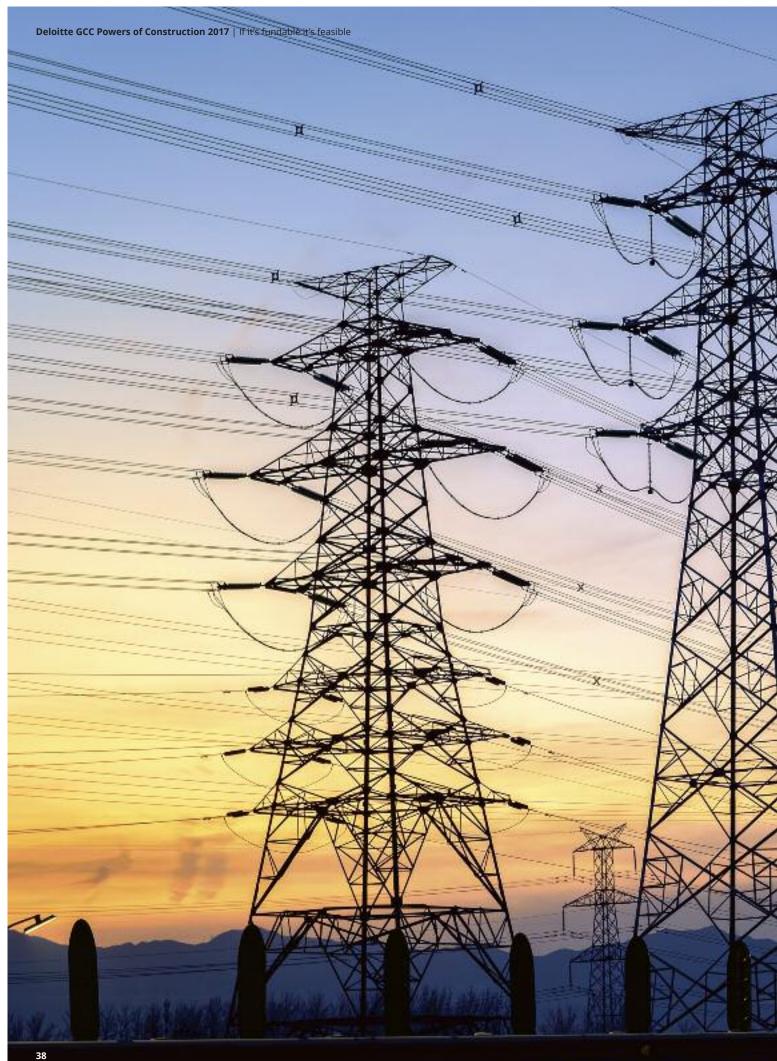
- the capability of its current information systems to support the new accounting and disclosure requirements,
- the need to upskill finance and operational employees and enhance their collaboration
- the commercial impact on the choices it makes on disclosures requirements
- the transition choices it elects to adopt

For contractors that have not yet assessed the impact of IFRS 15 on their contracts, there is much work to be undertaken to assess the impact this

standard will have on the opening balances as at 1 January 2018 to realign the existing accounting policies with IFRS15 as well as determining the future accounting policies and preparation of the information required to meet the disclosure requirement in its next financial statements. For contractors that have taken unapproved variations and claims to book under IAS 11, where they could meet the threshold of "probable" now have to reassess if these claims and variations meet the threshold of "highly probable" under IFRS 15. Such an assessment could lead to material adjustments to revenue on transition to IFRS 15 which is required to be disclosed in the current year financial statements.

1. This article provides a summary of the key disclosure requirements in IFRS 15 Revenue from Contracts with Customers and provides potential challenges and possible commercial sensitivities. However, this article does not cover all the required disclosures either by IFRS 15 or any other standards. Therefore, this article should not be taken as a replacement for a need for any accounting consultation nor should be treated as accounting advice.

by **Jaimi Raikundalia**, Audit Principal, **Meanne Rose Franco**, Audit Principal, and **Jonathan Mandon**, Audit Manager, Deloitte Middle East





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In light of slow economic recovery on a global scale, there has been a lack of growth in the electric power sector globally, marked with a slowing down of project awards overall, and subsequently intensified competition among engineering, procurement, and construction (EPC) contractors. This is particularly the case in the Middle East region, where the new normal of sustained low oil prices has led to fewer funded projects being launched in the market. Yet at the same time, the region itself remains a market of potential in the eyes of many international power EPC contractors, underpinned by factors such as population growth, urbanization, industrialization, and low electricity prices; moreover, with China's Belt and Road Initiative featuring the region prominently, a growing number of Chinese power contractors are now joining this already crowded market, making it even more difficult for other power contractors to stay alive and thrive.

Considering the immense challenges facing such contractors, we reached out to Mr. LIU Fangjiang, Vice President and MENA President of SEPCOIII Electric Power Construction Corporation, to get his views on market opportunities and risks of relevance to his company and other international EPC contractor peers, as well as what it may take for a power contractor to stay competitive amid sluggish market growth.

As one of the first globally active power EPC contractors from China, SEPCOIII Electric Power Construction Corporation is a wholly-owned subsidiary of PowerChina group, specializing in power related construction and installation that

includes those of thermal, nuclear, gas and oil-fired, hydro, wind, solar and biological power plants. It has distinguished itself with strong capabilities across the power industrial chain to deliver tailored solutions as an EPC contractor, or a variety of forms that include EPC+Operation, Built-Own-Transfer (BOT), Built-Own-Operate (BOO) and Project-Management-Contract (PMC) basis. In the Middle East and North Africa (MENA) region, the company has been delivering power plant projects since 2008, starting with Jordan before expanding into multiple markets across the region including those of Saudi Arabia, Oman, Kuwait, Egypt, Iraq and Morocco. Currently SEPCOIII is a leading power contractor among its peers, with the largest unit capacity under construction across the region.

Although long a well-known brand among Chinese power sector companies, the company's foray into the MENA region wasn't easy and it took nearly nine years of dedicated efforts to reach the market recognition it enjoys today.

Looking back at where they started in 2008, Mr. LIU recalled their MENA journey in a three stage development path familiar to many international contractor peers operating in a new market full of opportunities and associated risks. SEPCOIII's first phase spanned 2008 to 2012, with a focus on understanding the local market regulations, requirements and pricing mechanisms, via a number of pilot projects in key markets. This was followed by a second phase from 2012 to 2015, during which the company started to be more active in bidding for and winning projects in these markets, leveraging its

acquired experience and knowledge of the local operating environment. Then, during the third phase from 2016 until today, the company has built a large pipeline of achievements via continuous wins and consistent project delivery, and benefits from its strategic partnership with reputable developers, which include ACWA, Marubeni, Mitsui and NG.

Speaking about his experience in growing the business, Mr. LIU highlighted the challenges associated with market requirements, regulatory ambiguity and competition-driven pricing pressure.

On market requirements, the main regional markets, in particular the GCC countries, tend to adopt American and European standards when it comes to equipment as well as infrastructure building practices and codes. This presents practical challenges when SEPCOIII wishes to leverage its global resources to deliver efficiently on local projects. The company has to invest time in identifying the differences between Chinese standards and the marketrequired American/European standards, and it also needs to invest resources to reconcile the differences and tailor its overall solution to meet market requirements. This comes in addition to demonstrating to local developers that the company has the capability to deliver on standards as per their request.

Regulatory ambiguity is another area which Mr. LIU felt had significant impact on how they do business in the region. Unlike mature markets, many of the laws guiding the industry tend to be less precise and government/legal procedures less linear; at the same time regulatory measures associated with laws are often subject to constant change and

update. Such ambiguity inevitably led to inconsistent enforcements, and subsequently room for rent seeking behavior and an arbitrary approach towards market participants, which could be prohibitive for foreign companies who lack the market experience and knowhow to navigate such conditions. Competition-driven pricing pressure is another area Mr. LIU brought up as an important consideration for power contractors. He noted that, during the past year, the average price level had decreased by 10 percent compared to the previous year. This is largely driven by the limited number of independent power producer (IPP) projects in the market, and too many companies joining the competition. Despite these challenges, Mr. LIU stressed that the company has adopted measures to ensure their interests are protected and lessons learned.

In consideration of market requirements, the company focuses on project delivery in select markets to build solid credentials and let its track record speak for itself, which then paves the way for a sustainable business expansion across the region with continuing collaboration with existing project owners as well as building a growing network of strategic partnerships with key international financial institutions, design agencies and equipment providers. Such an approach has landed the company repeated contract wins with key market project owners across a broad spectrum of power mandates, including Noor II/III Solar CSP power plant (Morocco), IBRI/Sohar/Salalah natural gas power plant (Oman), Yanbu Power and Water project III (KSA), Samara Phase IV (Jordan.)

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hand working experience in target markets, and have gradually developed an approach to best protect their business from associated risk factors. Measures have been taken to ensure relevant considerations be factored into its project tenders and contracts. For this, the company enlisted support from professional consultants and legal advisors. During the project implementation process the company hires local talent extensively for its project management team across regional markets, and partners with quality local subcontractors, to ensure a smooth execution on the ground.

Addressing the competitive pressure, Mr. LIU acknowledged that SEPCOIII is facing fierce competition from all directions - companies from mature markets, such as Europe, the US, Japan and Korea, with a strong reputation, technical capabilities, and strong funding support, as well as companies from China willing to undercut competition on price and competing with similar sources of Chinese financing. Mr. LIU emphasized that for SEPCOIII the importance is to play to its own strengths, in particular, a well-balanced solution combining world-class technical capability and highly efficient project execution skills. Compared to other Chinese contractors, SEPCOIII is well versed in the most advanced international technology and standards in its space, having worked on complex overseas projects and partnered with leading global power developers for years across many high-end markets. Compared to other international EPC contractors, SEPCOIII has demonstrated stronger on-site project management capability, with a reputation for timely delivery. This is achieved by having assembled efficient on-site project teams with experienced management staff and

a workforce owning the right mix of skills. For highly technical aspects of the project, such as high pressure pipe welding, electrical equipment debugging, SEPCOIII usually sends its well-trained workers from China to lead the work, whereas for civil work and steel structures, the company will leverage the competitive subcontractors locally to deliver the work.

