

**Deloitte.**



**11<sup>th</sup> edition**  
**Building a sustainable future**  
Deloitte GCC Powers of  
Construction 2021



# Foreword

Welcome to the 11th edition of the Deloitte GCC Powers of Construction. Now two years into arguably the biggest shakeup humanity has ever experienced, it is a new, post-Covid world we live in, and while the pandemic is still a way away from being totally eradicated, the road to recovery is becoming more attainable.

However new considerations are needed, so that we challenge the way the industry operated before and create a better way to work in collaboration with investors and owners to drive a more balanced way of contracting and delivering a capital asset that is financial viable and sustainable. What is definite is that the new reality we find ourselves in, quite rightly should not be business as usual, otherwise we would have wasted the lessons learnt and the opportunity to address some of the pressing concerns that over time have become the accepted practice in the industry.

Businesses operating in the Middle East having to face several challenges including:

- project delays;
- incomplete designs;
- significant change orders;
- challenging contracts not always drafted in a way to help deal with these changes and delays and ensure that the risk can be fairly distributed in the contract.

All of this compounds and the overall knock-on impact on liquidity and progress and hence often leading to significant budget overruns on iconic capital projects which often were untenable for both the contractor and the owners. It is these sometimes harsh realities that need to be addressed to better balance the delivery, cost and overall return on investment on these capital projects in our region to create a sustainable way of doing business.

As we emerge from lockdowns and other restrictions, and find ourselves in the recovery phase, we are all grappling with adopting new emerging ways of doing business where sustainability finds itself at the forefront of several government agendas and new ESG goals and guidelines are being implemented and legislated at record speed. This change that has been created through questioning the way we work and where we work, coupled with sustainability goals, brings about opportunities for existing and new businesses to create a new normal – creating opportunities for SMEs and emerging growth companies.

For many governments, lenders and institutional investors the impetus is clear – in the not too distant future, only those projects with clear sustainability objectives will be fundable as institutional investors seek out these investment opportunities to align with their own ESG goals.

Sustainability is at the core of this year's publication, creating sustainable business practices and building sustainable capital projects which coincides with the COP26 climate conference held in the UK, where a number of countries have pledged to "Net Zero" and to decarbonize their economies, including Saudi Arabia, the United Arab Emirates and Bahrain. The target time frames presented are between 2050 and 2060, and involve significant investment in infrastructure and capital projects and therefore present opportunities for companies working within these economies.

To attract investments from institutional investors and lenders capital projects will need to be planned with a whole life cost model in place so that the return on investment and the return on ESG goals are clearly articulated and delivered. With these core themes in view this year, the report reviews the current market conditions and current trends based on data and opinions gathered from key industry leaders, as well as

leveraging Deloitte expertise, and includes a series of articles that reflect how the industry as a whole should be moving forward to drive sustainable economic growth, sound business practices and align with net zero carbon goals.

We hope that you find this year's publication of interest and that the information detailed herein provides you with a better understanding of the challenges and opportunities faced by the Construction industry in the coming years.

With its considerable environmental, social and economic impact and potential force for good, by embracing Sustainability at the heart of its processes, the Construction Industry is a very important ally in creating a Sustainable future for all. ●

## **Cynthia Corby**

Partner and Regional Construction Industry Leader, Deloitte Middle East

With its considerable environmental, social and economic impact and potential force for good, by embracing Sustainability at the heart of its processes, the Construction Industry is a very important ally in creating a Sustainable future for all.

# Contents



---

04

The GCC projects market outlook

---

08

Construction Industry Survey: The Chief Executives' view

---

12

COVID-19-related claims within the Middle East construction industry – Calm before the storm?

---

15

Value Added Tax (VAT) Updates in the GCC: What's next after nearly four years of VAT in the region

---

18

Future workplace strategy in the Middle East

---

22

Sustainability within the construction sector

---

25

Can modular manufacturing help the drive to a more sustainable industry?

---

28

Building the cities of the future



---

## 31

Doing the right Projects – how a Portfolio Management approach can ensure the most efficient allocation of an organization’s investment

---

## 34

Construction Tech through a legal lens

---

## 37

All eyes on sustainability

---

## 40

Data driven decision making for the real estate sector

---

## 43

Getting back to basics to move forward – the contract fundamentals driving sustainability

---

## 46

The growth of sustainable cities

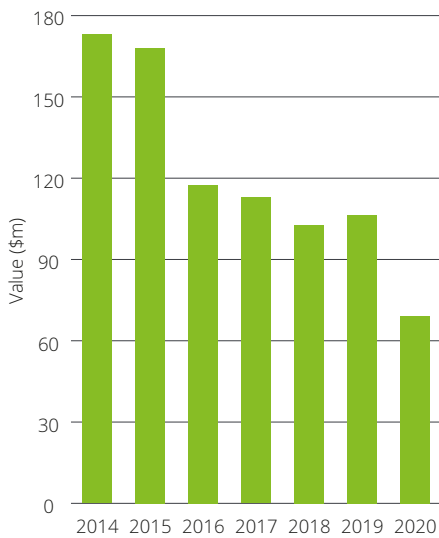
# The GCC projects market outlook



It has been more than 18 months since the pandemic took hold the world over. Over this time, few sectors and industries globally have been left untouched by the economic upheaval and disruption left in Covid's wake.

The GCC projects market has unfortunately been no exception. In 2020 total contract awards dropped 35% to just \$69bn as the coronavirus, falling oil prices and lower government spending precipitated a dramatic slowdown in capital expenditure. As a result, last year was the worst for the market in nearly two decades.

### Value of contracts awarded in the GCC 2014-20 (\$m)



Source: MEED Projects

Yet while the virus' effect on spending levels is undeniable, not every market and sector experienced the same impact. Worst hit were Saudi Arabia and the United Arab Emirates (UAE) where year-on-year contract awards declined 53% and 33% respectively according to the MEED Projects tracking service ([www.meedprojects.com](http://www.meedprojects.com)). However, expenditure in Qatar fell by only 6%, while in Oman and Kuwait award values actually increased on 2019 totals, albeit from a much lower base. Outside the GCC, Iraq and Egypt also registered growth.

Individual sector performance was also uneven. Construction, historically the largest market segment, saw deals fall 29% year-on-year to \$29.7bn, while oil and

### Value of contracts awarded in the GCC 2019-2020 by country (\$m)

Year	Bahrain	Kuwait	Oman	Qatar	Saudi Arabia	UAE
2019	3,042	3,310	5,015	13,693	49,490	31,974
2020	1,726	4,311	5,927	12,868	22,902	21,345

### Value of contracts awarded in the GCC 2019-2020 by sector (\$m)

Year	Chemical	Construction	Gas	Industrial	Oil	Power	Transport	Water
2019	2,087	42,120	11,744	3,390	16,858	5,607	16,802	7,916
2020	512	29,705	2,846	1,906	4,364	6,531	14,888	8,327

Source: MEED Projects

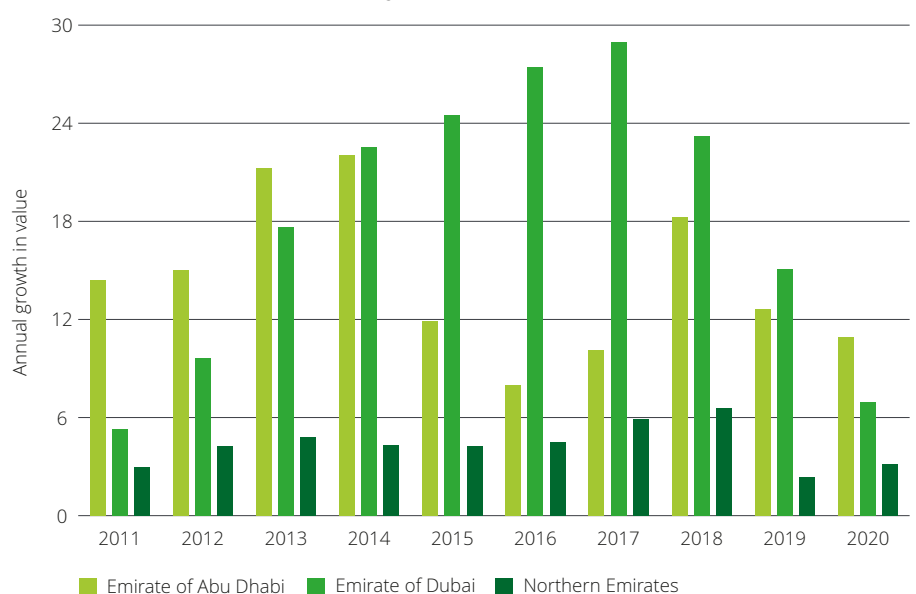
gas had precipitous falls of 74% and 76% respectively. On the other hand, both the power and water sectors grew marginally on their 2019 totals, reflecting the growth over the past half-decade in renewable energy production and water treatment and distribution projects.

The overall decline in spending was compounded by a fall in contracts moving from tender to final award. In 2019, 88% of 667 projects under bid evaluation at the start of the year were awarded within the next 12 months. However, in 2020 only 58% of the 713 under bid projects were awarded over the same timeframe, reflecting the inherent uncertainty caused

by the pandemic and the subsequent need for many clients to reconfigure their schemes.

Covid has not been the only factor behind the market's performance. In Dubai, once the single largest projects hub in the region, the ongoing oversupply of property has been the overriding driver for the decline in its market. While Abu Dhabi and the Northern Emirates have been reasonably stable over the past few years, a lack of new project launches in 2020 resulted in the Dubai market shrinking to just a quarter of its 2017 peak, thereby making Abu Dhabi the largest projects market in the federation for the first time since 2013.

### Value of UAE contracts awarded by emirate, 2011-2020 (\$m)



Source: MEED Projects

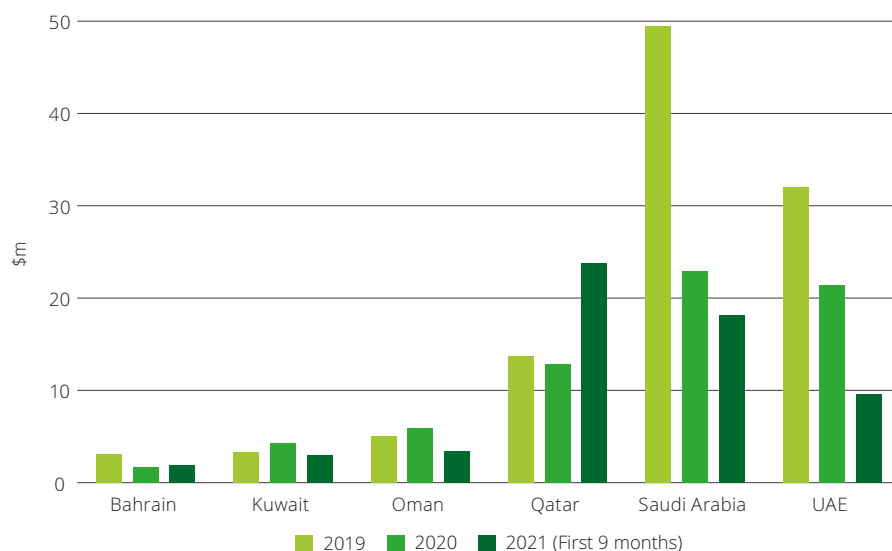
After the 2020 annus horribilis, the market's expectation for this year was high. But while it has performed better, the recovery has arguably not been as quick or as strong than might have been hoped. Contract awards for the first nine months of the year were \$58bn compared with \$69bn for 2020 as a whole. The market is therefore likely to outperform last year but is still going to fall far behind the 2019 number as the region continues to shake off the pandemic's lingering impact.

There have been some bright spots, however. Qatar is likely to outdo 2019 and 2020 combined thanks to some \$15bn of contract awards this year on its massive LNG program. A final push on projects to be completed in time for next year's FIFA World Cup has also helped. Similarly, Kuwait, Bahrain and Oman could well match or even exceed the 2019 and 2020 totals.

The UAE remains the most disappointing market having awarded just \$9.6bn of contracts in the first three quarters of the year. The continuing dearth of new projects in Dubai and ongoing delays in several major oil and gas projects in Abu Dhabi have contributed to the slump. That said, the recent rise in property prices and the successful launch of a handful of notable villa projects suggest that the emirate may have turned the corner. The opening of the 2020 Expo is also likely to provide a boost to its short-term fortunes.

But it is Saudi Arabia where most eyes are currently fixed. The region's largest economy has in recent months begun to ramp up tendering on its Public Investment Fund (PIF) 'gigaprojects' program, particularly on the Neom, Red Sea, Diriyah Gate and Qiddiya developments as it seeks to turn its ambitious tourism and real estate plans into action on the ground. Since June more than a dozen major contract packages have been released on Neom alone as the estimated \$500bn development enters full-scale construction.

### Comparison of GCC 2021 first 9 months contract awards with full-year 2019 and 2020 (\$m)



Source: MEED Projects

This is just the beginning; there are an eye-watering \$720bn worth of projects under the PIF program alone of which only 1% have so far been awarded. It is no surprise therefore that many UAE-based consultants and contractors are increasingly focusing their resources on the kingdom. Although only \$18.2bn of contracts were awarded in Saudi Arabia in the first nine months of 2021, the sheer number of projects out to bid suggests that next year could see a record-breaking total if all goes to schedule.

In total, there are a little over \$173bn worth of projects under tender in the GCC, of which \$80bn are in Saudi Arabia. This indicates a very healthy short-term pipeline as projects where tenders have been issued are typically expected to be awarded in the next six months. This also reflects the large backlog of contracts delayed by the pandemic and suggests the next 12 months could witness a substantial pick-up in activity levels as the market continues its recovery.

Longer term, the outlook is even brighter. There are currently more than \$2.3 trillion of known planned and un-awarded projects in the pipeline in the GCC. Saudi Arabia has the largest share of this at \$1.18 trillion worth of projects. The kingdom is followed by the UAE, with just under \$650bn and then Kuwait, Oman and Qatar each with between \$125bn and \$170bn of future projects.

### Value of contracts in bid (\$m)

Country	Value (\$m)
Bahrain	847
Kuwait	19,553
Oman	11,489
Qatar	29,008
Saudi Arabia	80,086
UAE	32,620

Source: MEED Projects

### Value of known planned and un-awarded projects in the GCC (\$m)

Country	Value (\$m)
Bahrain	38,551
Kuwait	170,229
Oman	125,934
Qatar	138,018
Saudi Arabia	1,186,892
UAE	646,578

Source: MEED Projects



Even if only half of these projects go ahead, this would still compare favorably with the more than \$1.2 trillion worth of contracts awarded in the region over the past decade.

It has been an undeniably difficult period for the regional projects market, but the strong short and long-term pipelines suggest that there is light at the end of the tunnel. Yet while there is still plenty of work for years to come, contractors and the projects supply chain in general cannot afford to stand still. Digitalization of the construction industry is gaining momentum as clients demand greater efficiencies and reduced costs. Emerging construction technologies such as 3D printing, Big Data, digital twinning, robotics and the Internet of Things (IoT) are increasingly being employed on projects and companies that fail to embrace innovation will run the risk of finding themselves side-lined.

Traditional challenges also remain. Fewer opportunities and late payments continue to pose headaches to contractors and their supply chain partners.