Speaking about the importance of funding in recent years, Mr. LIU acknowledged the increasing role that funding capabilities play in securing project wins and getting projects started across the region. For traditionally resource-rich countries like the GCC, shrinking public funding as a result of sustained low oil prices has led to an increasing willingness of governments to embrace private sector participation in satisfying the demands of power infrastructure developments. For countries with a shortage of resources, such as other MENA countries (Jordan, Egypt, Morocco among others), governments are eager to tap into additional financing to get the much needed power projects off the ground. With China's Belt and Road Initiative focusing on this region, SEPCOIII, as a state-owned enterprise, has the natural advantage of financial backing from Chinese FSIs as well as its parent group PowerChina. However Mr. LIU is more realistic about how much leverage it will allow SEPCOIII in terms of project wins. For projects supported by bilateral government agreements between China and target markets, Chinese contractors could benefit from having such financing support from Chinese FSIs. However, for other projects on commercial terms, rates offered by Chinese FSIs don't always compare competitively against European or Japanese FSIs in the international

project finance market. In such cases, SEPCOIII prefers to partner with other reputable developers while taking the EPC mandate only.

In order to differentiate itself from competition in the MENA region, SEPCOIII is focusing more on making selective decisions about where to play, leveraging its credentials in relevant areas while further building such credentials in the regional market. For example, in the conventional energy space, SEPCOIII has solid credentials, having completed 18450 MW total installed capacity in gasfired combined cycle power plants to date. In the renewable energy space, the company is putting more efforts around concentrated solar power (CSP) power projects, where the barrier to entry tends to be much higher than Photovoltaic (PV) projects, hence less prone to competing on price only. The Noor II/III Solar CSP projects, where SEPCOIII plays the role of the main EPC contractor, are the world's largest and most advanced CSP power plants. Such experience helped SEPCOIII credentialize itself in preparation for growing demand in this space. In addition, SEPCOIII has also stepped into water desalination with the Salalah and Rabigh projects in Oman and KSA respectively. This is consistent with the company's regional project mix: out of SEPCOIII's 12 ongoing projects in the MENA region, nine are conventional gasfired power plants, with another two in renewables and one being a coal-fired power plant.

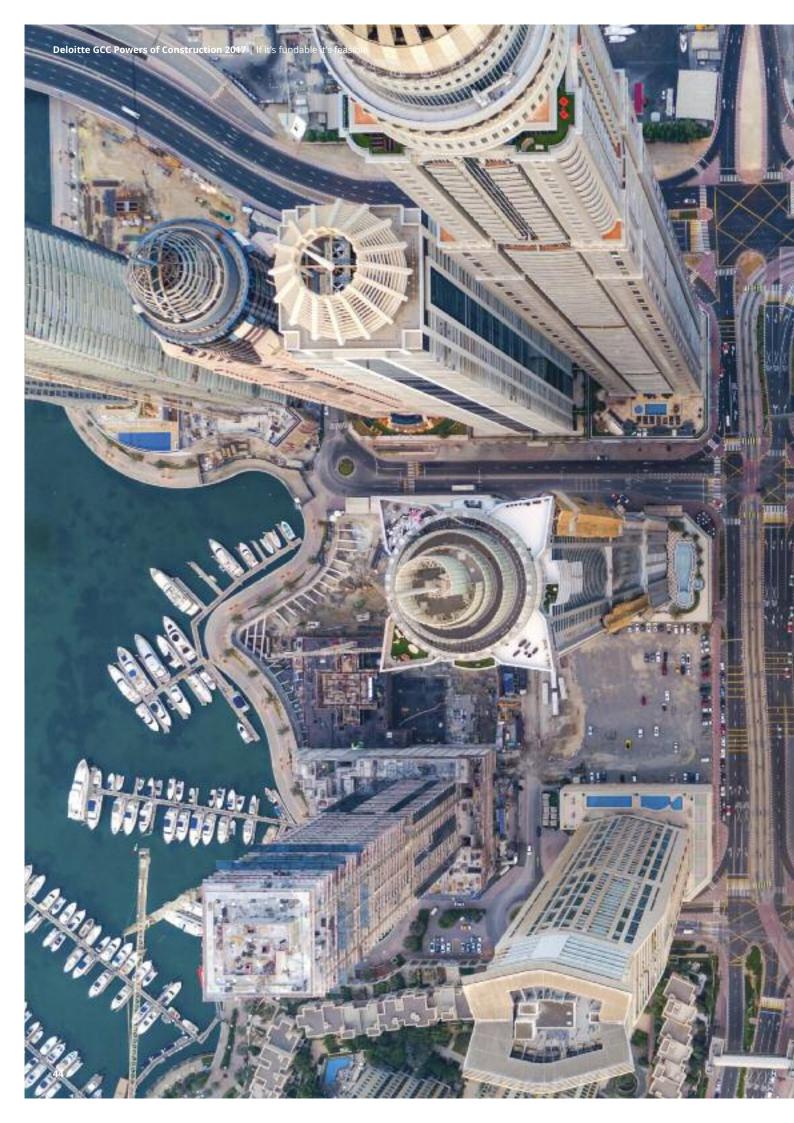
All these efforts are consistent with aligning SEPCOIII's vision and strategy with realities on the ground, making its regional expansion plan more sustainable and viable. The company is the first and only Chinese power

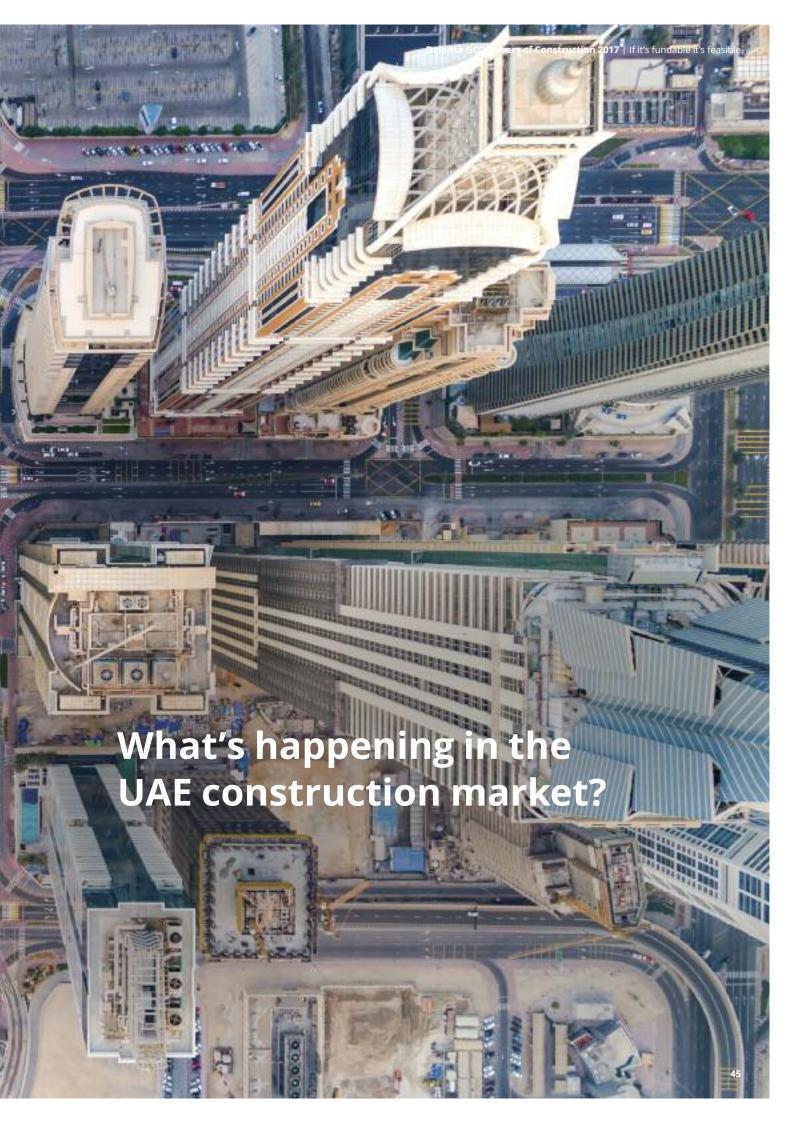
In the renewable energy space, the company is putting more efforts around concentrated solar power (CSP) power projects, where the barrier to entry tends to be much higher than Photovoltaic (PV) projects, hence less prone to competing on price only.

contractor to have secured a place among Saudi Electric Power Company (SEC)'s qualified EPC contractors, after solid delivery on the Rabigh power plant project in the KSA. This qualification further opened doors to a number of subsequent contract awards in KSA and access to more opportunities in the high-end GCC markets, mostly using American/European standards. It has also made steady progress into the operations and maintenance (O&M) space, building upon strong project delivery on two of its EPC contracts in KSA and Morocco respectively.

Despite the challenges and risk factors associated with carrying out projects in the region, Mr. LIU is optimistic in terms of what the MENA market has to offer: the market potential is enormous compared to many other countries in the world, and such potential is firmly supported by population growth and a still developing economy in need of efficient energy.

**Mr. LIU Fangjiang**, MENA President of SEPCOIII





#### **Summary**

Like much of the UAE, the construction industry is being affected by an uncertain economic climate and in particular the drop in the oil price. For the construction industry, this means a lack of cash and liquidity across the supply chain. As a result, projects are slowing down, being suspended or not completed at all. Employers are increasingly seeking to rely on their contractual rights and remedies to avoid having to pay or to delay payment. Meanwhile, contractors feel that they have no choice but to initiate claims to get paid. All of this leads to a very active disputes market.

### What's happening in the construction market?

- Contractors are seeing greater competition for fewer contracts. This means they are reducing their margins in order to win work and the project is started on a tight budget, with little room for contingency. This tends to mean that parties are less likely to work collaboratively to overcome any changes and issues that (inevitably) arise during the project. Instead, both parties have a tendency to focus on payment and enforcing their strict contractual rights, often at the expense of the longer-term needs of the project.
- Employers and/or contractors are unable to finish the work because they run out of cash. This results in some projects being abandoned midway through. We are seeing some contractors still trying to get paid for legacy projects from 2008-2010 or earlier.
- Employers are not paying their contractors for variations, not paying them on time or, in some cases, not paying them at all. This, in turn, is passed down to subcontractors and suppliers; affecting the entire chain.

• More parties are trying to terminate their contracts as a result of all these payment issues. However, termination in these circumstances is always difficult and sometimes the process is not administered correctly, which in turn can have significant effects on contractual rights (and payment) post-termination.

The DIFC Courts have launched a new Technology and Construction Division (the "TCD".) This is a positive step and shows an appreciation of the importance of the construction industry in the UAE.

- Bonds are being held by employers against contractors, and also by contractors against subcontractors. Until recently, bonds were thought of as being a "last resort" if there was no other way to ensure performance of a contractor/subcontractor (such as liquidation.) However, it is becoming more common for bonds to be used to put significant pressure on contractors/subcontractors. We are increasingly seeing employers or contractors refusing to release a bond at the end of a project. This compounds the issue of decreased margins and makes the successful resolution of disputes between the parties less, rather than more, likely.
- Taking over certificates are not being granted, as employers are worried that contractors will then disappear without completing the snagging and/or

because employers are using it as a tool to get contractors to carry out additional work. Similarly, employers are refusing to sign off the end of the defects liability period because they are anxious not to relinquish potential leverage over contractors and do not want to release retentions.

### What's happening in the legal market?

- The DIFC Courts have launched a new Technology and Construction Division (the "TCD".) This is a positive step and shows an appreciation of the importance of the construction industry in the UAE. However, we are yet to see how effective this will be in a new jurisdiction and, in a region that favors arbitration (largely due to its international focus), the TCD's success is likely to rest on the specialist construction expertise of the judges it can attract.
- The threat of potential criminal sanctions for bias is reducing the UAE's attractiveness for experienced arbitrators and experts. The amendment to Article 257 of the UAE Penal Code imposes the possibility of imprisonment on arbitrators and experts if they fail to perform their duties in accordance with objectivity and integrity. Anyone accused of a criminal offence may have their passport confiscated whilst the allegation is investigated. This is leading to some arbitrators, and even some experts, declining instructions in the region. Some arbitrators are, instead, insisting that the arbitration is held outside of the UAE - although this is unlikely to help as they still need to be physically present in the UAE to sign the award (otherwise the award itself may be unenforceable.)

- The long-promised Arbitration Law is still awaited, but is it just around the corner? With numerous drafts issued over the years, the new Arbitration Law is highly anticipated. When it finally arrives, the new law should provide a singular legislative framework for arbitrations in the region and is expected to be based on the well-respected UNCITRAL Model Law and influenced by Egyptian arbitration law. The introduction of a domestic arbitration law ought to be welcomed by the construction sector.
- Contractors and suppliers in the region need to register for VAT. A new law put into effect on January 1, 2018 will require all those who supply goods and/or services to register for VAT. Given the current low margins and the value and volume of contracts that contractors have in place at any one time, "sticking VAT" could become a real burden for them.
- The Judicial Tribunal (JT) continues to assert its dominance. The JT has emphatically confirmed that the DIFC cannot simply be used as a conduit jurisdiction for the recognition and enforcement of domestic or international arbitral awards in onshore Dubai. Whether or not the DIFC Courts can still be used as a conduit jurisdiction for enforcing foreign court judgments is yet to be resolved. We anticipate that it will be resolved in the next 12 or so months, so watch this space.

### So what's next?

It seems that the oil price is unlikely to rise significantly and there is a risk that it will drop further. Either way, this will mean a continuation of the issues outlined above, with potential worsening over time as the lack of cash flow continues to bite.

While the UAE is stable, the wider instability of the geopolitical climate will have an effect on the UAE's international

market. There are lots of negative indicators including: the unpredictability of Donald Trump, the nuclear threat from North Korea, continuing issues with neighboring Qatar, and potential instability caused by Iran.

However, it is not all doom and gloom, and there are a number of positive things on the horizon: The region has seen an increase in solar power projects (with Abu Dhabi announcing plans to build the world's largest solar power plant in a project worth \$870 million.) Dubai is gearing up for Expo 2020 and Qatar is gearing up for the World Cup in 2022, both of which are causing an increase in developments and hope to produce significant income for the region (as well as, hopefully, some cash flow in the construction market.)

In recognition of the continuing issues surrounding the oil market, we are seeing the UAE diversifying from the oil industry with projects such as the Emirates Global Aluminium's \$3 billion Al Taweelah alumina refinery, Abu Dhabi Ports' Khalifa Industrial Zone Logistics Park (which involves the construction of 100 warehouses), and Abu Dhabi Industrial City (where hydrocarbons-intensive industries have been one of the major areas of growth.)

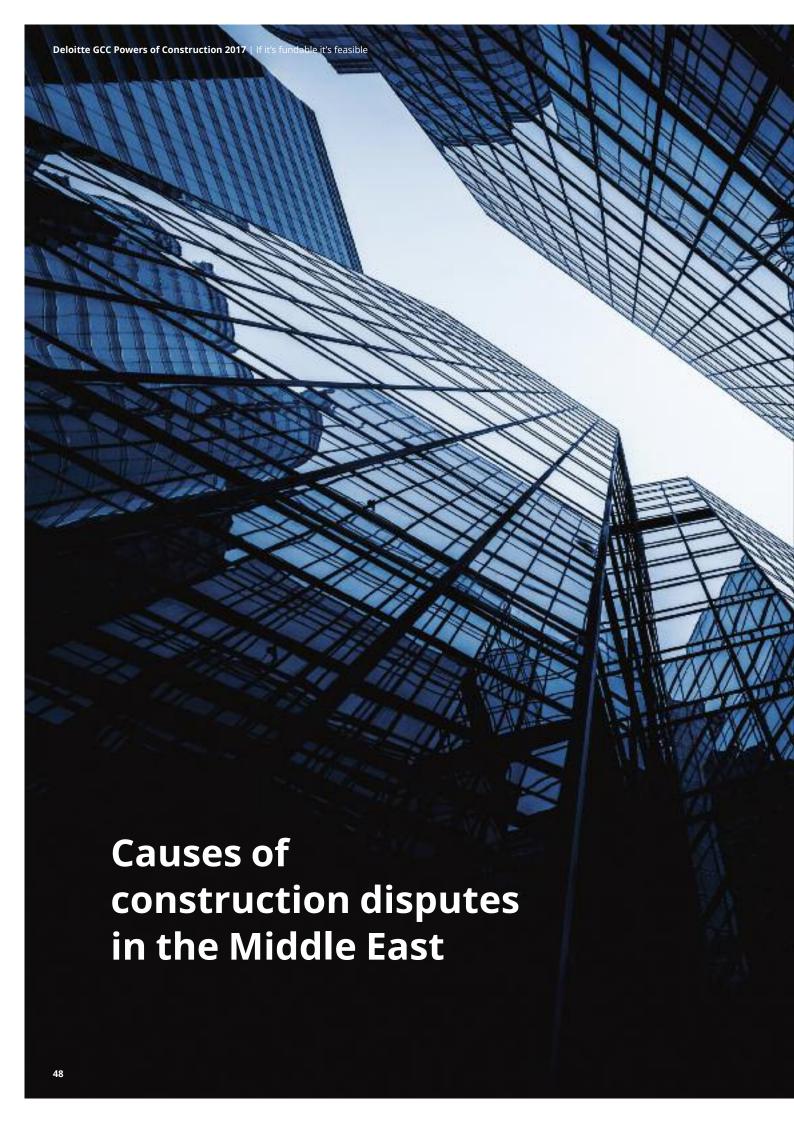
### What should parties do? Top 3 tips: Communication, records and escalation

- 1) Communication is key. Being honest and open early on in a project, and fostering a collaborative relationship (both up and down the chain), can really help to identify issues early on and find an amicable way to deal with them. Even if problems cannot be solved immediately, it will prevent them escalating to the point where they are out of control.
- 2) Accurate record keeping. Whilst keeping accurate records can seem like an additional administrative burden during the project, it can make

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all the difference if issues are escalated to a formal dispute. One particular issue we are seeing is where contractors feel unable to rectify meeting minutes. Although not ideal, an accurate and detailed internal record setting out why the meeting minutes cannot be amended will assist in a dispute.

- 3) Escalate issues for a prompt resolution waiting rarely, if ever, helps. Problems tend to continue escalating throughout a project, with each party becoming more and more entrenched in their own position. If the problem can be dealt with early and head-on, then this can avoid it becoming a much bigger problem further down the line. Seeking advice early on can help you avoid disputes rather than becoming embroiled in them.
- by **Alastair Young**, Partner and **Suzannah Fairbairn**, Associate, both members of the Construction and Dispute Resolution Team in the Dentons' Dubai office





The economic slowdown caused by low oil prices has negatively impacted the construction industry in the Middle East over the past years. Government spending has decreased across the region, giving rise to various challenges amongst construction companies and reducing the pool of available work for the construction sector. The consequences include many contractors having experienced delayed payments, stronger negotiations over contractual conditions and risks, lower profit margins and other challenges. Claims have therefore become a real method to generate revenue, not necessarily to increase profits, but to reduce the extent of losses on some occasions. Disputes arise when claims are not resolved through the contractual mechanisms agreed by both parties (i.e. an employer and a contractor.) Even when these mechanisms are sound, disputes may still arise due to lack of proper application. Claims management in general can best be described as immature in the Middle East, which is reflected by the poor quality of claim documentation. Our experience shows that there are three main causes of disputes frequently seen in the Middle East construction market, as further explained below.

### Firstly: Poor contract drafting and risk allocation

Proper contract drafting and a balanced risk allocation are the first steps towards dispute avoidance. A sound construction contract reduces the potential of disputes to a great extent by addressing as many potential risks as possible. These are ideally drafted by experienced lawyers and/or contract specialists. Whatever the reason for not achieving sound contracts may be, the impact can be significant and is often felt during the completion stages of projects. Experience, continuous learning, and development for commercial managers are needed when considering the various obligations and liabilities of the parties related to a construction contract. There are some simple steps that can be taken to mitigate risk and ideally avoid disputes, namely:

- Apply a recognized standard international form of construction contracts (e.g. forms issued by the International Federation of Consulting Engineers or "FIDIC")
- Use caution when making additions or changes to the adopted form of contract and ensure that the full impact of the changes is understood
- Ensure that there are no conflicts with the applicable laws including, but not limited to, labor laws, health and safety, etc.

Proper contract drafting and a balanced risk allocation are the first steps towards dispute avoidance. A sound construction contract reduces the potential of disputes to a great extent by addressing as many potential risks as possible.

- Ensure that all known risks are addressed in the contract with a clear and balanced allocation of risks between the parties
- Ensure that clear consequences are defined for the identified risks (e.g. What would happen if a contractor identified a discrepancy in an employer's design? Would the contractor be liable to propose solutions or should he wait for a resolution, and what happens if he doesn't meet the agreed obligation?)

There are a number of major risks in the Middle East that should be dealt with in new construction contracts given their frequency and impact. These include agreeing on the delay analysis method in extension of time claims, the criteria of demonstrating concurrency and its consequences, and the measurement techniques of prolongation, disruption and acceleration. These, among others, could be potentially controlled, if reasonably and clearly addressed at the contract drafting stage, reducing the probability of disputes.

### Secondly: Poor contract administration and claims management

A review of construction claims in the region suggests that the majority of claims are poorly substantiated and prepared due to poor internal contract and claims management. The matter here is not necessarily related to poorly drafted contracts; in fact, the contracts could still be well drafted but not well administered. Poor contract administration and claims management occurs due to several reasons, including insufficient resources, lack of associated experience, and budget constraints, all of which could impact the main elements of a successful claim, such as the availability, quality and management of records. Instances where contractors report

sudden significant losses near to the completion of a project are becoming more common, whereas the causes of loss are sometimes not fully comprehended by the senior management. These can be largely attributable to a lack of records to substantiate claims, misreporting, poor contract administration, poor cost management, etc. They can also be attributable to unrecognized revenues, pertaining to missing entitlements under the contract, which can potentially lead to time and/or cost compensations. The lack of proper claims management can affect the perspective of what is a win and what is a loss, by actually not realizing contractual entitlements and therefore not claiming them.