The world is a very different place to where it was 18 months ago. The most successful companies going forward will be those that adapt fastest to change while maintaining strong business fundamentals. And if there is one lesson learnt from the pandemic it is that those that fail to change will run the risk of being left by the wayside. ●

by **Ed James**

Director of Content & Analysis at  
MEED Projects

The most successful companies going forward will be those that adapt fastest to change while maintaining strong business fundamentals.

# Construction Industry Survey: The Chief Executives' view



Deloitte recently conducted its annual survey of Chief Executives from the GCC construction industry. The survey gained insights into market sentiments on a range of issues affecting construction across the region.

As we emerge from the pandemic, optimism seems to have returned to 2018 levels with 61% of respondents being more optimistic about their future prospects relative to the past 12 months. This comes as no surprise with oil prices returning to above US\$60 but also with US\$173bn of projects under tender in the GCC .

The following is a summary of the key findings.

### An opportunity to look within

When asked if their pricing strategy had changed, more than 80% of respondents continued to adopt the same pricing model as prior to the pandemic but over 43% are expecting an increase in operating margins over the next 12 months.

With 70% of respondents stating that they have had projects either terminated or put on hold over the last 12 months, many contractors have used the downturn as an opportunity to reflect on their delivery models, operations, staffing and asset requirements with a staggering 78% being more optimistic about their future due to the internal transformations they have made as we emerge from the pandemic.

Consistent with many sectors and economies across the world, we saw that in response to the pandemic, all of our respondents in 2020 had implemented self help measures, with 38% reducing headcount, 31% implementing temporary salary reductions and another 31% implementing both. A year on, 13% of our respondents continue to operate with temporary salary reductions, 35% with a reduced headcount and 17% continuing to implement both. 35% of our respondents are no longer implementing any self help measures.

When asked if pricing on tenders had become more competitive in the last 12 months, 83% of the respondents believed that it had, however when asked about the next 12 months, it was not surprising that 61% of respondents expect their revenue to increase with a growth in project pipeline and projects that were put on hold being mobilized again, with over 30% expecting to hire in the next 12 months and 43% expecting internal restructuring to yield results through increased operating margins and cashflows.

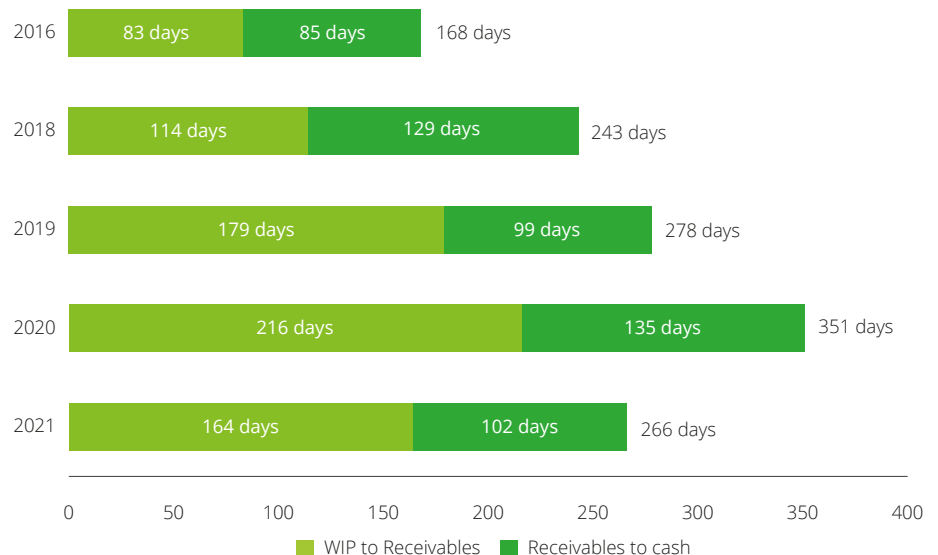
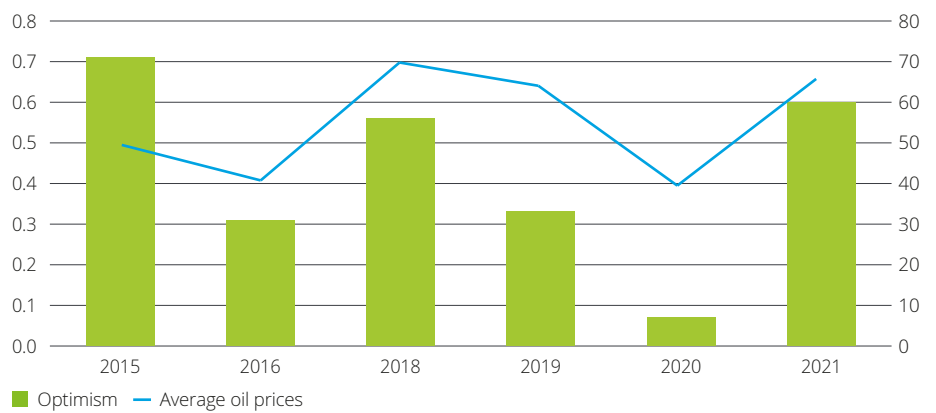
### Cash conversion cycle

With cash preservation being the top of everyone's agenda, it came as no surprise that during the pandemic the cash conversion cycle for contractors, i.e. the time taken from when work is performed on site to being certified and then being paid, was almost 1 year in 2020.

To determine the average cash conversion cycle for 2021, we asked respondents about the average time for conversion of 'work done (uncertified WIP) to receivables' and the average 'collection time of receivables' once certified. On average, the cash conversion cycle reduced by 85 days compared to levels at the height of the pandemic and is back at 2019 levels, leaving contractors providing funding for approximately 9 months of working capital.

It should be noted that the above collection timeframe assumes there were no legal/contractual disputes. Respondents indicated that when there is a dispute with the employer, the collection period is substantially longer, and this further increases the financing requirements of the business.

### Average Optimism



### Volume of contractual disputes

When asked on whether the level of contractual disputes has increased in last 18 months, more than half of respondent said "Yes". Over 70% of our respondents continue to be involved in contractual disputes, which has remained a consistent trend over the last 5 years.

With 50% of our respondents estimating these claims to be between 2% and 5% of their revenue and 74% of respondents (2020: 60%) not recognizing revenue on these claims until the disputes are resolved, given the uncertainty associated with this revenue, more and more contractors continue to feel that they have no choice other than to enter into dispute resolution proceedings to recover costs on variations and delays.

### Some relief: A reduction in dispute resolution time

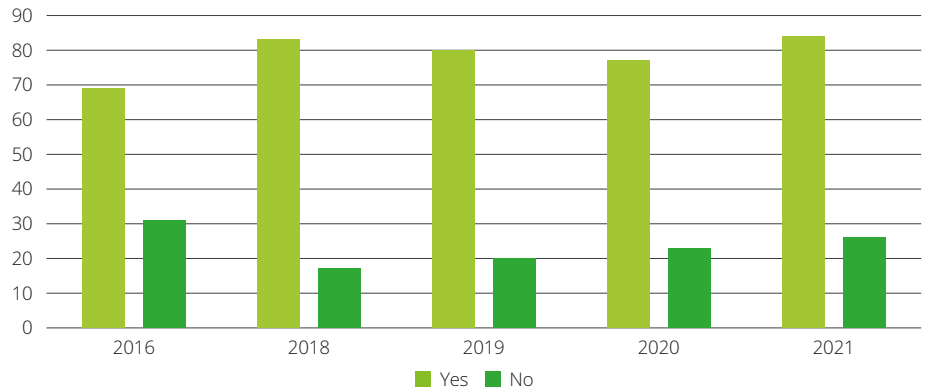
Whilst dispute activity is on the rise and the working capital cycle remains similar to 2019 levels, there appears to be some relief for those contractors that are involved in dispute resolution. The average dispute resolution time appears to have reduced significantly; 35 months in 2019 to 24 months in 2021, which has been attributed to both parties' collective approach to reach a resolution.

When asked about the outcome of dispute resolution for any contractual disputes completed over the past 12 months, more than 50% of respondents said that the resolution was fair to both parties. This is a significant development from 2019 where just above 20% of respondents said that resolution was fair. This change in sentiment follows the formation of numerous dispute resolution committees across the region to drive a fair process.

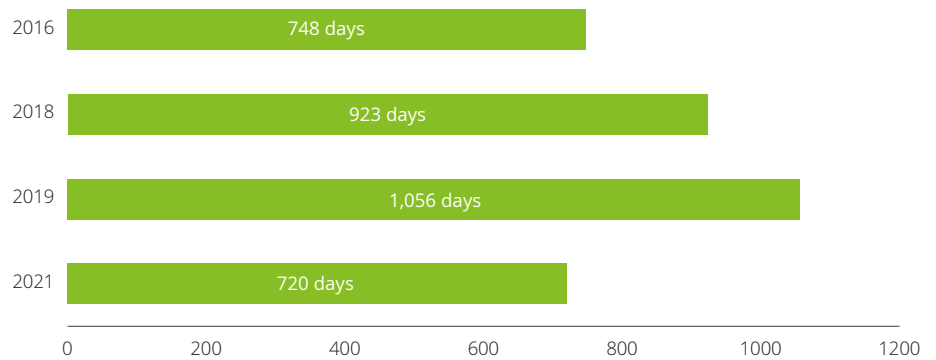
### Is financing getting tougher to obtain?

Due to the increasing number of contractual disputes, there has been an increase in the number of bonds being called in the market, increasing banks' exposure. This in turn had led to banks requiring higher guarantee margins from contractors, further putting strain on cash.

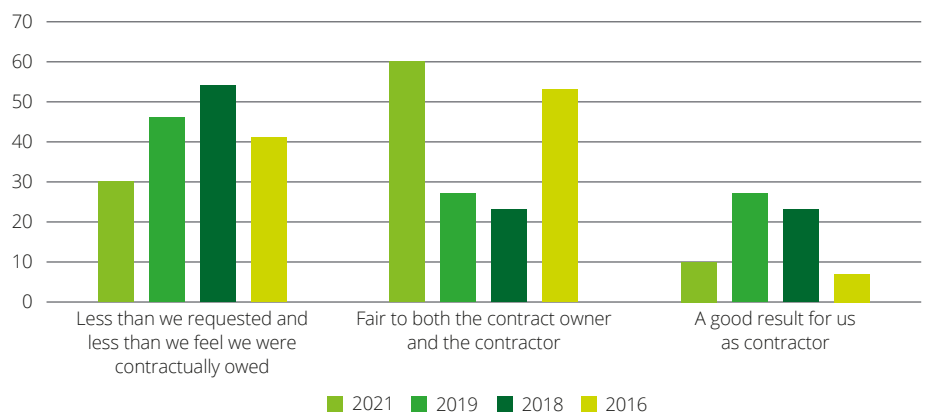
### Organizations involved in Contractual Disputes



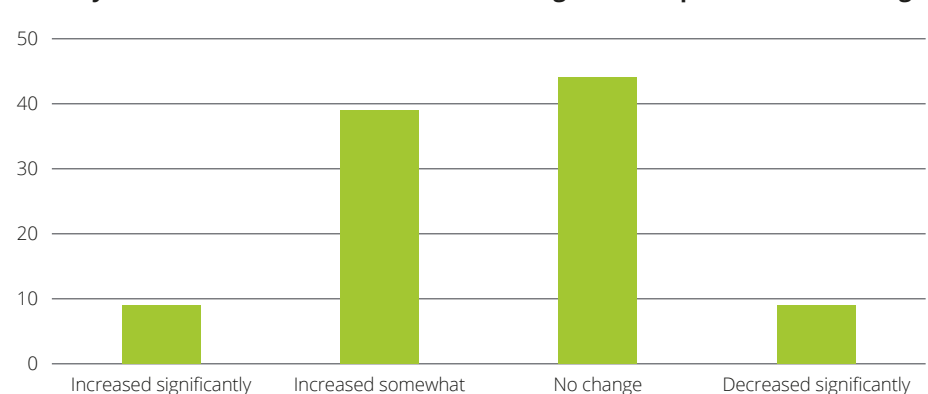
### Average time to resolve contractual disputes



### Resolution of Disputes over the Years



### What is your level of nervousness around bonds being called compared to 12 months ago



As such, it is not surprising that 48% of respondents feel that their level of nervousness around bonds being called compared to 12 months ago has increased.

With a 9 month cash conversion cycle, 24 month dispute resolution time and the requirement for increased guarantee margins, there remains a growing pressure on contractors to fund and manage project liquidity. As a result, the majority of respondents (70%) are experiencing greater pressure to fund projects compared to 12 months ago.

With banking regulations and the risk appetite of traditional banks transforming with the implementation of the different pillars of Basel, almost 40% of respondents are finding it hard to obtain finance, which has doubled from 2019.

With a decrease in availability of traditional finance, an ever-increasing spotlight on sustainability and the availability of green funds, now appears to be the ideal time to look at re-balancing contractual risks and change previously established practices to allow contractors and employers to fund feasible projects.

In recognition of the exponential growth of interest in Environmental, Social and Governance ("ESG"), a result of Climate Change commitments by countries to decarbonize and increased social activism, we have for the first time included questions on ESG in our survey. The insights have been expanded in the article: Sustainability within the construction sector.

Note to reader: This was a "pulse survey" conducted to ascertain the views of C-Suite industry leaders. It is not, nor is it intended to be, scientific in its number of respondents, selection of respondents, or response rate. ●

by **Jaimi Raikundalia**  
Partner, Audit & Assurance,  
Deloitte Middle East

**Nishant Gupta**  
Audit & Assurance,  
Deloitte Middle East

**Scott Mathias**  
Audit & Assurance,  
Deloitte Middle East

**COVID-19 related claims  
within the Middle East  
construction industry –  
Calm before the storm?**



Whilst the costs and impact of pandemic mitigation measures have been a major topic of debate, discussion and negotiation on many Middle East projects, the expected deluge of litigation and arbitration proceedings has not, so far, transpired although there are increasing signs that formal claims may be on the way.

Whilst construction projects in the Middle East have been living with the effects of COVID-19 since at least January 2020, there are probably several different reasons for parties holding fire on starting court/ arbitration proceedings, including:

- **Lack of funds** – Prior to the COVID-19 pandemic, projects in the Middle East were already suffering financially from low oil prices. The pandemic exacerbated the situation and led to even further strain on finances. Parties are therefore actively seeking to avoid - where possible - expending such cash as is available on chasing claims in lengthy court or arbitration proceedings.
- **Lack of appetite** – Analyzing delay and disruption claims is not straightforward in the context of COVID-19 claims. There are many reasons for this including the way in which the various protective measures and restrictions were introduced by governments, regulatory authorities and project teams and the ambiguity as to the effect/scope of restrictions which has increased the challenges of establishing loss/ entitlements. In the circumstances, there has so far been a lack of appetite for commencing formal proceedings unless there is no other alternative.
- **Cultural norms of leaving claims to end of project** – There is a tendency in the Middle East for claims to be left until the end of a project. The usual driver for this is a desire to maintain good working relationships during project execution by avoiding contentious discussions regarding claims. It may therefore be the case that many of the COVID-19 claims have not yet reached the stage of formal proceedings as the projects have not been concluded.

- **COVID-19 is still ongoing** – In many respects, the full effects of the pandemic and its impact on projects have yet to be seen. New variants can (and are) arising at any time leading to ever-changing restrictions in many jurisdictions. COVID-19 is expected to remain a major issue affecting the Middle East at least until 2022/2023 and given the uncertainty, many parties whose works will continue to be affected are holding off from pursuing their claims in formal proceedings until the effects of COVID-19 have come to an end and can be identified and quantified.

Before such formal proceedings are commenced, parties will need to weigh the prospects of recovery. This has inevitably led to a close watch on Government-mandated guidance as to how COVID-19 claims are to be dealt with and also the approach of the local courts with regards to the applicable legal principles.

It goes without saying that the prospects of successfully prosecuting a claim for damages due to the pandemic will be heavily dependent on the terms of the relevant contracts and the applicable governing law.

**In consequence of the above factors, we have seen parties resort to a number of alternative options when dealing with their COVID-19 claims.**

<b>Settlement</b>	Given the uncertainty as to the duration and impact of COVID-19, some parties are opting to cut their losses, settle at as optimum a level as they can and move on. Some parties are using COVID-19 as leverage to settle historic non-covid related claims by asserting that they are unable to continue with work due to COVID-19 and seeking to globally settle claims to secure payment to allow them to proceed with their work.
<b>Mediation</b>	Although it is a much quicker and cheaper method of dispute resolution, mediation has not traditionally been favored in the Middle East, possibly because suggesting mediation is sometimes taken as an indication of weak claims. However, we have seen an increase in interest in mediation in relation to COVID-19 claims. This is likely to reflect the real drive by many parties to achieve a resolution as quickly, cheaply and amicably as possible given that everyone has been impacted by COVID-19 and no one wants to become embroiled in lengthy disputes with complicated delay and disruption analysis.
<b>Ad hoc Dispute Adjudication Board (DABs)</b>	We have seen an increase in interest in ad hoc DABs, which traditionally would have been deleted from the FIDIC forms of contract, as well as expert determination. Again, this appears to be reflective of a desire by parties to find quicker and cheaper methods of resolving their disputes and this has naturally led to a focus on COVID-19 related claims in recent months.

However, the difficulty with all the alternative dispute resolution methods mentioned above remains the lack of an easily enforceable award or judgment at the end of the process. This is unlike court, where judgments are almost immediately enforceable, and arbitration, where parties can proceed to court and seek enforcement of their awards in the event of a failure to comply. Accordingly, we expect to see an uptick in COVID-19 related construction claims going forward as projects directly affected by the pandemic move towards completion and attempts to use alternative forms of dispute resolution or to amicably resolve disputes that have been unsuccessful.

However, based on our experience, certain themes are emerging. In particular, some GCC Governments have been proactive in issuing guidance as to how COVID-19-related claims should be addressed. A good case in point is the Kingdom of Saudi Arabia (KSA) where on 23 December 2020, the Supreme Court of Saudi Arabia issued Order no. M/45 of 8/5/1442 H. This provided a prescriptive approach to assessing claims under contracts affected by the pandemic and set out guidelines for assessing entitlement.

However, examples of courts in GCC jurisdictions applying local laws relating to force majeure (and other legal principles

relevant to the pandemic) to construction-related claims are at present few and far between. In the UAE, the courts have traditionally taken a narrow approach to interpreting the extent to which Article 273 of the Civil Code (which operates where an unforeseen event makes performance of a contract “impossible”) might provide relief. Based on the few cases that have been through the courts that are analogous to a pandemic claim, it seems that this approach is likely to continue.

Having said this, to the extent formal pandemic-related claims are made, the likelihood is that it will be in arbitration – the traditional dispute resolution forum favored

in construction contracts in the Middle East. We would therefore expect that, whilst the approach of the courts will obviously be of some assistance in assessing likely entitlements, ultimately the particular terms of the construction contracts with regards to force majeure, change in law and related provisions will become a particular focus.

Whilst it is unlikely that there would be much argument that COVID-19, and the measures introduced to combat it, impacted on construction projects, the real battle ground going forward will be whether the effects fall within the scope of a contractual force majeure or change in law clause (although this will of course turn on the words used in

the contract) or more general force majeure legal principles under local law. Watch this space! ●

by **Mark Raymond**

Partner, Head of Risk Advisory Services,  
Pinsent Masons Middle East

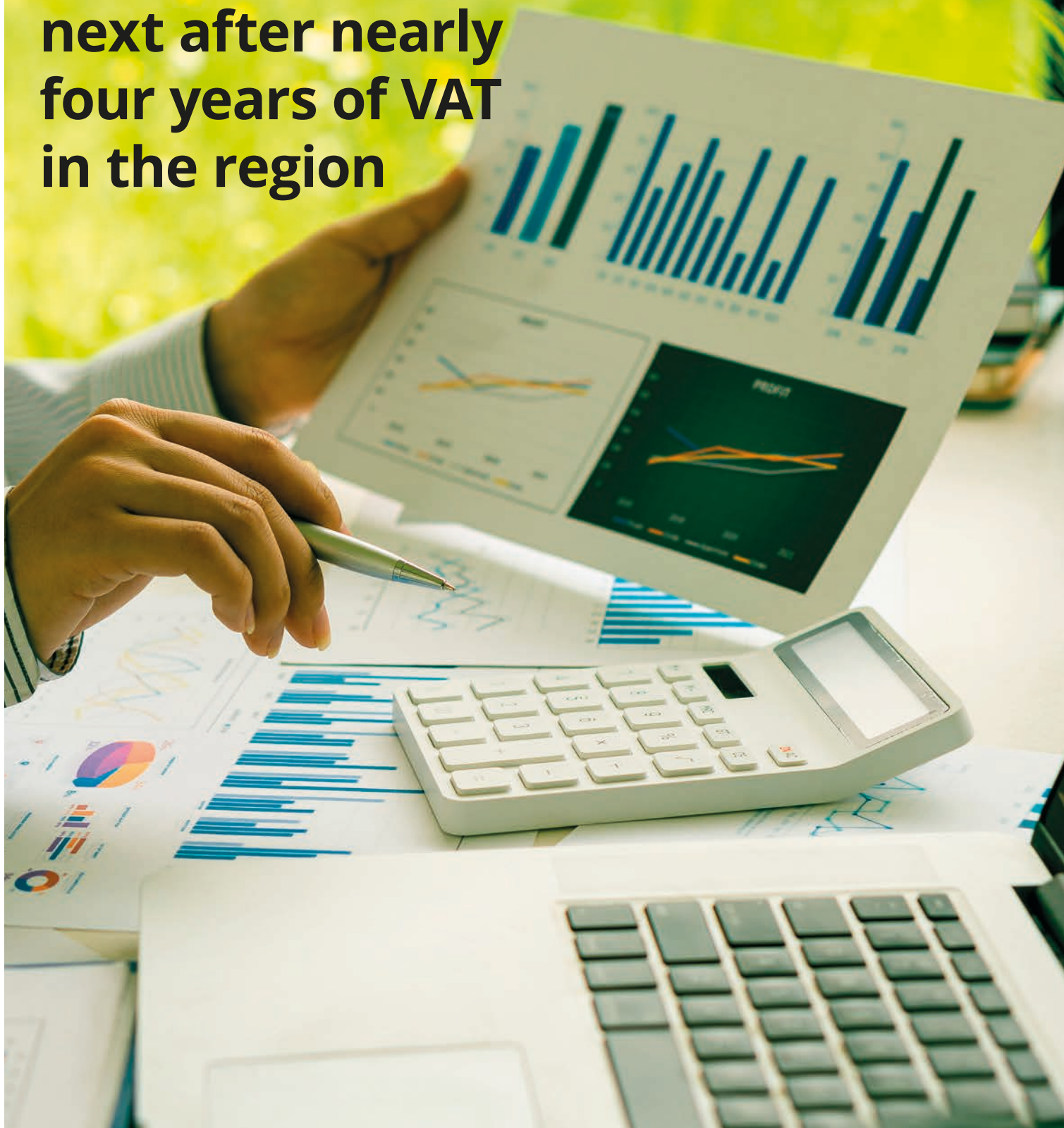
**Nesreen Osman**

Partner, Risk Advisory Services,  
Pinsent Masons Middle East

The real battle ground going forward will be whether the effects fall within the scope of a contractual force majeure or change in law clause.



# Value Added Tax (VAT) Updates in the GCC: What's next after nearly four years of VAT in the region



1 January 2018 marked a historic event in the Gulf Cooperation Council (“GCC”), seeing the introduction of VAT in the region for the first time. With the Kingdom of Saudi Arabia (“KSA”) and United Arab Emirates (“UAE”) leading the way with the introduction of indirect taxes, we have since seen Bahrain, and more recently Oman follow suit to implement a VAT regime aligned with the GCC Tax Treaty. However the implementation of VAT was not the end of the story, and in the almost-4 years since the introduction of VAT in the region we’ve seen a number of developments and evolutions emerge. Over time, policy decisions taken by the different GCC Member States in relation to VAT have seen each country develop its own approach to administering and enforcing VAT, and we now find ourselves with VAT regimes based on a unified agreement, but each having their own local nuances and complexities to navigate. For businesses which operate in traditionally complex industries – those considered “high risk” by tax authorities – effective tax management has never been more important in order to operate successfully in the region.

Taking the UAE as an example, which has some of the world’s largest and most complex real estate projects, the introduction of VAT has necessarily impacted the way in which the construction sector conducts its business. The Covid-19 pandemic has also had a significant impact on businesses in the sector, from limitations impacting progress of projects, to forcing changes in the back-office operations for finance and other support functions to keep businesses moving remotely. In this environment, it should not come as a surprise that the Federal Tax Authority (“FTA”) in the UAE has been particularly active of late. There have been a range of developments, both confirmed and anticipated, along with increased enforcement activity, all of which will have significant bearing on taxpayers and the VAT compliance landscape in the UAE for the foreseeable future.

First and perhaps most importantly, is a change in approach from the UAE Government with respect to the application

## The Covid-19 pandemic has also had a significant impact on businesses in the sector, from limitations impacting progress of projects, to forcing changes in the back-office operations for finance and other support functions to keep businesses moving remotely.

of tax penalties, and the FTA is tasked with administering that change. The penalty regime initially introduced at the inception of VAT has recently been updated by new legislation and addresses some of the initial challenges faced by taxpayers, such as the previously limited differences in penalties applied for voluntarily disclosing an error versus the penalties applicable under audit by the FTA. Revised penalties were introduced with effect from 28 June 2021, with the new regime designed to encourage cooperative compliance with authorities by creating greater divergence between voluntary disclosure and tax assessment penalties. In some cases, penalties are limited to as little as 5% of the tax (subject to the timing of the voluntary disclosure being submitted relative to the date of the error being made) and the rate of the penalty increases with the more time which passes until the error is corrected. Notwithstanding this however, strict penalties of up to 300% remain for cases where errors are uncovered by FTA audit, rather than being voluntarily disclosed by taxpayers. As such, the new penalty regime seeks to encourage a more regular review and disclosure of errors by businesses, thereby prompting a more inward-looking approach to ensure effective governance and regular internal reviews of tax positions taken.

Secondly, and the corollary to the above point, there have been some very recent updates to the Federal Tax Procedures Law with respect to dispute resolution and tax controversy. In particular, the changes made provide more time for taxpayers to file appeals, reduce the requirements to

pay large amounts into court to earn a right to a hearing, and the introduction of an alternative disputes mechanism (albeit only in relation to disputes with government / public entities). The over-arching sense from these developments is that there appears to be an increasing number of actions taken by the UAE Cabinet and the FTA in an attempt to cooperate with businesses and allow taxpayers to appeal more readily, addressing some of the challenges faced in the early stages of the VAT system. However on the other hand, having now confirmed its previous approach to the application of penalties through successful litigation, and having responded to taxpayer feedback on ease of access to challenge tax decisions, the FTA’s authority to issue and uphold these penalties is also now validated.

Thirdly, and perhaps promoted by the above legislative changes, is the increase in audit activity we are seeing from the FTA. This appears to be driven by several factors, including an increase in audit capacity through a growth in auditor numbers, clear audit strategies from FTA leadership (targeting high risk industry sectors, such as real estate and construction, for example), and perhaps most importantly, the impending approach of the statutory time limit for audits approaching, which will remove the initial tax periods following VAT implementation from the audit remit. Under the Executive Regulations to the Federal Tax Procedures Law, the FTA cannot undertake an audit more than 5 years after the end of the tax period (except in cases of tax evasion, fraud, or similar). For the first monthly VAT

returns covering the period of 1 January 2018 to 31 January 2018, this period will fall out of the statutory time limit for audit from 31 January 2023. Accordingly, we're seeing an active increase in FTA activity to ensure that these earliest tax periods are audited for the most material or high risk businesses. From a taxpayer perspective, these early tax periods are also the highest risk of containing errors due to the uncertainty of VAT positions at the time of implementation and the publication of guidance since that date which may impact on positions taken. In light of the new penalty regime, those early periods would benefit most from an internal review prior to the initiation of any FTA audit.

Looking to the future, while not yet confirmed in the UAE, there are significant steps being taken across the region to digitize tax and improve data collection and visibility of compliance for tax authorities. The first and clearest move in this regard is the introduction of e-invoicing in the

In light of the new penalty regime, those early periods would benefit most from an internal review prior to the initiation of any FTA audit.

Kingdom of Saudi Arabia ("KSA"). While the initial rules require simply for all tax invoices generated by taxable persons to meet certain data requirements and be issued from a tamper-proof electronic system, the second phase (to be effective from 1 January 2023) will require real-time integration with tax authority systems. The increased level of real-time information available to tax authorities as a result of such initiatives is likely to drastically change the compliance landscape, and it can be expected that increased scrutiny will come in relation to input tax validation and tax invoice verification. This will be a seismic shift for tax compliance and tax authority oversight in the region and it is expected that we will hear announcements introducing a similar regime in the UAE in the near future. Taking learnings from the experience in KSA, even for the most prepared businesses, this has required far more preparation than initially anticipated and has been a significant undertaking to prepare for. A future introduction of e-invoicing in the UAE will pose many similar challenges.

Finally, while the UAE has been silent on any plans to increase the standard rate of VAT, we note that there has been movement on this in the region. In KSA, the standard rate of VAT increased from 5% to 15% on 1 July 2020, and in Bahrain it has recently been announced that from 1 January 2022 the standard rate of VAT is expected to increase from 5% to 10%. Any change to the standard rate in the UAE will have a range of significant impacts to

taxpayers, not least of which increasing the stakes of any non-compliance, and exacerbating any cashflow issues currently faced as a result of VAT recovery (or non-recovery). As the impact of tax to businesses becomes increasingly high, ensuring that effective tax governance structures are set up and present within the business now is key, so that future changes to tax rates etc. can be managed effectively at the relevant time and the risk of material exposure can be mitigated.