When it comes to settlement of claims and disputes, it is likely in the region that, due to poor claims management, claims and disputes are settled through amicable negotiations based on a percentage of the total submitted value of claims. The level of analysis and method of applying these discounts are usually shallow and based on subjective views. This mainly occurs when a submitted claim is a "global claim", meaning that it does not include a cause and effect analysis and therefore there is no certainty over whether the identified heads of claim have actually led to the alleged impacts or not. Whilst business relationships can be an effective factor in claims negotiation, knowledge of the full and complete extent of entitlements through applying sound methods of quantification can be an effective tool when it comes to recoverability of claim values.

### **Thirdly: Opportunistic behavior**

Opportunism is the act of one party taking an unfair advantage over another as an opportunity presents itself. An Sound contracts are designed to make clear perspectives on risk allocation between the parties, and experienced specialists are able to properly administer contracts and deal with contractual matters as they arise, and therefore, the probability of opportunism occurrence should be diminished.

opportunistic party can actually harm the other by unfairly transferring a risk to another to secure additional profit. Opportunistic behavior in the Middle East can occur in many forms and due to various factors, such as language barriers, communication skills, lack of experience between the parties and lack of proper contractual understanding. These factors usually appear in the early stages of dispute resolution prior to any official resolution methods such as arbitration and litigation. An example of this can be seen where a negotiator uses complex terms to overwhelm others and win arguments unrightfully in a settlement meeting. Another example can be where an employer uses their power, as the project sponsor, to benefit from a contractor with poor contractual knowledge, or vice versa, where a contractor submits a claim with unrealistic contractual risk events and unsubstantiated costs in order to take advantage of an uninformed employer.

This opportunistic behavior can be linked to poorly drafted contracts as well as weak contracts and claims management practices, since opportunities could arise from contractual flaws and procedural non-compliances, as well as lack of contractual knowledge. Sound contracts are designed to make clear perspectives on risk allocation between the parties, and experienced specialists are able to properly administer contracts and deal with contractual matters as they arise, and therefore, the probability of opportunism occurrence should be diminished.

#### Conclusion

In summary, the simple solution for reducing the probability of projects falling into dispute is to ensure that sound contracts are in place from the very start, a contracts and claims management strategy is set at the early stage of a project, and qualified/experienced specialists and consultants are appointed to administer the contract.

These measures can reduce the impact of claims and disputes, and lead to benefits, such as:

- Maintaining the planned financial position of the stakeholders and avoiding surprises at the end of projects
- Enabling claims to be dealt with as they arise, allowing more certainty over the impact, following good industry practice
- Allowing mitigation by the time a risk event arises, rather than dealing with its impact at the end of a project
- Maintaining good relationships between the stakeholders and avoiding opportunistic behaviors.

by **Amr Ibrahim**, Manager, Real Estate & Construction, Deloitte Middle East

### The evolution of construction

How building information modeling and lean management are transforming the industry





There is no secret as to the challenges that face the construction industry and specifically the delivery of capital projects. As the dozens of reports on the sector's productivity suggest; capital projects take too long, cost too much and often fail to fully meet the requirements of the customer.

However, construction is on the brink of a transformation which will provide benefits to industry stakeholders and society alike. If fully embraced, two new methods of working can deliver the sustainable productivity the global economy needs in order to address rapid urbanization and scarcity of resources.

The first is the digitization of assets through Building Information Modeling (BIM). In short, BIM is the collaborative production of a 3D representation of an asset (containing geometric and nongeometric data) that is used to manage this asset throughout its lifecycle. The second is the application of lean management principles to construction. The principles originated from the automobile manufacturing industry and focus, among other things, on 'just in time' production, reducing waste and the use of stable and standardized processes that are continuously improved. One example of how this is manifesting itself in construction is the use of modern construction techniques, such as 3D printing and modular, prefabricated building products.

Both methods will provide a much needed increase in construction productivity as well as cost and time certainty that the construction industry needs in order to retain stakeholder confidence and meet the needs of society. They represent a paradigm shift from the view that construction should provide 'more for less', to 'much, much more for the same'.

### **Examples of early adoption**

Recent local and international examples demonstrate the direction in which the construction industry is traveling. For example, the Dubai Government's 3D printing strategy has an objective that 25% of every new building in the Emirate should be 3D printed by 2025. The strategy aims to "reduce labor by 70%, reduce cost by 90% and reduce time by 80%" across the construction, medical and consumer product sectors.

As the dozens of reports on the sector's productivity suggest; capital projects take too long, cost too much and often fail to fully meet the requirements of the customer.

This commitment is being backed up by action. The Dubai Future Foundation's offices, opened in 2016, were 3D printed and assembled on site in less than three weeks. The structure cost \$140,000 in labor, plant and materials costs, which is estimated to be half the cost of a comparable structure built using traditional construction methods. The Road and Transport Authority and the Dubai Electricity and Water Authority have also both made commitments to developing and implementing 3D printing in their businesses.

In addition, across the GCC, governments are starting to emphasize and incentivize the use of modular, pre-fabricated building products in order to boost the construction sector and deliver affordable housing to their citizens.

Further afield, in the Netherlands, the world's first 3D printed bridge was opened to the public in October of 2017. The bridge spans eight meters and was made with 800 layers of reinforced, prestressed concrete by printing machinery that only deposits concrete where it is needed. The contractor commented that 3D printing the structure produced far less waste than traditional concrete casting methods.

With regard to BIM, the Dubai Municipality mandated its use on all governmental projects in 2015, preempting the UK Government's mandate in 2016. Take-up in the region is beginning to accelerate, with early adopters noting positive client feedback and huge improvements in the way it accelerates and improves the design process. Clients can now visualize and understand the asset, in a way that was not possible in the past. There are numerous examples of projects that have adopted BIM in the region, most notably the award-winning Etihad Museum in Dubai

### Delivering better value and efficiency for all stakeholders

One of the core principles of BIM and collaborative design is that it shifts the greatest effort level to earlier in the project lifecycle. Designers, contractors, owners and operators are all involved during the concept (or 'scheme') design stage by reviewing and optimizing a 3D model of an asset before it is built. As the design is finalized, its architectural, structural, mechanical and electrical elements are integrated, reducing the need for costly changes on-site in the construction phase.

Based on this collaborative approach, some of the benefits BIM can provide to clients and contractors are as follows:

• Ensures design integration is completed before work begins on-site and

facilitates communication between the client, end user, and supply chain.

- Provides fixed and indisputable construction materials data – allowing quantity surveyors to perform 'take-offs' (for tendering purposes) with far greater clarity than the current drawing-based methods.
- Facilitates time-related construction planning and site management by combining the project schedule with the 3D model (4D BIM).

The traditional construction methods and processes are well established with the vast majority of production taking place on-site using a variety of skilled and unskilled trade labor, a flexible but time-consuming process delivered at low margins.

The design fixity and certainty, as delivered through collaborative BIM design and the adoption of lean management principles, can subsequently enable more efficient methods of construction, such as new materials (e.g. modular, 3D printed products) to be utilized on projects. This brings the construction process closer to manufacturing and will ensure a higher quality output for clients with less waste.

New methods of construction include advanced automation (3D printing and robotics) and modular construction (panels and volumetric components for repeatable areas such as kitchens.)

Adopting lean management principles and new methods of construction has been shown to:

- Achieve a higher quality of output components are manufactured in a factory, then assembled efficiently on site;
- Require less on-site labor and greatly reduce construction duration bringing financial benefits to clients; and,
- · Provide standardized and repeatable

The barriers to the evolution of construction are, by and large, not technological. They are more linked to a behavioral resistance to change that has long been prevalent in the industry.

building components, thus reducing waste and enabling processes to be continuously improved.

### **Barriers to implementation**

The barriers to the evolution of construction are, by and large, not technological. They are more linked to a behavioral resistance to change that has long been prevalent in the industry.

This typically comprises a reluctance to let go of traditional methods of construction and fear of the unknown ("better the devil you know..."), skills-gaps in both technology and lean management principles and processes, and an entrenched 'lowest price wins' construction business model.

Specifically in regard to BIM adoption, awareness of the benefits and a common understanding of what BIM is (i.e. a tool to construct, operate, maintain and manage the asset throughout its life) are key challenges. The main challenge currently experienced by suppliers is a lack of informed clients who typically request that a project "be delivered in BIM" rather than setting out what their asset information requirements are.

#### **Conclusion**

The current established practice of awarding architectural, structural, mechanical and electrical packages based on an un-coordinated, paper-based, outline design is unsound.

It leads to more expensive projects as un-coordinated design and gaps in scope rear their head later in the construction phase of projects. Traditional methods of construction, while providing flexibility, consistently lead to increased costs without a corresponding improvement in quality.

The adoption of BIM and lean management principles are just two ways the construction industry is moving forward and delivering projects more efficiently. Further investment in skills and research and rewiring contracts to accommodate collaborative working, will further support the proliferation of new methods and technology.

Early adopters, be they client organizations or the supply chain, who embrace and invest in these areas, are likely to reap rewards in the future by delivering more work with greater value, certainty and profitability.

by **Matt Hanson**, Assistant Director, Real Estate & Construction, Deloitte Middle East

# Interview with Bishoy Azmy, CEO and Executive Director at Al Shafar General Contracting (ASGC)













The UAE-headquartered construction company Al Shafar General Contracting (ASGC) was named 'Contractor of the Year' at the Construction Week Awards 2017. With more than 16,000 staff and an annual turnover of approximately \$1bn, the group has maintained its leading market position through the quality of its operations, an extensive service offering, sound client relationships and by demonstrating best practices. We asked Bishoy Azmy, CEO and Executive Director, to share his thoughts on the company's strategic plans and the future of the construction industry, generally.

## ASGC has been named 'Contractor of the Year' at the Construction Week Awards 2017. How do you think ASGC distinguished itself from the competition and how have you managed to develop to being a prominent home grown contractor that now competes with international contractors?

By focusing on our clients – how we can serve them better in all respects. We try and put ourselves in our clients' shoes and imagine what is important to them rather than be focused on what is important to us. By doing that we generally succeed in having their satisfaction and appreciation even if we slip in some area which is not so crucial to them.

## You delivered a number of prestigious projects in 2017. Are there any projects which you are particularly proud of, or which you feel were a new challenge for ASGC in terms of capability?

Delivering the country's national museum celebrating the formation of the UAE, the Etihad Museum, is something we are very proud of. Also Citywalk has turned out to be the new destination for the city's trendy pedestrians.