The points outlined above show a clear evolution in the tax compliance and enforcement landscape in the region, along with a number of risk areas for taxpayers and future developments to watch. This evolution is not isolated to the UAE only, as the GCC region as a whole continues on its journey of tax transformation which began in 2017 with the introduction of Excise Tax. The impact and significance of taxes in general to the way business is done in the region is only increasing, and this should remain a high priority for businesses to manage in the short term. Now is the time to ensure that effective tax management and compliance is high on your agenda. ●

by **Kate Bacon**

Director, Indirect Tax,  
Deloitte Middle East

**Renan Ozturk**

Senior Manager, Indirect Tax,  
Deloitte Middle East

# Future workplace strategy in the Middle East



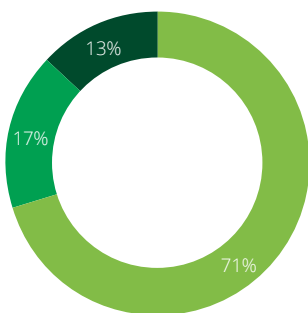
## Introduction

To help understand the current state of workplace usage and future plans, Deloitte captures sentiment from companies in the Middle East in relation to the evolving nature of their bricks and mortar requirements, work from home (WFH) experience and policies to reflect the 'new normal'.

This survey was conducted in November 2021 and the findings are based on responses from senior executives across a range of industries.

**Only 6% of the respondents said they are looking to reduce their office space, compared to 17% last year.**

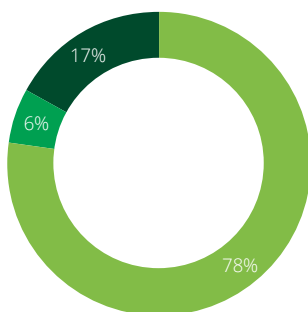
### Expected change in space requirements when current lease expires – November 2020



■ No change ■ Space reduction ■ Space increase

Note: Percentage may not total to 100 due to rounding

### Expected change in space requirements when current lease expires – November 2021



■ No change ■ Space reduction ■ Space increase

## Key findings

Banking, Financial Services and Insurance (BFSI) represent the majority of the respondents considering relocation when their lease expires.

The relative importance of having office space varied by industry.

Face masks are considered the primary safety measure for returning to the office in person among those surveyed.

Only 6% of the respondents said they are looking to reduce their office space, compared to 17% last year.

Professional Services companies (Legal, Consulting, Architecture) comprise 67% of the respondents considering increasing their office footprint in the future.

'Introducing digital collaboration platforms' was ranked as the most important factor for making remote work sustainable.

71% of respondents do not have a current work from home (WFH) policy within the organisation, while 18% have a full-time WFH policy. Respondents expect these policies to remain the same over the next 12 months.

**6% of the respondents expect to relocate in the same city when their lease expires.**



Banking, Financial Services and Insurance (BFSI) represent the majority of the respondents considering relocation when their lease expires.

The current office size for the majority of the respondents considering relocation is 3,000 sq m or more.



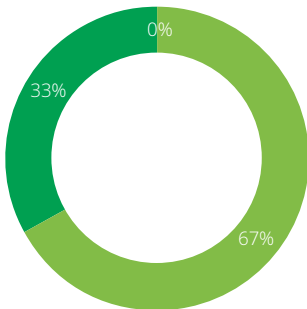
Those expecting to relocate estimate an increase of 25-50% in their space requirement.

Professional Services companies (Legal, Consulting, Architecture) comprise 67% of the respondents considering increasing their office footprint in the future.



Primary reason for increased office requirement is expansion of existing business, while for 33% of respondents the space increase will be driven by addition of new business lines.

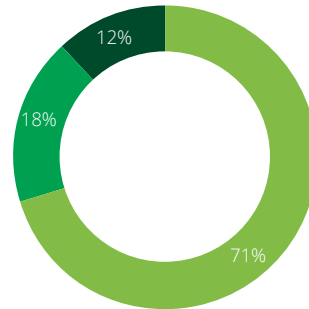
**Expected percentage of increase in office space when current lease expires**



- 0-25% space increase
- 25-50% space increase
- More than 50% space increase

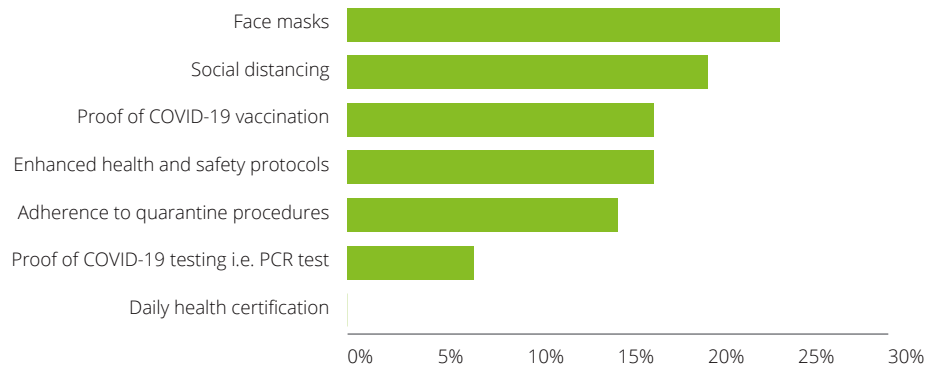
71% of respondents do not have a current work from home (WFH) policy within the organisation, while 18% have a full-time WFH policy. Respondents expect these policies to remain the same over the next 12 months.

**Expectations of WFH policy over the next 12 months**



- No policy
- 1-2 days per week
- Full time work from home

Face masks are considered the primary safety measure for returning to the office in person among those surveyed.



Note: The respondents were asked to select each safety measure that applies to their organisation. Multiple measures could be selected.



### The relative importance of having office space varied by industry.

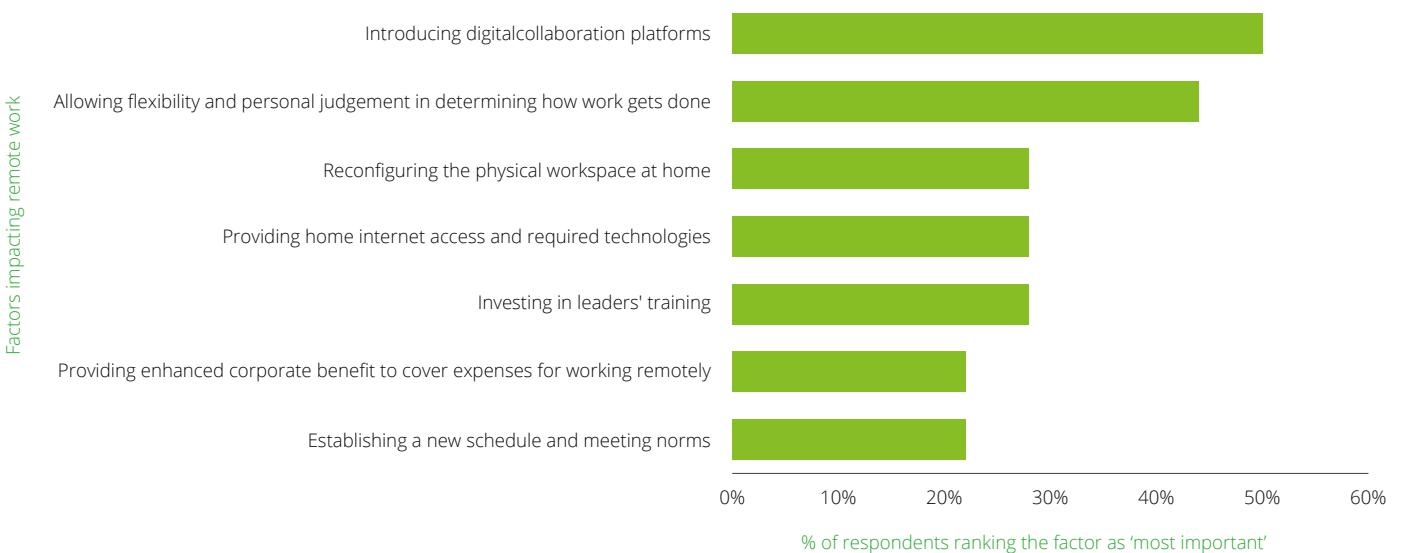
	Social hub	Ad-hoc collaboration and communication	Creativity/ inspiration	Development/ training	Access to technology/ filing systems	Client interface	Focus/ productivity	Licensing requirements
<b>Banking, financial services and insurance (BFSI)</b>	Light Green	Light Green	Light Green	Light Green	Light Green	Light Green	Medium Green	Light Green
<b>Consumer – transportation, hospitality, retail, wholesale, automotive</b>	Light Green	Dark Green	Light Green	Dark Green	Light Green	Light Green	Light Green	Light Green
<b>Government and Public Services</b>	Light Green	Light Green	Light Green	Light Green	Light Green	Light Green	Light Green	Light Green
<b>Real Estate Investment/ Development</b>	Light Green	Light Green	Light Green	Light Green	Light Green	Light Green	Light Green	Light Green
<b>Professional Services – Legal, Consulting, Architecture</b>	Light Green	Light Green	Light Green	Light Green	Dark Green	Light Green	Dark Green	Light Green

Note: The respondents were asked to rank each workplace function from 1 to 5 in ascending order of importance. Responses were not mutually exclusive – multiple workplace functions could receive the same rank.

Key: % of the respondents ranking the workplace function as four or five.



### 'Introducing digital collaboration platforms' was ranked as the most important factor for making remote work sustainable.



by **Stefan Burch**  
Partner, Head of Real Estate, Deloitte Middle East

**Oliver Morgan**  
Director, Head of Real Estate Development, Deloitte Middle East

**Manika Dhama**  
Assistant Director, Real Estate Development, Deloitte Middle East

# **Sustainability within the construction sector**





In November 2021, the UK hosted the 26th UN Climate Change Conference of the Parties (COP26). This global summit brought nearly 200 countries and their leaders together to accelerate action towards the goals of the Paris Agreement and the UN Framework Convention on Climate Change, commitments to limit global warming to 1.5 degrees compared to pre-industrial temperatures.

The COP26 had 4 key focus areas:<sup>1</sup>

1. Securing global net zero by mid-century and keep 1.5 degrees within reach, through accelerating the phase-out of coal, curtailing deforestation, speeding up a switch to electric vehicles and encouraging investment in renewables.
2. Adapting to protect communities and natural habitats through protecting and restoring ecosystems and building defences, warning systems and resilient infrastructure and agriculture to avoid loss of homes, livelihoods and even lives.
3. Mobilizing financing to deliver on the above goals and unleashing the trillions in private and public sector finance required to secure global net zero.
4. Working together and accelerating action to tackle the climate crisis through collaboration between governments, businesses and civil society.

The ambition is for the world to halve emissions over the next decade and reach net zero carbon emissions by the middle of the century if we are to limit global temperature rises to 1.5 degrees.

The conference was held against a backdrop of an important report released in August 2021 from the IPCC, the UN body for assessing the science related to climate change, that provided a harsh message. As the UN Secretary-General António Guterres, explained, this report

*'is a code red for humanity' because the 'internationally agreed threshold of 1.5 degrees Celsius is perilously close.'*<sup>2</sup> The COP26 President-Designate Alok Sharma said *'If ever there was going to be a wakeup call for the world when it comes to climate, then it is this report.'*<sup>3</sup> There is therefore a great imperative to move quickly and decarbonize across all industry sectors.

Unfortunately, through its construction methods and use of materials, the Construction industry it is a heavy contributor to global emissions and user of energy.

According to the recently published 2021 Global Status Report for Buildings and Construction, the buildings and construction sector accounted for 36 per cent of global energy demand and 37 per cent of energy-related CO2 emissions in 2020.<sup>4</sup>

The Construction industry is also a considerable user of resources and a major source of pollution. According to the World Green Building Council, the industry accounts for more than 50% of all material extracted globally; and construction demolition waste contributes 35% to the world's landfill.<sup>5</sup>

Nevertheless, the Construction industry can actually play a key role in supporting the objectives of COP26 through changing its methods, materials and designs; and benefitting from the ambitions of COP26 with its future focus on investment, infrastructure, mobilization of finance and collaboration.

Our recent survey of large construction companies in the Middle East suggested that these trends and themes have already started and are accelerating.<sup>6</sup>

Just over 60% of survey respondents indicated that over the past 12 months they had seen a greater proportion of tenders incorporating sustainability elements in their tenders than previous years. Clearly the Middle East has had a recent history of developing significant projects that are

either specifically focused on sustainability, such as the world's largest single-site solar project, Noor Abu Dhabi, in the UAE<sup>7</sup>, or Neom, the \$500 billion futuristic smart city being built in the KSA<sup>8</sup>; or where sustainability has been a heavy influence in the project, such as the 'cleanest and greenest' world exposition ever staged in the UAE's EXPO 2020<sup>9</sup> and the reusable stadiums for the Qatar FIFA World Cup 2022.<sup>10</sup>

Nevertheless, given the global focus on Sustainability, and in particular, within the Middle East the recent commitment announcements prior to COP26 by Bahrain, KSA and the UAE to Net Zero, indicate that significant further investment will be focused on such projects.

Incorporating sustainability elements into a tender is becoming a common feature in the industry in the Middle East, as confirmed by 95% of our survey respondents.

The reason that design/purpose, construction methods and materials is such a focus for tenders is highlighted by a UNEP report on Greening the Building Supply Chain, which states: "It has been estimated that in use, emissions account for over 80 percent of the total lifecycle carbon emissions of buildings, with a further 15 percent of emissions embodied in materials and around one percent resulting from the construction process itself."<sup>11</sup>

The Construction industry can actually play a key role in supporting the objectives of COP26 through changing its methods, materials and designs.

1. UN Climate Change Conference UK 2021, ukcop26.org

2. 'Secretary-General's statement on the IPCC Working Group 1 Report on the Physical Science Basis of the Sixth Assessment', 9 August 2021, un.org

3. 'Following the science to take climate action and make sure COP26 keeps the 1.5 degree goal alive', 9 August 2021, gov.uk

4. United Nations Environment Programme (2021). 2021 Global Status Report for Buildings and Construction: Towards a Zero emission, Efficient and Resilient Buildings and Construction Sector, 19 October 2021

These sustainable features are therefore required in many tenders:

<b>Design/purpose</b>	Over 40% of survey respondents indicated that over the past 12 months, the overall project was being held out as 'Sustainable in design'. This demonstrates the appetite for clients to commission projects, with a clear sustainable purpose: whether it is a defined 'pure-Green' purpose (such as a renewable energy park) or a project adapted to become identified as sustainable (such as incorporating sustainable elements into a new housing development). The design/purpose will impact the lifecycle of the construction project and the emissions and resources used over that period.
<b>Construction methods</b>	By improving construction methods, significantly less emissions can be made, and progress can be made on other social and economic benefits, such as worker welfare and the development of local industry.  Over 48% of survey respondents mentioned that tenders over the past 12 months have included 'sustainable construction methods' as a feature, indicating the growing demand by clients for sustainability in the construction industry.
<b>Use of materials</b>	Materials are key to the construction industry and the by-product of creating materials (such as cement and steel) are significant amounts of emission. Furthermore, the extraction of materials or landfill / pollution caused, has environmental impact on the local communities. By changing and developing the use of materials, significantly less emissions can be made, and better use of resources achieved.  Over 30% of survey respondents highlighted this as a feature of tenders over the past 12 months. Given that the development of alternative materials can substantially reduce emissions or provide better recycling and reuse benefits, it is surprising that this is not higher on the tenders' requirements.  Perhaps more needs to be done in terms of the development of new alternative materials, unit prices lowered, the cost/ environmental benefit of using different materials better analyzed; supply chains and availability of materials strengthened; and clients being better informed of new innovations and developments in materials.
<b>Is the construction method sustainable</b>	A developing trend is that of the construction firm needing to demonstrate to clients that it is itself sustainable. Over 52% of our survey respondents confirmed that they were required to demonstrate that they were sustainable.  Companies can demonstrate this by analyzing their own impact on their stakeholders; developing their own sustainability strategies and targets; capturing information on their own emissions, waste, diversity and other KPIs; and being more transparent in its Sustainability Reporting.