### Your main focus market is the UAE. Do you have plans to expand your services across the region?

We have a small set-up in Egypt which we are looking to grow, and are currently looking at some specific countries in Africa.

Big data is becoming relevant in construction. There are millions of data points or facts around us which we can collect easily. If we analyze those, we can make better inferences about our decisions and this affects our future behavior.

### What is the strategic direction you have set for ASGC for the next five years?

- Organic growth
- Targeting even more complex, special, challenging projects
- Entering the infrastructure space
- Expanding into Africa
- Evolving use of technology

### How is the group developing in terms of systems, procedures and technology adoption? Does your internal supply chain still give you an advantage in terms of delivery as a main contractor?

We are adopting a lot of new initiatives using technology. This is already starting to bear fruit. We have a chief information officer (CIO), who, along with the IT team and the various stakeholders across the

organization, is implementing changes in how we operate in almost every aspect of our being. We have more than 30 live projects at this point, and we use the technology offerings of some of the best companies out there, including Oracle, Microsoft and IBM.

Big data is becoming relevant in construction. There are millions of data points or facts around us which we can collect easily. If we analyze those, we can make better inferences about our decisions and this affects our future behavior. Different software now assist the construction process, ranging from estimation programs and e-procurement to labor tracking and asset IOT connectivity.

## Dubai aims to 3D print 25 percent of its buildings by 2030. What do you think are the limitations posed by 3D printing construction and how should this technology evolve? What innovation initiatives is ASGC using or developing for the future of construction?

3D printing is certainly going to be become relevant to the future of buildings, globally and in Dubai. But currently the lack of codes and proper research on its safety and strength for mainstream construction is curtailing its entry into mainstream construction use.

### The construction industry is making steps towards sustainability and green building. Have you implemented any sustainable practices?

Yes, we have. From the selection of materials, to the usage of resources, to the handling of waste. We have been ISO 14001 certified for almost a decade but that is only the beginning of this important journey.

The GCC needs more infrastructure and social infrastructure to replace older networks, enable newer more efficient human and business connectivity, and to cater to a growing and increasing young population.

What is your assessment of the construction industry in the GCC, and what are the sectors that you think offer the greatest opportunity for contractors in the short term and will continue to attract investment?

The GCC needs more infrastructure and social infrastructure to replace older networks, enable newer more efficient human and business connectivity, and to cater to a growing and increasing young population.

### How would you characterize the current market situation for contractors – opportunities and threats?

There are certainly both.

The growing young population and the direction of the governments to remain at the forefront of business and urban relevance and their drive to diversify their economies means there is plenty of work to be done in various fields of construction.

The never relenting emphasis on competitive pricing is leading to contractors succumbing to take on projects with either very little or no margin, which ultimately does not bode well for the industry because these companies eventually fold, such as some

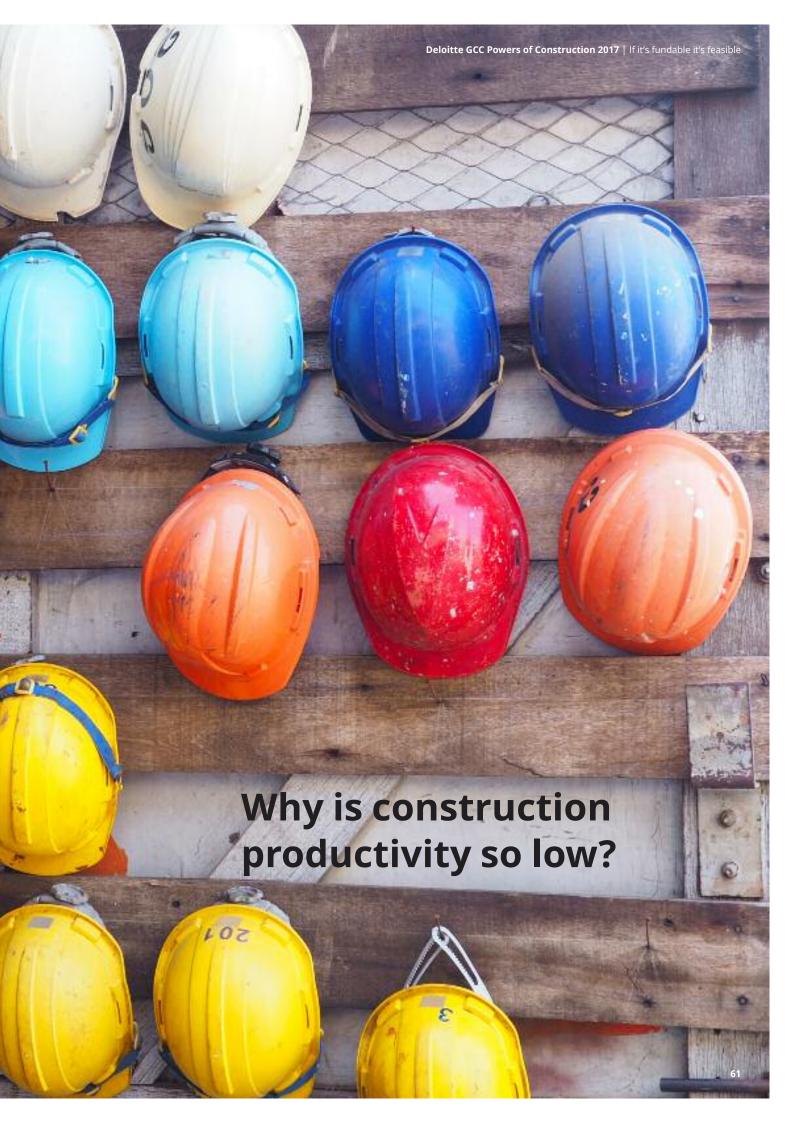
international contractors we have heard about recently as well as local listed ones in the region.

Given the liquidity concerns in the market and the continuing focus on a large pipeline of developments in the GCC, how do you see the opportunities around Public-Private Partnerships (PPPs) developing to provide the much needed funding required?

I think this model will become more relevant and more common in this region over the coming few years. Primarily this is a vehicle governments resort to for two reasons – it allows them to tap into private funding sources and embark on infrastructure expansion beyond their current capital budgeting limitations and it shifts the onus of successful design, construction, operation and maintenance to private sector players with skin in the game which may mean higher efficiencies.

**Bishoy Azmy**, CEO and Executive Director of ASGC





It is important to observe that construction productivity is low not only in Dubai or the region, but rather that it is a global problem. With the construction industry employing 7 percent of the world's labor force and construction activity representing up to 13 percent of the global Gross Domestic Product (GDP), the size and importance of the problem makes it, at the same time, equally compelling and, if solved, potentially rewarding.

The Department of Economic Development in Dubai recently published "The Economic Report 2017 for Dubai". Following the report's approval by His Highness Sheikh Hamdan Bin Mohammed, Crown Prince of Dubai, newspapers gave their front pages to the story "Innovation and High Productivity are the Focus". From analysis of the data related to the productivity of the construction sector, locally and globally, we find that in the past few years the growth rate of labor productivity in the construction sector has been negative. In one sense, this says that the growth in the value of the output is less than the growth in cost and/or efficiency of the construction labor force. This does not say that the total (labor, material and capital) productivity in construction is negative, yet, since construction is a labor-intensive industry, the effect of labor productivity is significant. It is important to observe that construction productivity is low not only in Dubai or the region, but rather that it is a global problem. With the construction industry employing 7 percent of the world's labor force and construction activity representing up to 13 percent of the global gross domestic product (GDP), the size and importance of the problem makes it, at the same time, equally compelling and, if solved, potentially rewarding.

Needless to say that productivity, either of labor or as a total, has grown at a faster rate in other sectors. The question is: "Why is construction productivity low and not growing as fast as other industries?" The obvious answer is that the development rate of the construction sector is much slower than other sectors. So why is this? The answer lies in some of the sector's current characteristics, which could be addressed. For example:

- 1. Labor-intensive: construction has yet to utilize more mechanization, automation and use of smart/intelligent systems. Improvement could be two-fold; reducing labor intensity and improving the productivity of the remaining labor force. This will require a deep review of the execution processes, material handling, automation, methods and production/construction techniques.
- 2. Physical: the more physical the nature of an industry, the lower the productivity is, and, simultaneously, the more the opportunities for improving productivity through incorporating e (electronic), virtualization (e.g. models), applications (IT, Smart, BIM) and creating value virtually. Apparently, this cannot be the case in all aspects of construction, however, there are many examples where this concept applies. For example, when hard disk drives (HDD) in computers became solid state drives (SDD), a big jump in efficiency and speed, and reduction in size, temperature and noise resulted.
- **3. Sequence-dependent:** construction is a highly sequence-dependent industry. As such, delay at any stage could propagate to affect the rest of the activities. Again, labor costs money whether it is active or not.
- **4. Inflexible:** a study of many aspects of the construction industry will reveal that, relatively speaking, little change has taken place over the years in:
  - a. Contracts
  - b. Materials
  - c. Methods
  - d. Requirements
  - e. Standardization (vs. customization)

- f. Skills and competencies
- g. And many other construction aspects

In total, the rate of change in these aspects is not helping in improving productivity.

- 5. Data, information and knowledge: the accuracy of data, information and knowledge applied and necessary in construction has not improved, unfortunately, as much as desired. Incorrect information, lack (or late availability) of important data, and uncertainty still result in significant variations, delays and cost.
- 6. A man's world: other industries have benefited from the inclusion of women in management and supervision. The edge of women's competencies in planning, multitasking and follow up, as well as other advantages has led to improvements in productivity in other industries. This has yet to happen for construction.
- **7. Standardization:** construction. almost globally, is customized. Each project differs from the other. While some components are standardized, the majority are not; foundations, structure, and concrete work are highly project-specific, and consequently not standardized, resulting in lost opportunities for improving productivity. Elsewhere, in the manufacturing industry, a major productivity improvement was gained by standardizing production processes, standardizing products, using special purpose machines, ensuring repeatability and interchangeability. In construction, this is an open opportunity for improvement.

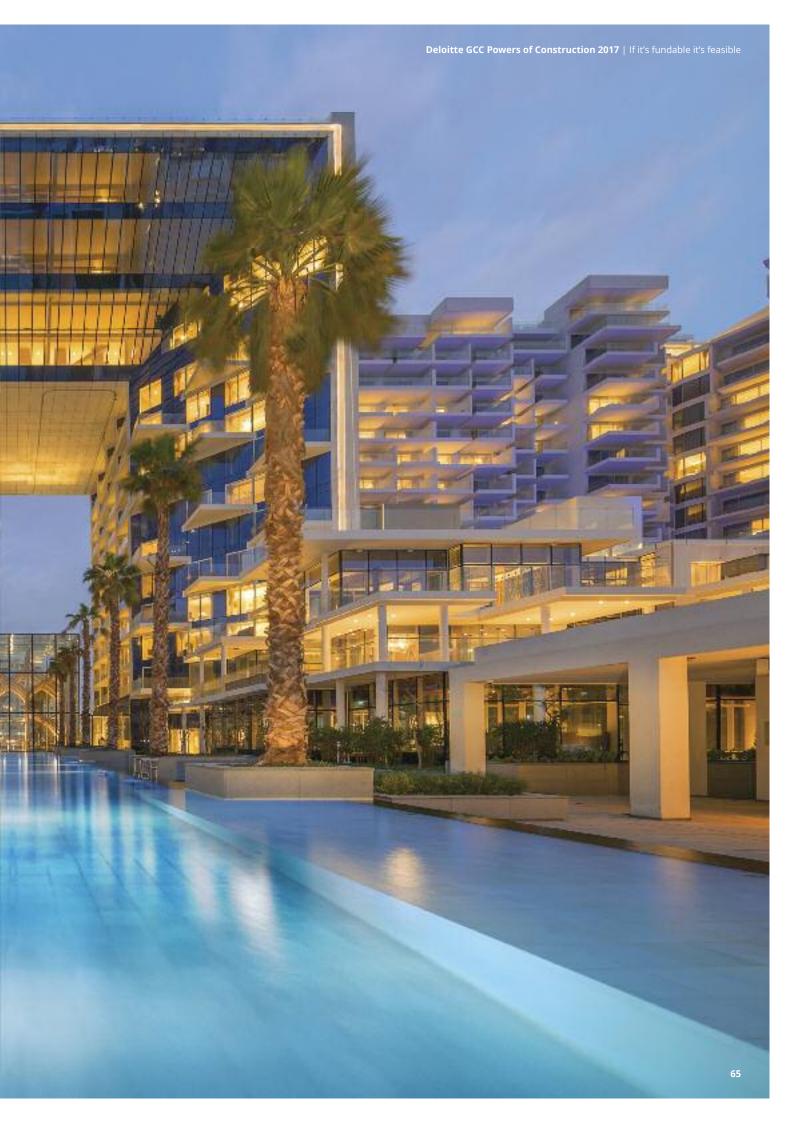
Many functions are lacking or are at an inadequate level in construction, especially in contractor organizations. Some of the important ones are research and development, innovation, knowledge management, systems engineering, industrial engineering, engineering management and others.

- 8. Integration of IT: other industries have integrated modern IT in all its aspects more than the construction industry has done. Compare for example, a modern manufacturing facility with CAM (computer aided manufacturing) robots, AGVS (automated guided vehicle system), AS/RS (automated storage retrieval systems) to a construction site with zero or very little automation.
- 9. Modern technology: yes, there have been some developments in construction, however, much more is possible and desired. For example, material handling on site, internet of things (IOT), design/construction integration (just like CAD/CAM integration) automation and others. Many functions are lacking or are at an inadequate level in construction, especially in contractor organizations. Some of the important ones are research and development, innovation, knowledge management, systems engineering, industrial engineering, engineering management and others.
- 10. Project organization: classically, work can be organized around a project, a product or a process. It is well known that project organization is the least productive of the three types of organization. The question is can construction projects benefit from product or process organization, i.e., can we embed organization for process, product or a combination of the same into a construction project? The answer is definitely, yes.

In conclusion, there are other characteristics that affect the productivity of construction, however, these characteristics together predict that improving construction productivity is possible and attainable, rewarding and not risky. The opportunity is big. Some estimates for the gains from productivity improvement worldwide for the construction industry are in the order of trillions of dollars, equivalent to the sum of GDP for many countries in the region: is this rewarding enough to strive for?

by **Dr. Zain Tahboub**, Chief Advisor at Dubai Aviation Engineering Projects





Construction, as one of the world's oldest traditional industries, is not generally known for being the most advanced when it comes to adopting new technologies. The fragmented nature of the industry has made any efforts to roll out innovative solutions much more difficult and time-consuming. In an ecosystem of numerous small subcontractors operating at varying levels of maturity, embracing technology and building new capabilities at scale seems almost naïve if not entirely impractical. The Middle East, as elsewhere, is no exception to this.

However, there is also a strong incentive for market participants to embrace technological advances, especially in light of mounting issues currently contributing to stagnating the industry, including large project overruns, declining productivity, as well as low and volatile financial returns for contractors. As per the World Economic Forum article 'What's the future of the construction industry?', the upside is too attractive to overlook: "Wherever the new technologies have properly permeated this fragmented industry,"

Automation in construction is made possible by advances in digitalization, disruptive technologies and building techniques, such as the emergence of building information modeling (BIM), 3D printing, AI, advanced building materials, and their respective application along the whole construction project life cycle.

the outlook is an almost 20 percent reduction in total life-cycle costs of a project, as well as substantial improvements in completion time, quality, and safety."

As a fully-owned subsidiary of the world's largest construction and real estate conglomerate in terms of revenue, CSCEC ME has the full support of its government-owned parent – the CSCEC Group – both in terms of technological expertise sharing and financial backing. Over the years the company has built comprehensive capabilities through its experience in undertaking building works as well as civil and infrastructure facilities construction in the region. It is no stranger to technology adoption in the Middle East market, having pioneered many technological advances here, including undertaking the task of putting together the world's first fully functional 3D printed office in Dubai, among other areas

With this in mind, we spoke with Mr. YU Tao, President & CEO of CSCEC ME, to hear his thoughts on the role of technology in pushing the boundaries of what is feasible in the industry; the technological advances he considers of relevance to the local market; how his company has been making technology work as an integral part of the business; what challenges remain ahead and what the future holds for market participants.

### What are the trends and technologies that will shape future construction projects?

Speaking of technological advances shaping the future of construction, one key concept that drives such efforts, as in many other industries, is the idea of automation, and the benefits this would bring to the whole industrial value chain, from improving workplace safety, to

## Al (Artificial Intelligence) is another promising direction with the potential to define the future of the industry.

enhancing quality and productivity, to making the industrial process more proficient and sustainable. Automation in construction is made possible by advances in digitalization, disruptive technologies and building techniques, such as the emergence of building information modeling (BIM), 3D printing, AI, advanced building materials, and their respective application along the whole construction project life cycle. Improvements brought by such advances can be seen in many different aspects, from the design stage where implementation of BIM technology helps automate the design conceptualization and review process, to the engineering stage where shop drawing preparation could be digitized, up to the operations stage, where critical records including certification, specification, supplier info, and the warranty are all centralized on BIM, making operations and maintenance (O&M) management much easier to handle.

Besides automation in the engineering process, the more important changes have been brought on by automation during the actual construction phase, either through off-site precast and prefabrication of building components, or onsite through the facilitation of 3D printing technology in the process, which is now a promising area of the industry. Precast and prefabrication could significantly improve efficiency, although at the moment this comes with a high price tag; 3D printing could produce modular building components especially those complex, curved ones that are used in modern buildings, with

consistency and scale challenging to achieve via traditional methods. However, currently the technology is constrained by the grade of printing materials, which lacks strength to be viable for a multistory building without the need for additional steel reinforcement. Thus, new materials need to be developed in order for the technology to be more widely adopted.

Al (Artificial Intelligence) is another promising direction with the potential to define the future of the industry. At the moment, it is still in its infancy, yet there are already automated robots being used in laying bricks, digging, and painting, among other functions. Al can be utilized to improve safety and efficiency on a construction site by having it perform repetitive and dangerous tasks. The same can be applied to assist inexperienced workers in handling complex tasks and to improve consistency in working performance, which can be very helpful in an industry that's experiencing increasing difficulty in sourcing highly skilled workers.

What is the level of technological advancement in the construction industry in this region compared to other markets that you've experienced? And what is CSCEC ME's plan for staying ahead of its peers in this area?

The GCC market in general, and particularly the UAE, is widely considered as one of the most active construction markets in the world, with many large-scale projects underway. In this market one can arguably find most of the

currently available technological advances being introduced, experimented with or adopted, with varying degrees of popularity. This is partially a result of technology inventors and suppliers finding it very attractive to target key stakeholders in this region, be it developers, consultants or contractors. It is also driven by the market dynamic and associated challenges: given the sheer volume of works underway, there is a relative shortage of skilled manpower; the extreme weather conditions during summer further affect manpower productivity. All these factors have contributed to making the market here a frontrunner compared to other regions in terms of technological adoption.

Having said that, being a China-based company, we are part of a construction tradition with thousands of years' history, which has had its share of continuous technological advances over time. Many of the drivers of such advances are very similar to those in the local market here, hence we can easily relate to the development of the industry here and its ever changing dynamic.

Based on our understanding of the local market, we are bringing in new technological practices, in particular those we believe to be the well-tested best practices from China's construction market – one of the largest and most complex in the world; we do so only after having revalidated the optimal implementation of such practices here, and having ensured their consistency with local market requirements and regulations. Such access to deep industry expertise and local know-how is what differentiates us from the competition.

In terms of how we do business, we are actively diversifying our business model from general contracting to financing and investment-driven engineering, procurement and construction (EPC), utilizing our strong capability in bringing in a competitive holistic solution including finance/investments, design and construction services to our clients.

### Has your company adopted innovative approaches over the past years to improve the business?

We are fully committed to innovation as a way to continue our business success, and we look at innovation in a broad spectrum of areas, including an innovative approach around how we do business, and in terms of how we leverage cutting edge technologies to improve our business. In this regard, we have the full support of our parent company with its strong research and development (R&D) capabilities and proprietary techniques.

In terms of how we do business, we are actively diversifying our business model from general contracting to financing and investment-driven engineering, procurement and construction (EPC), utilizing our strong capability in bringing in a competitive holistic solution including finance/investments, design and construction services to our clients. To help our clients capitalize on the increasing demand for development opportunities in the region, CSCEC ME can properly assist them in getting the much needed funds to ensure project success. We were successfully awarded the Five Palm Jumeirah Dubai Hotel Project and Five Jumeirah Village Dubai Project by adopting such an approach. It was a major breakthrough for CSCEC ME to diversify our business from general contracting to an alternative business model.

In addition, since we first came to the local market in 2003, CSCEC ME has always been introducing unique solutions for the construction challenges facing our industry. We always believe in the value of technology in construction, and have been pioneering a number of technological adoptions to improve

business efficiency. For example, we foresaw the importance of BIM in construction at a very early stage, and started implementing BIM in our projects even without it being a specific requirement from the client.