Globally, Sustainability Reporting is a hot topic and initiatives are being driven forward by regulators and stock exchanges to improve the quality and amount of such disclosures, particularly for the benefit of activist investors. In the UAE, the regulators have recently moved to require all listed companies prepare a Sustainability report based on the Global Reporting Initiative (GRI), a stakeholder-centric reporting format covering a wide range of reportable disclosures, reflecting the holistic nature of Sustainability.

Interestingly, over 52% of respondents considered that being sustainable was an advantage in the market, with 35% considering it to be an expectation. Perhaps over time, we will see the development of a trend that will expect all construction companies to become sustainable, through

the use of more environmentally friendly designs, construction processes and materials, with a much greater transparency of achievements and targets.

One key trend area is the development of finance, with products such as Green Bonds, Sustainability Linked Bonds and Green Loans being issued to fund ESG projects. In the Middle East, banks such as the First Abu Dhabi, Qatar National Bank and corporates such as Majid Al Futtaim have raised funds to finance their 'green frameworks' i. e. their investment mandates. Often the green frameworks include the development of 'green buildings' and other construction projects with sustainability features. Such products will help the COP26 achieve its goal of mobilizing the financial markets to finance the trillions of dollars needed to achieve global net zero.

The construction industry in the Middle East has the potential to significantly help the world's battle against climate change, its more efficient use of resources and the overall reduction in pollution. It can also bring about important and lasting social improvements, through the development of a local support ecosystem of businesses supporting construction. It can work to help COP26 achieve its ambitions and in turn, create a sustainable future across the Middle East region. ●

by **Damian Regan**  
Reporting & Assurance Leader for Sustainability, Deloitte Middle East

5. Annual Report 2020, The World Green Building Council
6. Deloitte Middle East Construction Industry Survey, September 2021
7. [www.ewec.ae/en/power-plants/noor-abu-dhabi](http://www.ewec.ae/en/power-plants/noor-abu-dhabi)
8. [www.neom.com](http://www.neom.com)
9. [www.thefirstgroup.com/en/news/expo-2020-dubai-focus-on-sustainability/](http://www.thefirstgroup.com/en/news/expo-2020-dubai-focus-on-sustainability/)
10. FIFA World Cup 2022™ - News - New report reaffirms Qatar 2022's commitment to sustainability - FIFA.com
11. Greening The Building Supply Chain, United Nations Environment Programme, UNEP
12. 'Green Shoots: Sustainable Capital Markets in the Middle East' Clifford Chance, May 2021



**Can modular  
manufacturing  
help the drive  
to a more  
sustainable  
industry?**

The decision to establish a modular manufacturing business is a difficult one. There are high barriers to entry in terms of knowledge and capital investment, the journey that follows is difficult and full of pitfalls. To start with, you struggle to secure a project until you have a facility, once you have a facility you need a track record, it is a vicious circle. You need forward thinking, supportive shareholders who have a vision, commitment and believe in innovation and change. You need clients with a pipeline centric approach, not just a project centric approach.

There are many different types and versions of modular products. They range from simple panelised systems, to fully pre-finished volumetric modular buildings. LINQ<sup>1</sup> is initially focused residential and hospitality in the form of prefinished volumetric modular buildings, manufactured from hot rolled structural steel frames that are stackable and designed around dimensions that give a high consideration to logistics constraints, infilled with light gauge steel walls, floors and ceilings, incorporating MEP services and finishes as far as is practicable in the factory environment.

The modular dilemma is fraught with strategic choices during business setup, we could have selected concrete as our base build material, we could have selected panelised systems, but we have chosen what we believe to be a far more versatile, manufacturable and sustainable base build material. This was chosen because it will give us the ability to create delivery focused products that are sustainable, even though they are at odds with what would be considered the 'norm' in terms of building materials and practices in this region. However, the norms are changing, and they need to change; the built environment is a huge contributor to our Carbon Footprint in terms of embodied carbon and carbon generated through building lifecycle energy consumption.

A step change is needed in relation to the delivery of built environment assets, Governments and Authorities should implement more robust standards and building codes to drive the change to align with Sustainable Development Goals (SDGs) at a National and Global level. Local codes and standards for highly efficient buildings in the region lag a long way behind the standards of most Northern European nations, and yet the energy consumption, due to high cooling loads in the Middle East region, is not reducing. Renewable energy investment is not the total solution; we must reduce consumption through improved building design, thermal efficiency, robust detailing, and quality of delivered product.

Manufactured products provide the opportunity to create buildings with lower levels of embodied carbon by applying DfMA (Design for Manufacture and Assembly) principles to building design. It is possible to reduce component counts, standardise components and implement higher levels of control to the manufacturing process than is possible on a construction site. This creates reductions in

- Total logistics movement
- Input manhours at all levels
- Drastic reduction of physical waste
- Total energy consumption
- Total components and component count
- Defects

To successfully achieve this, we need a collaborative approach from inception to completion. Clients must set clear carbon targets that will require all stakeholders to collaborate in order to achieve them. This includes selection of materials, systems and energy strategies very early in the design

process in order to achieve the targets set by clients. Investment and focus are needed during the project definition phase to clearly set out project outcomes and success, requiring discipline, transparency and stakeholder maturity. This in turn, increases the need for alignment, collaboration and clarity, whilst reducing risk and costly delays.

Modular is not a silver bullet, it can't and won't be the solution to all projects. Attempting to convert a project from a traditional design to a modular design without understanding the constraints of the manufacturer will be setting a project up for failure. The traditional route of passing risk through the supply chain will not solve the delivery problem. Fair and equitable share of design responsibility and risk can create an environment for success that will allow all stakeholders to succeed. An integrated approach is needed.

The industry suffers from constant change management issues that can cause costly delays. Material waste is just one example of waste, the waste in terms of manhours at all levels of a construction projects is well documented and alarming, every manhour of a project contributes to that projects carbon footprint through energy, transport, food and drink, much of this can be attributed to change.

Construction has become a reactive industry; it reacts to constant change and uncertainty. To successfully implement a modular solution, the whole process from inception to completion needs to be implemented in a more controlled process, design requires completion to a far greater degree of detail prior to commencement of the manufacturing process. Our target is to manufacture a modular in home in around nine days. It is clearly not possible to do this without all design, detailing, co-ordination and procurement being complete. This means full sign off by all stakeholders.

---

1. LINQ is a manufactured housing solution that integrates industry best practice with high-quality materials, resulting in an agile, sustainable product that can be assembled anywhere.

When production is ramped up to full throughput capacity, it will be possible to output up to 240m<sup>2</sup> of completed product per day. Over a calendar year, this will equate to 60,000 m<sup>2</sup> of finished product, completed by a workforce of around 350 people. The input manhours required are less than half that of traditional construction, along with the process implemented and the materials used. We also reduce waste, water and energy which all contribute to lower levels of embodied carbon. The benefits are clear.

The key focus is product, modular manufacturing is the process of productizing elements of buildings, to achieve the levels of throughput to make the

product and business sustainable. There needs to be an element of standardization. Manufacturers can encompass an element of configuration, but customization is time consuming and costly, which has a negative impact on sustainability.

The construction industry is ready for change, it is a necessity, it is prepared to embrace off-site construction, but the industry must change itself and the way that it approaches the use of modular and off-site methods. If the industry continues to deliver projects in the same manner that it has done historically, then modular and off-site products will struggle to succeed, and the industry will yield the same results.

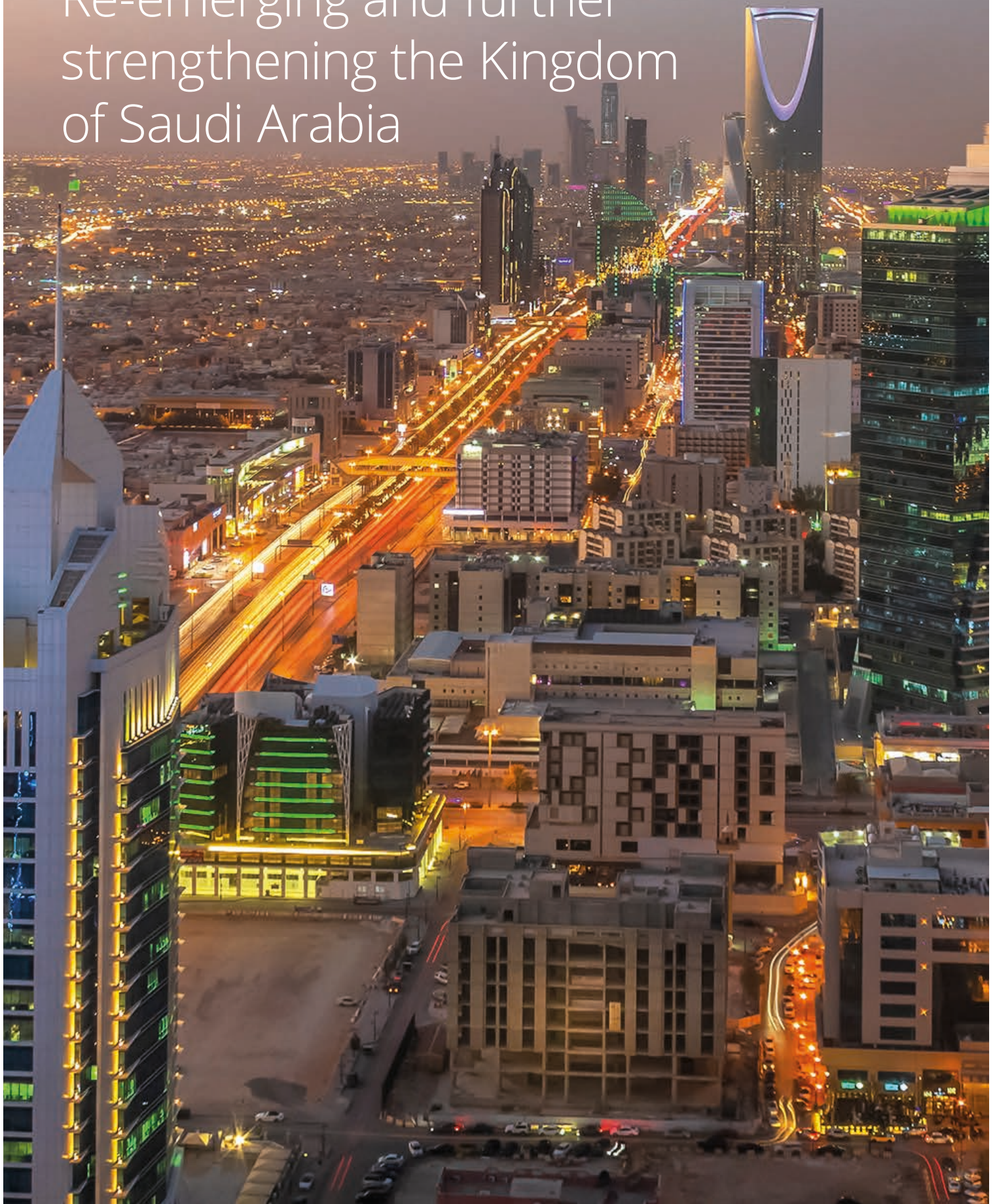
Without change it is hard to see how these tough and ambitious SDGs can be achieved. We need to move from construction to production to realise these benefits.. ●

by **Gwyn Taylor**,  
General Manager, LINQ By ALEC

The construction industry is ready for change, it is a necessity, it is prepared to embrace off-site construction.

# Building the cities of the future

Re-emerging and further  
strengthening the Kingdom  
of Saudi Arabia



The Kingdom of Saudi Arabia ('Kingdom or KSA') continues to escalate its transformation ambition in alignment with Vision 2030, which has enabled the country to further position itself as a key global market, propelled by the increased foreign investment, which has been attracted through the Public Investment Fund and similar such initiatives. Similarly, the country continues to reinforce its position through realigning and developing its regulatory landscape to global best practice, whilst introducing government programmes which have aided development, growth, and investment.

The vast development across the Kingdom has positioned the country as the hub of the Middle East, along with being acclaimed as the 'city of the future'. At the core of this development is the Construction industry.

Following global trends, the industry contracted by 4.7% in Q2 2020 and by 7%<sup>1</sup> in real terms during the same period, driven by the impact of the COVID-19 pandemic and declining oil prices. That said, the industry is now reemerging and the opportunities to continue developing the country towards its ambition remain optimistic.

As a response to building a more sustainable economy, whilst managing the impact of the pandemic, the Kingdom introduced integrated stimulus packages and support to various industries, including construction, which experienced challenges such as cost chain escalation and supply chain issues, along with the increased rate of VAT from 5% to 15%.

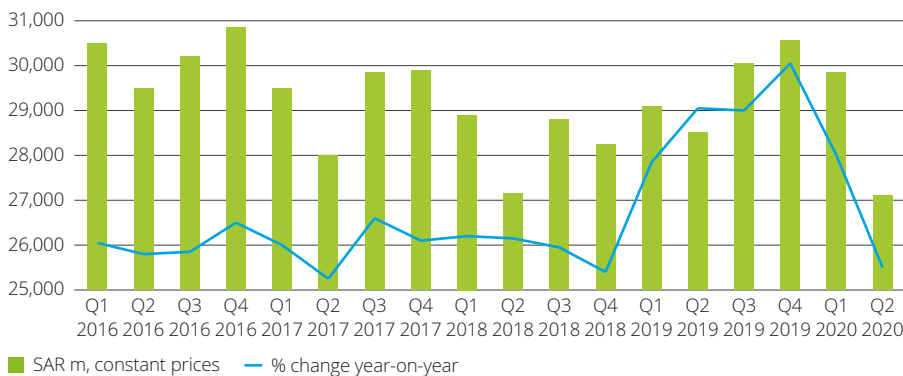
The country continues to reinforce its position through realigning and developing its regulatory landscape to global best practice.

Whilst the pandemic impacted various industries in the Kingdom including construction, it is worth noting that this has not been isolated to the country alone. In addition to the various stimulus initiatives and change in the VAT landscape, there were also various other initiatives implemented by the government to further support growth and re-emerge, including announcing that from 2024, the government and state backed institutions would stop signing contracts with foreign companies that had a headquarter in another country in the region in an effort to limit economic leakage and support with the creation of jobs and Saudisation<sup>2</sup>.

This onshore policy will drive a stable increase in demand for both residential and commercial real estate, particularly in Riyadh, given the leadership's \$800 billion strategy which will double the size of Riyadh and position it as a global hub. Such regulatory changes will increase investment, enhance infrastructure, and stimulate construction projects to build the city of the future, which is projected to increase demand at an overall rate of 8% by 2023<sup>3</sup>.