We also were the main contractor to manage and complete the world's first fully functional office using 3D printing technology in the Middle East - the "Office of the Future" for Dubai Future Foundation. Despite all the challenges associated with such projects as a prototype, we strongly believed in how such technology could change the construction industry, and hence we decided to take the risk. We were heavily involved, not only in terms of project management but also through investments in research and technology development through our in-house research and development center in China, of which we brought a local branch to the Middle East for the project. As an ongoing effort around this leading technology, we are currently in the process of setting up the first local laboratory for 3D cement printing research in the Middle East.

In addition to pioneering the 3D printing initiative, at CSCEC we are also highly experienced in constructing megastructures such as super-high-rise buildings, with a number of innovations under our belt. We have built more than 90 percent of super-high-rise buildings in China (buildings higher than 300 meters), and 50 percent of super-high-rises in the world (buildings higher than 500 meters). We pride ourselves on having a comprehensive offering in this regard, including the relevant expertise and experience, the complete team, the latest technology and the right equipment.

In building such megastructures, CSCEC Group has developed a range of innovative construction technology and solutions to make the construction process more efficient, which includes an integrated smart platform, a crane slewing system, a circular elevator for vertical transportation, ultra-high concrete pumping, and a magnetic safety escape device, among others.

The integrated smart platform is a holistic solution, considered an industry-leading innovation dedicated to super-high-rise construction projects. It functions as a moving megastructure manufacturing powerhouse, with construction equipment such as tower cranes, a construction elevator, concrete spreader and work station, steel structure and other facilities such as formworks, a material storage yard, equipment warehouse, temporary water tank, labor welfare area, and lavatories all installed on-site; in addition, the platform is fully equipped with a smart alert system, offering live monitoring of stress levels, wind, temperature, and surface evenness etc., to ensure safety. The platform is designed to allow working on four floors simultaneously, and can bear thousands of tons of load while resisting windstorms amid a severe tropical cyclone at Beaufort wind force level 14, i.e. at 86-89 knots, which is stronger than a hurricane (Beaufort wind force level 12). Adoption of the platform has proven to significantly improve efficiency and reduce waste in super-high-rise projects, as evidenced in the recent six cases where it was adopted for building towers above 400 meters, for which the construction duration was shortened by three to six months on average.

A crane slewing system is a 20m-high structure designed as an X-shaped spatial truss, which usually gets installed

## Efficiency will be achieved through the dual effort of improving productivity while reducing abortive works. That is mainly what technology has to offer.

on top of the integrated platform for super-high-rise projects. It can host multiple cranes of different scale and swiftly rotate 360 degrees around the center of the system to allow full coverage of the high rise under construction, as well as utilizing each crane's capacity for varying types of installation tasks.

To address the logistic challenge of transportation up and down super-highrise construction sites, CSCEC came up with the circular elevator for vertical transportation, which can remarkably increase the transporting capacity of a construction site elevator and reduce operation space. CSCEC was the first in the world to use this system, which runs several lift cages circularly on a single track, so that one circular elevator can be as effective as several traditional elevators.

CSCEC has also mastered ultra-high concrete pumping in the case of superhigh-rise construction, which won us a Guinness World Record in 2015 for concrete pump delivery up the Tianjin 117 Tower at 621 meters, with a concrete grade of C60. As a recent example of CSCEC's continuing efforts around innovation and improvements in workplace safety, the company's R&D team successfully tested the magnetic slow down safety escape device, which weighs 10kg and allows the safe evacuation of workers in cases of high-rise emergencies at a speed of 1.5

meters per second (90 meters in one minute.) The device is now being further refined and tested for use on construction sites.

As one of the world's leading construction companies, we are committed to spending a lot of resources and funds on R&D of new technologies. Five years ago our headquarters set up a separate fund to study super-high-rises of above 1,000 meters. This year we are in the running to build these kind of buildings. Every year we start new projects and go from strength to strength, for which R&D is a critical driving force. China is developing rapidly today in terms of new technology developments and applications, and we benefit a lot from having access to such a pool of resources. For example, we use BIM technology and our company is spending lots of money on refining it and implementing it throughout our business, to ensure we make it work for us to stay ahead of the competition. Our company is also currently building the world's longest bridge over water, a 55 km-long, Y-shaped span linking the three cities of Hong Kong, Zhuhai and Macao, for which we overcame one of the most complex challenges ever to confront engineers, and incorporated the latest engineering technology and design, to build a structure capable of withstanding an earthquake, typhoon and potential strike by cargo vessel.

With 3D printing technology, only one copy needs to be produced – thereby minimizing and eliminating most construction waste. Moreover, the technology allows the use of local available materials, hence requiring less transportation to get the work done, and thus making it greener to execute.

### The industry is calling for more efficient ways to complete construction projects. How can new technology such as 3D printing contribute to this, if at all?

Efficiency will be achieved through the dual effort of improving productivity while reducing abortive works. That is mainly what technology has to offer. By leveraging advances in the digital space, strict control of the construction process can be achieved. Computerized systems leave little room for compromises in quality, or for time delays which directly impact productivity.

Therefore, utilizing BIM in different stages of design and coordination will ensure the early detection of clashes and accordingly reduce the time costs related to delays or abortive works. As a result, efficiency of the construction process will be improved. This also goes for 3D printing. When we reduce human error in the process and minimize several elements of false works, the overall efficiency can be improved. Such are the ways that technology can add significant value.

### The world's first 3D printed office building opened in Dubai last year, which your company helped put together. What advantages does this technology offer versus traditional construction methods, and how is it relevant to the industry?

The 3D printing application in construction has several aspects of added value to construction activities. The very first aspect is the improvement in the safety of workers. Taking certain elements of dangerous and risky activities traditionally carried out by laborers and replacing them with machine and 3D-printed prototypes will no doubt make the built environment safer for workers. The second aspect is

the improvements in quality, as reducing the human interference will, by default, automatically reduce the associated human error, and ensure consistency in the quality of construction output. The third aspect is the contribution to environmental preservation and sustainability. With 3D printing technology, only one copy needs to be produced - thereby minimizing and eliminating most construction waste. Moreover, the technology allows the use of local available materials, hence requiring less transportation to get the work done, and thus making it greener to execute. Last but not least, it also opens new areas for designers to experiment. 3D technology is removing the limitations of the need for repetition associated with the precast and conventional construction due to molding and reuse, therefore one can make every piece a unique one.

Regarding the cost factor, any new technology will be more expensive than conventional technology. This is simply due to the limited number of suppliers and the risks associated with initial testing to eliminate misapplication. However, once the technology has proven itself through on-site application, its cost will gradually drop to the breakeven point with conventional methods. At that time the advantages gained from using the new technology will gradually become known and will eventually result in the complete displacement of conventional methods. This is a common trend and is what we believe will happen with 3D printing technology as well.

What are the limitations and challenges posed by 3D printing construction, and how do you see this technology evolving for the improvement of the whole industry? The current limitations for 3D printing

technology applications in the local construction market can be listed as follows:

- The availability and use of higher strength 'inks' (currently in the equivalent strength of C20 to C30) require more research on material development. This is exactly what we are currently doing in our in-house R&D center.
- Further tests for fire resistance, durability and the long-term behavior of the material. This would require further testing and involvement of reliable testing agents, so that new testing methodologies can be developed to better anticipate the long-term performance of the material.
- Additional tests for raised health concerns over fiberglass, which is used in the 'ink mix' to prevent shrinkage cracks. This also requires specialists from the field of health and safety to investigate the impact and provide an assessment to confirm if those concerns are actually warranted. If so, are further mitigation measures required or are they unfeasible and can be dispensed with?
- Improvement of the printing head and speed to create thinner layers (currently 20mm) with a smoother appearance.
   This is something we are seeing develop gradually, but for the moment it is still not very satisfactory.
- Attaining international code/standards recognition and building authorities' approvals, which I believe is currently being worked on by the authorities. We will be waiting for their official release.
- The preparation of design guidance for general use in the construction industry.
   This is crucial in order to get the best out of the technology, as the architectural and structural designs need to consider the utilization of the technology during their early stages.
   Accordingly, custom-made designs can

be produced which maximize the value of the technology.

Dubai aims to become the global center of 3D printing and print 25 percent of its buildings by 2030. In a city of high-rise buildings it is difficult to see how this technology will satisfy demand. What are your views on this?

The application of 3D printing technology has several forms, but unfortunately the common perception of this application is only limited to structural printing. In fact, 3D printing technology is currently applied in 3D printed buildings more as a method of concrete construction without the need for formwork, and it could have a broad range of applications in the form of architecture, ID works, landscaping, fixed or moveable furniture, etc., i.e. creating specialized components for the built environment, which tend to be difficult to fabricate via other means.

All these applications add up to 25 percent of the building works. Setting such a target and formalizing it as an aspirational goal could act as a catalyst for change, a clear invitation and a strong signal to all market specialists to collaborate and do their part, which without doubt would receive a positive response. The aspiration is a visionary one, and what remains to be done is for key market participants to respond by aligning their internal strategy with the overall vision of the Emirate. Such an alignment should be done based on a real understanding of the objectives behind this target and appreciating how it will be beneficial to everyone in the future.

**Mr. YU Tao**, President and CEO of CSCEC ME





Development and construction companies in the world and in our region are increasingly relying on third parties to run their daily activities and operations and reach their short/long-term goals. Although historically third party relationships occurred as a result of cost reduction measures, third parties have become an integral part of the business network of development and construction companies, as they provide flexibility, insight, increased manpower, enhanced quality, and specialization.

As per a 2016 Deloitte Global extended survey on Third Party Governance and Risk Management (TPGRM) across different industries (Financial Services, Real Estate, Construction, Energy & Resources, Manufacturing and Public Sector, amongst others), "73.9 percent of respondents [from 170 senior members of management from a variety of organizations] said they believe third parties will play a highly important or critical role in the year ahead, up from 60.3 percent the previous year." This goes to show that organizations will increasingly rely on third parties in conducting day-to-day activities/operations. In addition, the survey highlighted that 87% of respondents faced a disruptive incident with third parties in the previous two to three years, 28% of which faced a major disruption and 11% a complete thirdparty failure.

In the Middle East and the GCC, reliance on third parties and related risks has also increased in recent years, with some risks materializing in major disruptions/ complete third-party failures when providing services to development and construction companies. The next question on everyone's mind is: "What are those risks arising from third parties and how can businesses be better prepared to deal with such risks?"

In this article we set forth the emerging third-party risks and also introduce potential detection and mitigation measures.

The ability to audit third parties can also provide opportunities to improve operations and/or identify needs for further risk mitigation plans.

#### **Emerging third party risks**

- Insufficient collaboration and communication with third parties Cross-functional teams not working in tandem, leading to disputes between the collaborating parties.
- Inability/Inadequate audit of third parties

Organizations doing business with third parties sometimes include provisions in the contract that allows the contracting organization to conduct audits. These audits can help ensure that contract requirements are met and that business practices with the third parties do not conflict with the culture of the contracting organization. The ability to audit third parties can also provide

opportunities to improve operations and/or identify needs for further risk mitigation plans. Without this right to audit, there is an increased risk of loss of reputation, fines, litigations and financial losses, business interruption, or cash flow issues.

#### • Inadequate compliance

Contracts between the contracting organizations and their business partners can create risks to both parties. Contracts should be reviewed by appropriate legal experts to ensure that the proper terms and conditions are included.

# Poor labor and human rights considerations

Labor rights and human rights have been some of the hot topics within the real estate and construction sector for the past couple of years – whether it relates to workers' pay, benefits, or safe working conditions. Although the control does not always rest with development and construction companies, they almost always suffer from negative media coverage and reputational risks that might unfold which lead to litigation, fines, suspension of operations and almost always to reputational damage.

## • Unreliable third parties

Failure to select appropriate third party service providers and monitor their activities may result in delays, dependency, and customer dissatisfaction.

# Effective risk management of third parties

Globally, for the above risks and others to be mitigated, organizations are increasingly taking steps to enhance the maturity of their TPGRM programs and are spending more on new technologies to help mitigate third party risks. However, and as per the abovementioned 2016 Deloitte Global extended survey on TPGRM, gaps are not entirely bridged with the introduction of technology, as "94.3 percent of respondents have only low to moderate levels of confidence in the tools and technology used to manage third party risk and 88.6% have a similar level of confidence in the quality of the underlying risk management processes, despite significantly higher levels of confidence in organizational commitment and governance frameworks - creating the execution gap."

Thus, technology and tools to curb third party risks have to be accompanied by other detection and mitigation controls that could span from traditional all the way to innovative.

Amongst the more traditional detection controls is the reliance on an established and strong internal audit function to perform risk-based internal audit reviews that will allow contracting organizations to detect process and excess payment issues. Contract compliance and contract management reviews could also help contracting organizations recover a percentage of the excess unjustified payments, which could be material in some cases.

# Contracts should be reviewed by appropriate legal experts to ensure that the proper terms and conditions are included.

A more innovative detection control increasingly used in development and construction companies, relates to data analytics (DA). With the increasing reliance on technology, data analytics – which is the process of examining data in order to make conclusions and guide a more informed decision-making – is helping organizations control costs at an early stage, which in turn helps management with the early detection of cost overruns and excess payments.

by **Khalil Balaa**, Manager, Risk Advisory, Deloitte Middle East

 "Third party governance and risk management: The threats are real." (2016). Accessed at http://www2.deloitte.com/content/dam/Deloitte/uk/Documents/audi

http://www2.deloitte.com/content/dam/Deloitte/uk/Documents/audi t/deloitte-uk-third-party-gov-risk-management-2016-printable.pdf on May 30, 2016.



Almost all GCC countries have identified the tourism industry, which encompasses the travel/transport, hotel, entertainment, leisure and other sectors, as a key pillar of economic diversification.

The fall in global oil prices has resulted in a tightening of national budgets across the GCC and put pressure on government expenditure, resulting in economic diversification becoming more critical now than ever before. Almost all GCC countries have identified the tourism industry, which encompasses the travel/transport, hotel, entertainment, leisure and other sectors, as a key pillar of economic diversification. Although in different stages of development, a significant amount of investment has been made and is planned in the leisure sector across the respective GCC states to further strengthen their respective positioning and support economic diversification.

Two key segments within the wider tourism sector are the hospitality sector and the leisure sector. Below we highlight the differences and also the interrelationships of investing in both sectors.

#### **Hospitality performance in the GCC**

Performance in the GCC hotel market softened in 2017 compared to 2016 across all key cities. Revenue per available room ("RevPAR") declined by between 0.1% – 17% over the first nine months of the year compared to the same period of the previous year, as shown in Figure 1.

All key cities in the GCC have experienced this decline in performance, with Medina experiencing the lowest decrease in RevPAR of 0.1%.

The region continues to be impacted by global economic headwinds in key source markets, such as the UK and India, in addition to regional geopolitical tensions and foreign currency fluctuations.

Despite the relatively moderate fall in performance, Dubai continues to be one of the best performing hospitality markets globally. Previously positioned as a luxury destination, a reduction in average daily rates is expected as hotel supply evolves to cater to the mid and budget market segments, and as it looks to attract the targeted tourist volume needed to sustain the desired growth.

Hospitality is a key sector in which diversification efforts are generally perceived to have been successful. The sector has a high economic multiplier effect, and while there are significant variances from city to city, the sector is viewed to be less dependent on government spending when compared to other sectors. The leisure and entertainment sector, which is often viewed as supporting tourism "infrastructure", continues to be highly dependent on government spending.

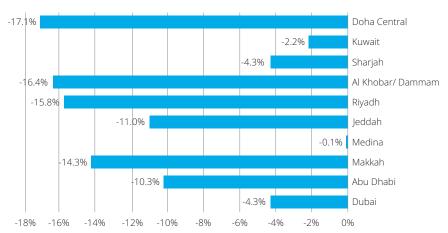


Figure 1. Change in RevPAR: YTD 2016 vs. 2017

Source: STR Global

# Investment in leisure and entertainment in the GCC

In order to support the goal of economic diversification, GCC governments are investing in leisure and entertainment facilities, for both the domestic and international target markets. Key investments include IMG World of Adventure and Dubai Parks & Resorts, which have recently opened in Dubai, the Botanical Gardens in Riyadh, and Al Shaheed Park in Kuwait City. Each country has adopted a different strategy and is at different stages of development, as illustrated in Figure 3. The UAE's emphasis has been on water and theme parks and other integrated destination offerings, while KSA has historically focused on sporting facilities, religious tourism and adventure.

The leisure development pipeline in the GCC is significant, with \$25.4 billion of investment having been announced in leisure parks and \$26.0 billion in sports-related facilities, according to MEED Projects.

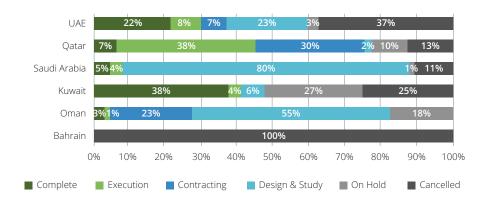
# Leisure investments are a long-term play

While these types of projects are likely to ultimately benefit and support the tourism industry and hotel sector through a strengthened destination offering, they require major capital expenditure and, as such, are unlikely to generate meaningful commercial/investment returns in the short term.

Figure 2. Existing entertainment and leisure facilities in the GCC



Figure 3. Project status of GCC non-sport leisure projects pipeline



The relationship between the hospitality and leisure sectors is both cyclical and symbiotic.
Once a destination and its hotel market have grown beyond infancy, a stage is reached where additional investment in tourism infrastructure is required to grow and enhance demand.

Hotels can generally be expected to reach stabilization in three to five years, while leisure facilities and theme parks, in particular, typically have significantly longer stabilization periods of closer to ten years. While well-conceived and appropriately located hotels are able to generate investment-grade returns, leisure facilities and tourism infrastructure, which serve as a catalyst for tourism and support hotel development, often need to be perceived in a different way.

Due to the high capital investment and relatively fixed operating cost profile, theme parks in the region are not generally as profitable or lucrative as investments in the shorter term.

However, their economic impact extends beyond just the facility and supports the development of the greater tourism offer of a destination. Studies¹ show that the development of theme parks has a measurable impact on the hospitality and broader tourism industry (through increased employment and increased tourist spending), and in some examples has led to longer lengths of stay.

Leisure and entertainment investments must also be reconsidered as long-term place-making investments instead of purely commercial ventures. Economic impact studies are likely to be a better tool of measurement, as opposed to gauging success through the profitability of the facilities on a stand-alone basis.

While leisure and entertainment attractions have the ability to induce demand in certain economic climates (usually in immature markets), they are not able to counter broader global economic trends/realities that affect travel purchasing decisions. Key source markets for the GCC are currently facing

both global and national economic factors. Dubai's top source markets (India, KSA and the UK), are all facing national challenges, such as the recent demonitization in India, the lower oil price and the subsequent reduction in government spending affecting KSA, and Brexit in the UK. Regionally, the removal of subsidies, the downturn in the oil and gas sector, growing inflation, and the introduction of VAT are all likely to lead to lower disposable incomes in the GCC market, and, as such, these economic challenges call for a review of national diversification strategies.

#### A symbiotic relationship

The relationship between the hospitality and leisure sectors is both cyclical and symbiotic. Once a destination and its hotel market have grown beyond infancy, a stage is reached where additional investment in tourism infrastructure is required to grow and enhance demand. The phasing of this infrastructure provision is key, and the 'build it and they will come approach' is generally not effective in this regard.

The lifecycle of destination development typically starts with the initial hospitality development coupled with rudimentary entertainment provision on a small scale. As the hotel market matures, it generates a higher requirement for tourism infrastructure, typically including transport, retail and leisure/entertainment. In order to support the scale of the required tourism infrastructure, the destination will require demand growth across additional market segments. One key trend includes the evolution of the demand profile to lean more heavily towards families, tour groups and their accommodation requirements. Hotel supply thus evolves to meet these market requirements.

The government will continue to serve as key enabler, and leveraging inexpensive but effective strategies, such as tax incentives and visa permissions, will further bolster the sector.

We can see this trend in the Dubai hotel market, which 10 to 15 years ago was primarily positioned as a luxury destination, with attractions, such as Aqua Adventure, Wild Wadi, and Dubai Aquarium, developed later on to support and grow hotel demand. In recent years, we have seen investors targeting more mid-market, family-oriented and budget segments. In order to support and complement this sector, attractions, such as IMG Worlds of Adventure, Dubai Parks and Resorts, and more retail destinations are being planned and delivered. There is, however, a lag between the investment, the opening, and market demand being realized to reach the scale required to support this tourism infrastructure.

#### A balancing act

Thus, the efficient allocation, phasing, and sizing of capital resources are critical to ensure that both investment goals and market needs are met. Balancing the two is challenging, with value engineering, dynamic marketing, and phasing being the primary tools for achieving a balanced and successful destination. The government will continue to serve as key enabler, and leveraging inexpensive but effective strategies, such as tax incentives and visa permissions, will further bolster the sector.

## A shift in perspective and strategy

In conclusion, a perspective shift regarding the investment returns of leisure products is required. While investment grade returns are not always likely, efficient operations are critical to ensure that the fixed cost profile of these facilities is well managed and capital expenditure is well phased to match the likely demand profile/market lag. These investments and facilities are critical for the continued growth and appeal of a destination but must be phased and coordinated with the supporting provision of hospitality products.

by **Robin Williamson**, Partner and Head of Real Estate & Construction, Deloitte Middle East

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