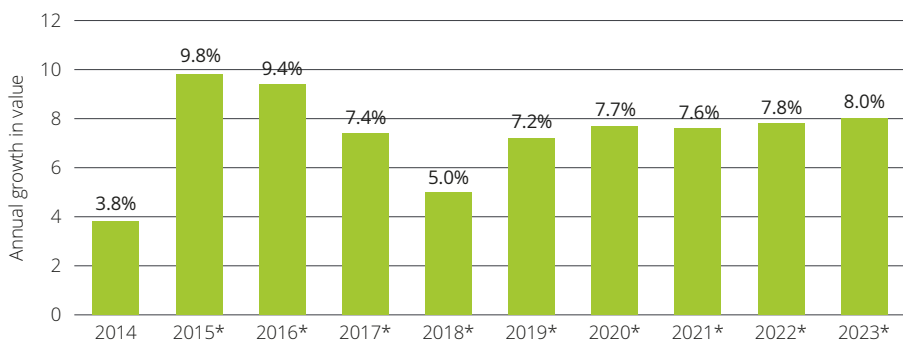
Given the changing dynamics in supporting Vision 2030 and building the cities of the future, construction projects in KSA have, until recently been procured on a traditional construction-only basis. Procurement is also becoming increasingly diverse with the

**Saudi Arabia, Construction Value-Add (SAR million, Constant Prices)**



Source: Kingdom of Saudi Arabia General Authority for Statistics

**Annual growth of residential and non-residential building industry value in Saudi Arabia from 2011 to 2023**



Statista 2021

1. Saudi Arabia's construction sector suffers sharp quarterly slide, 30 Sept 2020, GlobalData  
 2. Saudi Arabia Adds Pressure on Global Firms to Move to Riyadh, 15 Feb 2021, Bloomberg  
 3. Annual growth of residential and non-residential building industry value in Saudi Arabia from 2011 to 2023, Statista

shift in some cases leading to infrastructure projects being built on a design-base, altering supply chains, risk and further supporting in creating momentum to drive economic and infrastructure development.

Whilst driving this infrastructure development, the Kingdom has committed to do so in line with the Global Goals of the 2030 Sustainable Development Agenda<sup>4</sup> demonstrating the country's commitment to promoting a sustainable economy that makes a difference. This commitment has seen various initiatives being launched which has impacted the Construction industry, such as the National Renewable Energy Program, which aims to through diversification of energy sources produce 5.9 gigawatts of renewable energy by 2030.

Additionally, driving sustainable construction in building the smart city of the future, the Kingdom has also introduced the Saudi Building Code to promote energy

efficiency, implemented a project of issuing energy density certificates for existing and new buildings and are driving an initiative to rehabilitate government buildings and stimulate the private sector to invest in the energy efficiency services sector.

In demonstrating this in future projects too, Neom will comprise carbon-positive urban developments powered by 100% clean energy, providing a pollution-free, healthier, and more sustainable environment. More recently and as announced by the Crown Prince this year, 'the Line' which will form as part of project Neom will be a walkable "belt of hyper-connected future communities, without cars and roads and built around nature." It is said the city would have 1 million residents and create 380,000 jobs by 2030, with the infrastructure set to cost \$100 billion to \$200 billion and commence in the first quarter<sup>5</sup>.

Saudi Arabia aims to diversify its economy away from its traditional income sources such as oil. In supporting this they have launched various fiscal measures which are being implemented to finance the specific initiatives outlined in Vision 2030, with commitment to the Sustainable Development Goals (SDGs).

Looking ahead, it has been projected that the kingdom's construction industry is forecasted to recover in 2021, growing by 2.9% in 2021, having contracted in 2020 due to the global pandemic. The industry is projected to continue to recover over the remainder of the forecast period, growing by 4% between 2022-2025<sup>6</sup>.

The construction industry's output is anticipated to be supported by the government's focus on the development of overall infrastructure, as well as energy and utilities construction projects, in a bid to diversify the economy. In supporting this and more recently, Saudi Arabia has launched the National Infrastructure Fund (NIF), to support up to \$53 billion (SAR 200 billion) in projects over the next decade<sup>7</sup>.

There is a robust pipeline of projects which will support the long-term plans as set out in Vision 2030. This commitment was further fortified by the Crown Prince's announcement in January this year, that announced that the Public Investment Fund (PIF) will invest SAR3 trillion (US \$800 billion) on projects in the country over the next decade<sup>8</sup>.

Given the developments in the Kingdom of Saudi Arabia, the cities of the future are truly being built in the Kingdom, whilst embedding sustainable practices. In driving and building the cities of the future, the construction and infrastructure industry will be key which will naturally evolve in meeting the demand and needs of the future, that will continue to transform not only the Kingdom but the construction industry too, leading to change across the wider sector, which will not only help build the future cities of Saudi Arabia but cement further transformation across the construction industry. ●

by **Anwar Hadidi**  
Senior Executive Director,  
Deloitte Middle East

**Nav Dulay**  
Director, Deloitte Middle East



4. Sustainable Development, United National Platform, Government of Saudi Arabia  
5. Mohammed bin Salman unveils his plan for Saudi Arabia's post-oil future, 10 Jan 2021, World Oil  
6. Saudi Arabia Construction Market Report 2021: Key Trends and Opportunities to 2025, Q2 2021 Update, Research and Markets  
7. Saudi Arabia Rolls Out Infrastructure Fund With BlackRock To Invest \$53B Over Next Decade, 25 Oct 2021, Forbes Middle East  
8. Saudi Arabia's PIF to invest 3 trillion riyals over next 10 years: Crown Prince, 25 Jan 2021, Al Arabiya





**Doing the right  
Projects – how a  
Portfolio Management  
approach can ensure  
the most efficient  
allocation of an  
organization’s  
investment**

## Introduction

A number of public and private sector organizations across the GCC are undertaking portfolio rationalization exercises as a way to manage budget cuts and better align Capital Projects with societal and economic transformation objectives. Implicitly, there is also a recognition that corrective action is required based on a lack of project delivery success and lower than expected project benefits.

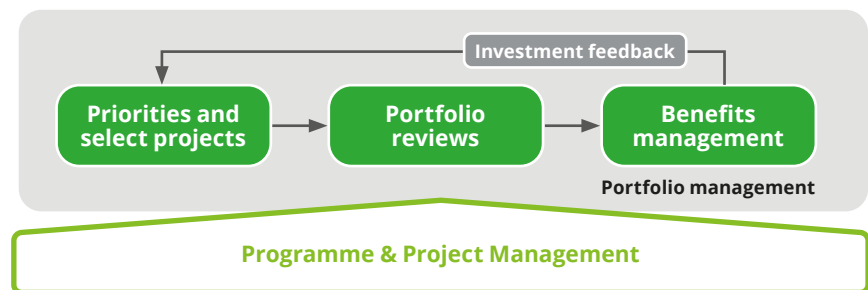
Portfolio rationalization exercises often have a painful and demoralizing effect in that they acknowledge that a great deal of time, effort and money has been wasted without any meaningful return on investment in regard to society, the planet, or balance sheet. Projects are cancelled by deciding, retrospectively, if projects have a sound business case or represent value for money, often long after design has been completed and people and machinery are on site.

Instead of committing resource to the delivery of projects and asking 'why' we have committed to them during the execution phase, the governance and management arrangements that allowed non-viable projects to begin in the first place should be re-examined. The root cause of poor Capital Project investment choices is a lack of a framework to initiate, prioritize and select projects, monitor their performance and measure benefits – or in other words, Portfolio Management.

The root cause of poor Capital Project investment choices is a lack of a framework to initiate, prioritize and select projects, monitor their performance and measure benefits – or in other words, Portfolio Management.

Organizations that struggle to understand why projects got off the ground or why business cases are routinely not being achieved (or even validated post project completion) lack a Portfolio Management approach that could save them time and money.

Portfolio Management is an overarching form of governance exerted by an organization over its Projects and Programmes. The governance framework can be summarized based on the three phases shown below.



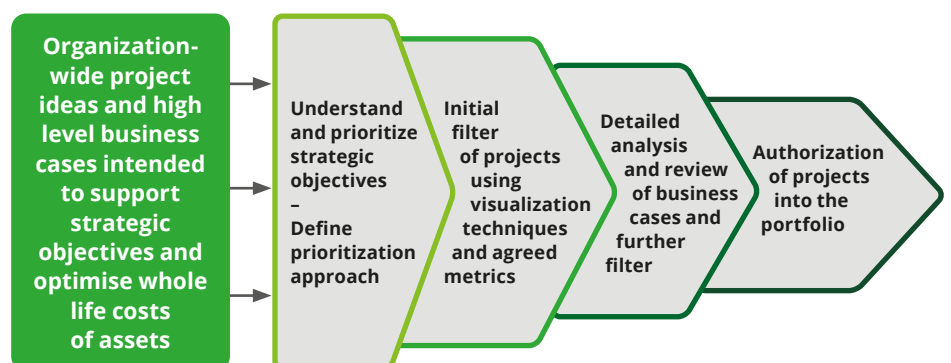
### 1) Prioritize and select projects

Supply chain, funding and resource constraints mean that not all projects can be delivered. Hard decisions have to be made to allocate resources to the projects that provide the greatest benefits. Therefore, the purpose of this phase is to generate an agreed list of deliverable projects and initiatives that will achieve an organization's strategic goals and objectives. This can be achieved by using a progressive filtering approach such as the one shown below.

Criteria for portfolio entry must be clear, unambiguous and rigorously applied in order to avoid the risk of 'Pet Projects'. In addition, the risk profile of the selected final portfolio needs to be in line with the risk appetite of the organization.

### 2) Portfolio reporting & reviews

Portfolio reporting should provide accurate, timely, relevant and clear Portfolio information in focused reports that enable decisions to be taken in executive level Portfolio reviews. A centralized and corporate Portfolio Management Office is typically used to generate Portfolio reports that:



- Help executives understand what is happening across the Portfolio
- Provide assurance that projects are on track and strategic goals can be met
- Provide recommendations on interventions required (such as stopping and starting projects)
- Align with, but not replicate or overlap, Project Management and business unit reporting

Without a central Portfolio Management Office, the performance of projects (in terms of time, cost, resources, progress and risk) will be reported by disparate functions and business units responsible for delivering them. Due to varying maturity and approaches to Project Management for say CAPEX or IT investment projects, the information reported will vary in quality and quantity and make like-for-like comparison between projects impossible.

The purpose of Portfolio reviews are for an organization's Executive Committee to decide if the Portfolio contains the most effective set of projects, based on a consolidated view of the status and forecasts of each.

Reviews should allow the Executive Committee overseeing the Portfolio to consider current status and forecasts in order to decide if the Portfolio contains the most effective set of projects. Reviews should include project and business unit managers in order to provide a view on the achievability of projects meeting their original business case and to support an informed discussion regarding alternative proposals.

Ultimately the questions that need to be answered are:

- Which Projects should start?
- Which Projects should stop?
- Which resources should be re-allocated?
- Is the risk profile of the Portfolio balanced?

### 3) Benefits Management

As projects deliver their intended outcomes and benefits to the organization, the assessment of the extent to which the projects (and the Portfolio) have been successful in achieving the organization's strategic goals should be assessed through Benefits Management. Its objective is to obtain feedback on benefits realized vs. benefits planned and delivery performance in order to inform future investment decisions.

While Benefits Realization occurs at the end of projects, Benefits Management should be a continuous process that begins at project inception. Benefits should be identified and defined at the Business Case stage, tracked throughout the development and delivery phases and measured upon project completion using a structured Benefits Management framework. A fundamental activity is Benefits Mapping, which is used to provide a line of sight or "Benefits Chain" between Projects and Strategic Objectives by identifying relationships, outcomes and benefits. The earlier this activity is undertaken, the sooner projects that have

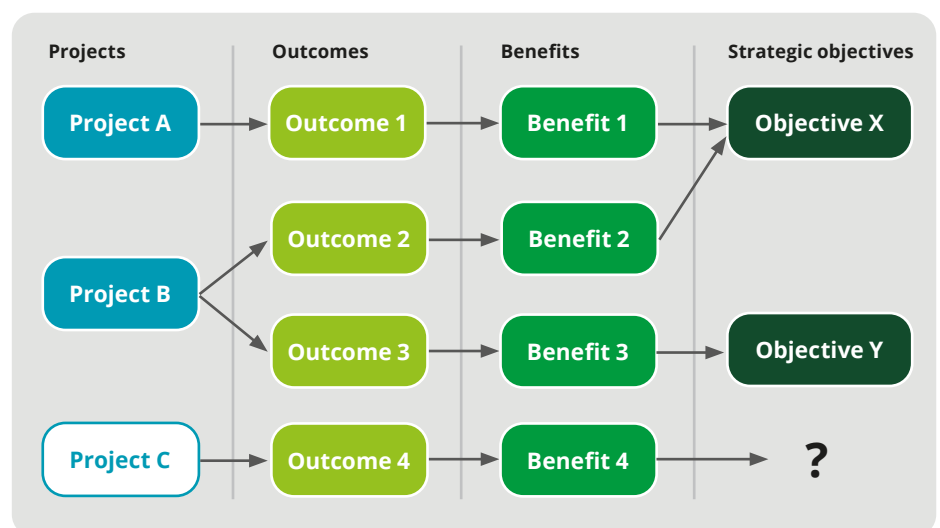
been started without strategic business alignment can be identified, and also which projects should be top priority. An example of a Benefits Map is shown below.

### Successful Portfolio Management

The purpose of Portfolio Management is to prevent the allocation of an organization's finite resources to projects that will fail to add value to an organization due to, cost and time overruns, benefits shortfalls and misalignment to strategic objectives.

Adopting a structured Portfolio Management approach can help organizations reduce the risk of committing to economically unsustainable projects and therefore can facilitate significant financial savings. Fundamentally, Portfolio Management helps an organization to become pro-active and in-control of their investment decisions while negating the requirement to undertake costly and time-consuming portfolio rationalization exercises. ●

by **Matthew Hanson**  
Senior Manager, Capital Programs,  
Deloitte Middle East



The background is a dark green field filled with a complex network of glowing green and yellow lines and nodes. The lines form various geometric shapes, including triangles and rectangles, some of which are highlighted with a brighter green glow. The nodes are small, bright green and yellow dots, some of which are larger and more prominent. The overall effect is that of a digital or data network, with a sense of depth and connectivity.

# Construction Tech through a legal lens

Razor thin margins have left the construction industry lagging behind in the race for digitalization, but pointing to the lack of money for investment is no longer enough. Sustainability must now be at the core of how businesses, industries and countries operate. With Expo 2020 under way and underpinned by the Sustainability District and hosting COP28 in 2023, the UAE has declared its intent, and the construction sector better keep up.

## Sustainability must now be at the core of how businesses, industries and countries operate.

### 3D printing

Following the launch of its 3D Printing Strategy in 2016, with a target of 25 per cent of buildings to be constructed using 3D printing technology by 2030, Dubai Future Foundation was awarded the Guinness World Records title for the world's first 3D-printed commercial building last year.

The home of the Dubai Future Academy was created with just one 3D printer. It took 17 days to print and 3 months to build. It is said to have required 50 percent less manpower than traditional methods of construction and importantly produced 60 percent less construction waste.

3D printing of buildings, or component parts of buildings not only saves time and construction waste: on-site printed elements allow greater potential for customization and creation of complex structures, or last minute changes; off-site manufacture aids the ability to construct in inhospitable places, or temperatures. 3D printing builds on some of the benefits of modular construction such as fewer interface and tolerance problems, and reduced maintenance costs for end-users.

Currently, 3D printing remains relatively high cost with standard 3D printers constrained by size. However, Dubai's 3D Printing Strategy plans to encourage the private sector and consultants "to adopt the processes of transformation towards printing buildings through a combination of direct impact incentives". This August saw the framework put in place through the issuance of decree no. (24) of 2021 regulating the use of 3D printing in the construction sector in Dubai.

### Surveying and progress monitoring

Beyond the public sector, other technologies are being adopted. Increasingly, crane cameras and drones are being used to survey and monitor projects. A step further, is 3D laser scanning, which can identify alignment problems through the scanning of installations to an accuracy of +/- 3mm, allowing early rectification and minimizing waste through error.

Perhaps most transformational is the emergence of technologies that can integrate tracking with project monitoring and reporting tools. For example, technology that takes a visual imprint of progress and overlays it on drawings and programmes, and in doing so quantifies progress over time.

This technology has the potential to produce a single source of truth for assessing progress payments, removing the mismatch between the contractor's payment application and engineer's payment certificate. Importantly reducing the time taken for the manual assessment of the percentage level of completeness, and removing an impediment to timely and appropriate cashflow. Cashflow, of course, being crucial to the sustainability of the supply chain.

## Most transformational is the emergence of technologies that can integrate tracking with project monitoring and reporting tools.

Further, the integration with project programmes allows for early warnings of delay, enabling open collaboration on mitigation measures, or, at worst, supporting the timely delivery of contractual notices.

If plugged into a BIM 4D model it could identify the time impact (and in BIM 5D, in time, quantify prolongation cost), providing the opportunity to make informed decisions on future actions with speed and efficiency.

With integrated technology already in existence, it is not difficult to envisage it paired with a blockchain-backed smart contract for the automatic triggering of progress payments through the supply chain from a project bank account. Aside from the cashflow benefits, the irrefutable proof of payment status having the benefit of eliminating payment disputes.

Back to the present, what the existing technology can achieve is a single source of truth on progress and delay against an agreed programme. This has the very real potential to reduce the incidence of long and costly delay claims. Where claims still occur they may cost less and the outcome be more reliable as a result of the availability and accuracy of evidence.

### Big Data

The measurement of a building's performance is already commonplace. Encouraging sustainability through informing lifecycle and maintenance activity. Again, it is time for construction to catch up.

The ability to obtain large data sets can facilitate the identification of trends and patterns in behaviour. In this way big data on trends in weather, traffic, community and business activity can be analyzed to determine the optimal phasing of a project, driving efficiency in the construction process.

Data from machinery can measure active and idle time to drive decisions on leasing or buying equipment, as well as fuel efficiency.

### Internet of Things

Smart devices and sensors have the potential to go some way to enabling machinery to maintain itself, for example a cement mixer ordering more cement. They can also be used (including as “wearables”), to track workers, identifying where they are working and when. Even identifying health concerns arising out of exhaustion or heat. These have clear advantages when it comes to safety and to removing the need for timesheets and clocking in/out procedures. Additionally, accurate data sets such as these could also provide an added benefit when prosecuting notoriously difficult disruption claims, evidencing the impact an event had on the deployment of resources.

### The legal perspective

Data protection and privacy requirements are constantly evolving, leading to additional layers of cost and administration, such as licensing and permissions for drone usage.

Of course, technology brings with it the potential to introduce a new breed of disputes: disputes based on inaccurate or incomplete programming at the outset or corruption in the records as the project unfolds. Who should take the risk if there is an error in the technology? Will technology companies carry levels of insurance commensurate with the potential losses to be suffered on a construction project?

Claims are a common part of administering construction contracts, unfortunately a portion of those find their way into formal

disputes. Technology can clearly play a significant role in reducing those disputes and, where disputes cannot be avoided, streamlining the process by providing accurate, unarguable evidence. The rise of technology does, however, create different challenges for dispute processes. There is already much more data to be reviewed. All forms of data (even metadata), electronic communications, photographic, videographic, audio are all likely to be discoverable (i.e. a party to a dispute may have to produce it for inspection by the other party). Legal tech is doing its best to keep up utilizing hosting platforms and intelligent search functions, and increasingly, AI programmes for first cut “document” reviews. This too comes at a cost, and many forms of construction documentation such as drawings and BIM data falls outwith the current technology’s capability.

There are also issues around maintaining confidentiality and legal privilege (the right not to produce certain narrow categories of documents during court or arbitration proceedings) in documents and data which can, and is, readily shared and reproduced.

Courts or tribunals will need to gain an understanding of the legal and contractual nuances of the technology. Legal principles will take time to evolve and become enshrined in the laws before their application can be predicted.

Unfortunately, one dispute that it is hard to see technology disposing of is the one around payment for variations. The last few years have seen a much complained of trend across the UAE for employers to pay the contract sum but not recognize

variations. It is difficult to see how progress monitoring or scanning technology (even when integrated with the project documents) will resolve the argument as to whether an instruction or set of circumstances amounts to a variation to the works for which the contractor is entitled to be paid. Software can now identify changes from one drawing to the next, and such changes would be recorded in a BIM model, but knowing where the change arose does not deal with who should carry the time and cost implications of it. It may, however, result in the arguments taking place earlier, avoiding claims gaining size and momentum further down the line.

### The cost challenge

Whilst promotion and funding of research and design, technology development and education might be delivered at government levels, the adoption of construction technology tends to fall to the company level. Prioritizing the adoption of construction technology at a time when it is continuing to evolve remains challenging for an industry on such tight margins. As recognized by the Dubai 3D Printing Strategy, incentive schemes for the deployment of construction technology will be key to ensuring countries reap the sustainability benefits of construction technology. ●

by **Suzannah Newbould**  
Partner, DLA Piper

# All Eyes on sustainability



The topic of sustainability and the built environment is certainly not new, for the past 20 years the construction industry has been trying to tackle how built assets can be delivered in a more sustainable way. During that period macro-economic events or the cyclical boom & bust nature of commercial property have inevitably influenced the pace of evolution – however the agenda is now influencing such a diverse range of stakeholders that structural change is happening...fast.

In the year of COP 26, continued scientific evidence of the rate of climate change underlines the urgency with which world leaders are being urged to act. The Paris Agreement in 2015 saw countries pledge to try to keep global warming to no more than 1.5C above pre-industrial period levels. COP 26 provides the stage for countries to set out their carbon reduction plans for 2030. Many have stated ambitions to achieve “net zero” by 2050; ambitions which require significant actions in the very short term.

### **The construction industry**

Specific to the construction industry there is a strong sentiment that government intervention in the form of legislation or financial incentives are essential, in order to drive a greener industry and ensure national and global climate change targets are met. In a highly fragmented industry such as construction, it is difficult to argue against that point of view. As an example, consideration must be given to enshrining targets into ‘local’ planning and building regulations to ensure ‘developers’ build in accordance with the targets before then committing to “offsetting” their carbon impact. This would ensure whole life carbon assessments are part of a projects’ DNA during the critical briefing and design stages.

From an industry perspective reliance cannot be solely placed on Government intervention to drive progress, change and innovation will need to be driven from within. Key to that will be how well the entire supply chain encompassing consultants, designers, contractors, and suppliers can collaborate and work towards common goals.

## **There is a strong sentiment that government intervention in the form of legislation or financial incentives are essential, in order to drive a greener industry.**

In reviewing the common goals, the industry will need to consider what are the current challenges or obstacles that may exist and determine a methodology to overcome. The table below highlights some of the key topics and is not exhaustive:

- Ensuring the client’s climate change targets are front and centre of the project brief and are fully embedded throughout design, procurement, and construction. This may drive early decisions such as whether to demolish and re-build or retrofit when assessing feasibility options for an existing asset.
- Being able to move away from the industry’s historic fixation on price and consider whole life costs for assets and buildings.
- Addressing the skills that currently sit within projects teams and understand where weaknesses or gaps may exist and put measures in place to ensure our people can be upskilled as and where necessary.
- Innovation will drive change but is unlikely to be the sole saviour within the timescales required. The industry is still hugely reliant on the use of concrete, the production of cement accounts for approximately 8% of global CO2 emissions. Therefore, huge benefits could be derived from the increased use of carbon neutral concrete or consideration of alternatives such as timber.
- In terms of construction processes ensure modern methods of construction and technology are fully embraced to maximize cost, time, and environmental performance. Technology must be embraced to ensure the volume of waste and energy consumed in the process is reduced.

The UK Government in 2020 implemented The Construction Playbook which is mandatory across all central government construction and infrastructure projects. The Playbook seeks to align clients and industry to a set of common goals or principles when delivering projects funded by the taxpayer. Part of that relies on collaboration from the outset, recognition of the whole life cost of an asset and the early involvement of the construction supply chain. This is a good example of how the public sector can help to drive positive change and earn hearts and minds of industry.

### **The real estate market**

There is an argument that the breadth of dynamics affecting the real estate market are more complex – or at least more nuanced - than the largely technical challenges confronting the construction industry. Not only are the technical considerations of key and growing concern in the real estate market, but so too are there reporting and reputational issues to contend with in respect of both new properties as well as assets of varying vintage within a portfolio.

Viewed as a form of “risk”, Sustainability presents clear concerns with regards to accelerating rates of obsolescence. Whether through reduced occupational appeal impacting achievable rental levels, extended void periods and the “quality” of tenant (and therefore covenant strength) that may be secured, through to increased exposure to rising levels of capital expenditure and reduced financing appeal there are clear market pricing and valuation challenges afoot. Notwithstanding a body of academic research, the reflection of Sustainability (and broader Environmental, Social and Governance (“ESG”)) issues within valuations is in its relative infancy with limited transactional evidence available to valuers to aid analysis and



to inform judgements. However, the constituent elements of Sustainability present demonstrable challenges to traditional approaches to market pricing. The RICS is currently consulting on a new Guidance Note on the subject of Valuation and Sustainability which will be mandatory to valuers and is expected to aid this evolution.

Importantly, whilst there is some market commentary that points to the potential to secure “Green Premiums” for assets with strong sustainability credentials, there is a danger that such terminology ignores the challenges of assets whose credentials are less well aligned. Ultimately, “the market” has a capacity to pay a price and will do so

for assets where credentials are robust and resilient...but it will discount if those credentials, which now typically include sustainability as synonymous with best in class, are in any way inferior. It may therefore sound less appealing, but the “Brown Discount” is more pertinent terminology!

Greater transparency in reporting requirements – whether voluntary or mandatory – are effecting change and driving stakeholder choice. By way of example, the Taskforce for Climate Related Financial Disclosures (“TCFD”) was founded in 2017 but has already eclipsed 1,500 signatories with a market capitalization of \$12.6 trillion and assets under

management of over \$150 trillion. Many elements of the TCFD are increasingly being adopted by financial regulators for mandatory application.

To conclude, the focus on Sustainability and ESG has a momentum transcending any financial cycle and is affecting every aspect of real estate construction and ownership. It requires clear planning at the stage of development (or refurbishment) and risk monitoring throughout ownership. Pricing differentials will undoubtedly occur with “Asset Resilience” becoming an ever-used watchword over the coming years. ●

by **Philip Parnell**  
Partner, Real Estate, Deloitte London

**Dan Gregory**  
Director, Real Assets Advisory,  
Deloitte London

The focus on Sustainability and ESG has a momentum transcending any financial cycle.



# Data driven decision making for the real estate sector

Urban planning, asset management and investment decision making for cities of the future is dependent on a clear understanding of the current and future supply-demand dynamics and underlying macro-economic factors. The integration of Artificial Intelligence (AI) and Geographic Information Systems (GIS) with real estate and financial planning expertise enables stakeholders to gain insights by location and asset category. This can support new ways of analyzing historic data and ultimately improve future decisions.

The business planning exercise for a large-scale master plan is dependent on available data, integrated data management and a robust implementation plan that can support timely access and ongoing review of information throughout the development process. The availability of robust real estate market data varies across geographies. However, by incorporating disparate datasets (both internal and external to organizations) into an AI forecasting solution, users can assess and visualize the interaction of different data layers. This is particularly relevant in complex environments such as large-scale master plans with multi-category land uses or where digital twins for cities can be modelled along with real time impacts of future projects before a spade is laid in the sand.

The impact of future trends can be studied through scenario analysis that draws from enriched data sets incorporating asset-level information, macro-economic data, and public opinion. In addition, it is possible to augment this analysis by linking, where possible, future Building Information Modelling (BIM) and smart city data. Ultimately this can enable users of the solution to interact with these customized and highly interactive analytics, made available in easily digested formats, where and when needed.

**Data strategy**

A pre-defined and integrated data strategy framework can support business planning for real estate projects by assessing the needs of the organization and defining roles and responsibilities for the implementation stage, including, but not limited to the following:

**Figure 1. Data strategy framework**

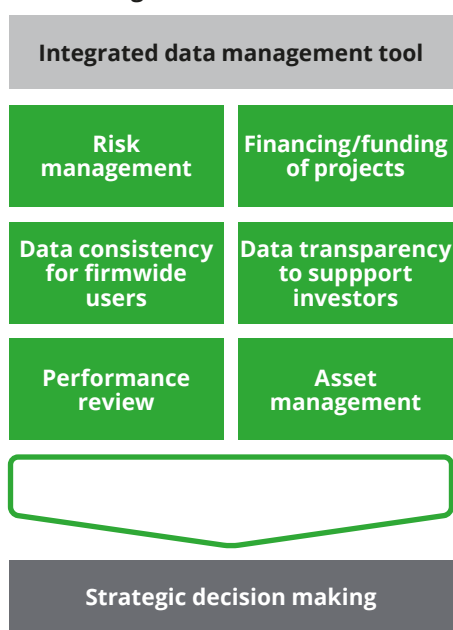


Source: Deloitte

**Integrated AI enabled forecasting solution**

A fully customizable forecasting solution can drive a market-based response to real estate throughout the project lifecycle, supporting the following key areas:

**Figure 2. Focus areas for an integrated data management tool**



Source: Deloitte

**Case Study: Use of Deloitte's Intuition accelerator to build a forecasting tool for a city planning department in GCC**

Deloitte developed an integrated decision-making framework for a city planning department in the GCC. The tool was developed to study the historic trends within the residential, retail, office, hospitality, and industrial sectors, along with relevant macro-economic indicators, to provide forecasting for key metrics using Deloitte's time series accelerator, Intuition.

Intuition is a bespoke forecasting engine that automates the process of identifying unique and complex trends within a data set by passing the data through different algorithms to pair the most predictive algorithm, with the provided data. The final solution also enabled a sophisticated scenario modelling component where the users can plan for certain scenarios, identify potential key drivers, and ultimately ensure better planning takes place for large (or small) scale events in the future.

The project involved a four-stage approach:

**Stage 1: Data discovery and design**

Data provided by the planning department, other government entities and extracted from public sources, was first cleansed, enriched and structured in a manner that would aid the forecasting process, as well as allow us to discover insights and connections. For instance, to study the change in residential prices, historic data on price performance, supply additions each year and investment yields were enriched using macro-economic variables such as GDP and currency fluctuations, that provided an additional dimension to insights and projections. Deloitte's local real estate expertise played a critical role in this stage.

Solutions of this nature also need to be customized and targeted for the individual company / national planning office / end user. Taking a user centered approach to this design component is critical to ensure the solution answers the right question, at the right time in the right manner, and also helps to drive ultimate adoption of data driven decisions within the business.

### Stage 2. Infrastructure setup

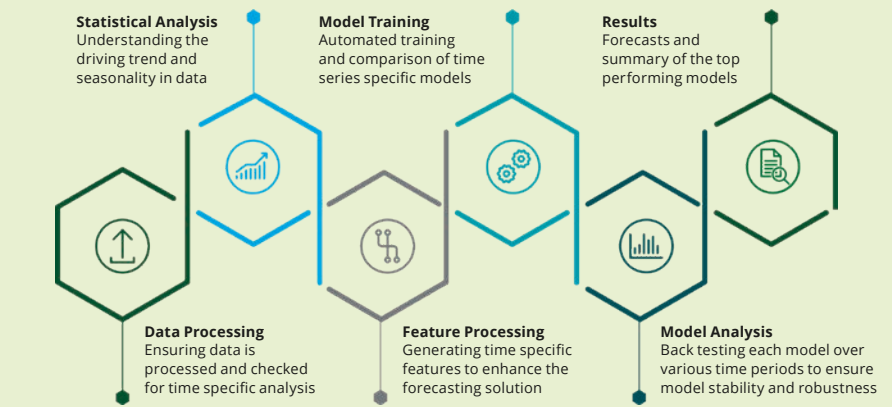
Next the current state of supporting technical infrastructure, costs and compliance needs were assessed to ensure that the tool would be fit-for-purpose. This was completed by engaging with the clients' technical team at the planning department which involved a series of fact-finding and ideation workshops to ensure the best solution was chosen. In order to do so, a detailed assessment was carried out between various hardware (cloud, on premises) and software (custom built, commercially available BI software, etc.)

### Stage 3. Forecast algorithm and scenario analysis

Using Deloitte's time series accelerator, Intuition, multiple forecasts were generated by highlighting previously unrecognized patterns in data and showcasing dependencies, or the lack thereof, in key sector specific and macro-economic drivers. These forecasts

were done at the most applicable data granularity and ensured that thousands of sophisticated models were built taking specific and granular information into account for each one. This enables us to develop highly accurate models at the lowest level of granularity with the best data available, thus supporting ongoing learning from identified patterns.

Figure 3. Forecasting framework



Source: Deloitte

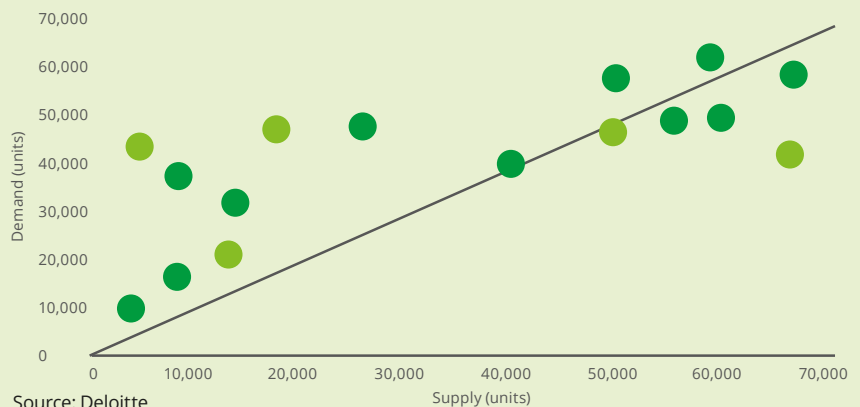
### Stage 4. Consumption of results

A fully customizable consumption layer was built as a web-based and mobile friendly interface for key stakeholders in the real estate development lifecycle to access the outputs and forecasts. This included macro-economic and sector-specific forecasts, the ability to run scenarios for change in low, medium, and high impact drivers and to use the tool to gain a full view of the real estate landscape. The solution also enabled key stakeholders to interact with the tool in different ways through an easy to use interface, further driving adoption in the business.

Figure 4: Scenario analysis extract

Residential sector – Scenario impact comparison

A comparison of scenarios in the residential sector indicating whether the demand has been met or if there is an undersupply or oversupply of units



Source: Deloitte

Our in-depth knowledge of the real estate market in the region, along with our data analytics capabilities, has provided decision support to the city planning department and other stakeholders to assess strategic projects. The unique proposition developed through this landmark project also incorporates training on the solution, thus enabling key personnel within the government departments to use the solution and extract insights independently. ●

by **Oliver Morgan**

Director, Head of Real Estate Development, Deloitte Middle East

**Muzammil Ebrahim**

Partner, Forensic, Deloitte Middle East

**Manika Dhama**

Assistant Director, Real Estate Development, Deloitte Middle East

**Wessel Oosthuizen**

Associate Director, Cognitive Advantage, Deloitte Analytics, Deloitte Africa

# Getting back to basics to move forward – the contract fundamentals driving sustainability



## Summary

The pressures of the COVID-19 pandemic have forced the Middle East construction industry to adapt and innovate to reduce construction costs, resulting in an increased focus on sustainability and changes to traditional building methods. These forward-looking measures are essential to the industry's growth and survival, but the necessity for change in a post-COVID economy also presents a rare opportunity to reform the industry's approach to contracting – in some ways of more fundamental importance to the sustainability of the industry in years to come.

## Challenge breeds innovation

The Middle East construction market, like many others around the world, has faced unprecedented challenges because of the COVID-19 pandemic. In a market of traditionally intense competition and price-sensitivity, rising labor and material costs, supply chain disruption and COVID-related working regulations have increased financial pressure on contractors and employers alike. Project costs have increased, whilst opportunities to pass these costs along the supply chain are limited in the current economy. At the same time, employers are increasingly focused on reducing building operation costs through the use of green and smart technologies.

As a result, the industry has been forced to find new ways to streamline operations and reduce costs. To some extent, the solutions are found in innovation. New building methods, such as off-site production and the use of more efficient building techniques and materials, have reduced the direct costs of construction. Industry standardisation – such as in the new Dubai Building Code introduced in late 2020 – similarly seeks to streamline building processes, reducing indirect and operating costs.

Embracing these measures will be critical if the industry is to meet ever increasing demand for pricing efficiency over the coming years. Contractors that move quickly to adapt to this new landscape are likely to see the most opportunities

Whilst a reduction in construction and operating costs is essential, these sustainability initiatives are predominantly forward-looking, addressing new and future challenges likely to impact the industry in the years to come.

and benefits as activity increases in the post-COVID market. Those opportunities are significant: as regional vaccination programmes come to fruition, the pressures of the pandemic ease and markets reopen, the Middle East project pipeline is comparatively robust. The value of the UAE's pipeline of projects has been estimated at between US\$ 300 to 600bn alone, with a continued focus on vital transport, energy and infrastructure projects required to meet the demands of a growing population. Qatar continues its preparations to host the FIFA World Cup in 2022 while Saudi Arabia forges ahead with its Vision 2030 programme of projects estimated to exceed US\$ 1tn in value.

However, whilst a reduction in construction and operating costs is essential, these sustainability initiatives are predominantly forward-looking, addressing new and future challenges likely to impact the industry in the years to come. This is only one aspect of developing a sustainable business model for the construction industry of the future. Of equal (if not greater) importance is the need for a fair, attractive and profitable business environment to drive market activity – something which, historically, the Middle East construction sector has struggled to offer.

## Historical trends of regional construction

The regional construction industry has long suffered from notoriously low margins. For more than a decade, endemic problems – a “lowest-price-wins” culture, payment issues and poor contract administration, to name a few – have pushed prices and margins ever lower and created a difficult operating environment.

Artificially low tenders inevitably lead to funding gaps in construction, resulting in a “bid low, claim high” approach that encourages costly and resource-intensive disputes and reduces quality of output in the meantime. Conversely, lack of timely payment and proper contract administration hinders progress, leading to reciprocal claims up and down the supply chain and a significant reduction of cash-flow essential to most construction businesses.

It is perhaps unsurprising, therefore, that the average value of construction disputes in the Middle East has consistently been higher than in comparable markets for the past several years. Until these disputes are resolved – which may often take years – it is common for projects to be essentially funded out of the contractor's cash reserves (often originating from other projects, which in turn are put under financial pressure). This is a financial burden that few construction firms are able to bear.

In a booming market, these issues become less important as the next project and cash injection is always on the horizon. That has changed. Falling oil prices – of critical importance in a region where construction is heavily driven by government investment and projects – and now COVID have led to a lack of liquidity across the industry and a market contraction. Against this backdrop, companies have been competing to win a smaller pool of work and are less able to rely on future projects to address the problems in their existing contracts. The issues that were once concealed by the next big win have instead been thrown into sharp relief once more.

For many, these fundamental issues pose a greater threat to the long-term viability of the Middle East construction industry than any COVID-related factors. After all, an inhospitable, unprofitable market is unlikely to be sustainable.

These risks are not hypothetical: the past few years have seen several key players seek to restructure their businesses to contend with rising market pressures, whilst others have folded or left the market entirely, seeking greener pastures.

When this happens, the consequences are rarely self-contained: knock-on impact is felt by employers, suppliers, subcontractors and lenders alike, often with further casualties up and down the supply chain. Few, if any, project stakeholders emerge unscathed.

### Going back (to basics) to move forward

The market is already adapting – perhaps belatedly – to these kinds of events as parties seek to protect themselves on future projects. There is a greater restriction on lending to contractors, particularly those deemed “at risk”, and a growing reluctance on the part of banks to issue unconditional performance bonds – a traditional, but occasionally-abused, mainstay in regional contracts.

In an industry already under pressure and where “cash is king”, a reduction in the availability of funding and finance facilities is likely to be a cause for concern. As market activity increases post-COVID, the temptation will be to revert to previous practices to bring work through the door. However, the industry should be wary of repeating the same mistakes of old and would do well to take advantage of the opportunity for change, already imposed by the pandemic and the shift in approach to financing, to improve industry resilience for the future.

Ironically, from a legal and contracting perspective, the key to addressing these issues lies less in forward-looking innovation, but rather going back to basics to get the fundamentals right from the start:

## Going back to basics to get the fundamentals right from the start.

- **Realistic pricing:** Proper pricing is essential. The temptation is to bid low to win the work, trusting that the job will become profitable in the end. This can happen, but far more common is for an under-priced job to run into difficulties as funding fails to match project costs. This can lead to delays and claims against an already cash-strapped contractor, pushing the project and parties into further difficulty.
- **Tender evaluation:** Similarly, the industry needs to move away from a “lowest price wins” approach to awarding projects. The cheapest tender, whilst superficially attractive, may not be the most appropriate tender for the proper and timely completion of the project. Indeed, an initial saving may end up costing more as claims roll in or a project stalls. In contrast, a fair contract price, based on a greater recognition and understanding of the actual costs of construction projects, business sustainability and the importance of cash-flow to the construction industry, is likely to result in fewer problems down the line.
- **Clear contract terms:** Given the prevailing use of international standard-forms across the region, it is perhaps surprising how often uncertainty is introduced into contracts through unclear drafting. A failure to understand and comply with contract terms is often cited as a leading cause of disputes on construction projects, demonstrating the pervasiveness of this problem. Investing the time and effort to ensure the contract is properly drafted will likely pay dividends in the long run.
- **Fair risk allocation:** Tempting as it is to push all the risks of a project onto one party (often the contractor), a better approach is to ensure that the risks are borne by the party most suited to do so. Onerous provisions concerning time-bars, penalties for interim milestones

and concurrent delays may seem an attractive way to incentivise performance, but are often not as watertight as intended and can be counter-productive. Commonly, they serve only to deprive a party of a legitimate entitlement, which can have a detrimental impact on performance. A party may feel it has no option but to escalate disputes to formal proceedings, incurring further costs for all concerned.

- **Fair and proper contract administration:** Contract administration has long been a major cause of problems on construction projects in the Middle East. Unfortunately, fair and proper contract administration can be surprisingly contentious, often viewed through an adversarial lens rather than a collaborative one. This is counter-productive. A failure to award fair entitlements in a timely manner may seem like a cost-saving, but in reality creates further difficulties and increases the likelihood of costly disputes. Conversely, failure to serve notices on time hinders employers’ abilities to manage cash-flow and budget for project costs, potentially leading to difficulties in making payments. Rather than being seen as adversarial, contract mechanisms should be recognised as a useful tool to resolve project issues proactively and collaboratively.

As the saying goes, “a rising tide lifts all boats”. A fair, balanced and overall profitable industry is to everyone’s benefit and is essential for the viability of the Middle East construction industry in the years to come. At a time when sustainability-driven change is at the forefront of business agendas, now is the time for the regional industry to ensure it has the proper foundations in place to drive growth for the future.

by **Beau McLaren**  
Partner, Clyde & Co

# The growth of sustainable cities





Cities are significant users of resources and source of emissions. According to UN Habitat, cities consume 78 per cent of the world's energy and produce more than 60 per cent of greenhouse gas emissions. In order to limit global warming to 1.5 degrees Celsius, a recent IPCC report highlighted that this would "require rapid and far-reaching transitions in uses of energy, land, urban and infrastructure (including transport and buildings) and industrial systems."<sup>1</sup>

Cities are also where most people live, with around 55 percent of the world's population today living in an urban area or city. That figure is set to rise to 68 percent by 2050, according to the "Population Division" report from the UN's Department of Economic and Social Affairs.<sup>2</sup>

Clearly then, if cities can be made to be more sustainable, the effect on resources, emissions and society would be enormous. Investment in smart transportation, green buildings and data-driven technologies will help ensure viable economic growth and will play an increasing role in making the urban environment "inclusive, safe, resilient and sustainable" - the target of the 11th UN Sustainable Development Goal, to be achieved by 2030.

### **What are sustainable cities?**

Sustainable cities are those that are built and developed with environmental concerns in mind. Cities can be planned, designed and built in a way that incorporates key sustainability features through green building, sustainable mobility options, and water and energy usage. This was the idea behind Masdar's pioneering vision for Masdar City, which was to directly address the increasing challenges of the climate crisis and the crucial role that cities would play in providing solutions to realize more sustainable urban living for everyone. Through this project, we are actively

demonstrating how these key sustainability features can be applied in a real world practical and cost-effective manner.

At the time it was established, there was no other project like Masdar City, but now we are seeing a rise in similar projects following suit, such as NEOM's The Line, in the Kingdom of Saudi Arabia, Lake Nona in Orlando, USA, and Western Parkland City in Sydney, Australia. This is positive progress.

You can also enhance cities and make them more sustainable, for instance by focusing on transport or housing initiatives, such as those in Egypt that are working with the European Bank for Reconstruction and Development's (EBRD) flagship urban sustainability programme, Green Cities<sup>3</sup> ('brownfield sites'), and creating sustainable

## **Sustainable cities are those that are built and developed with environmental concerns in mind.**

communities within existing cities.

### **What changes are needed to make cities sustainable?**

With countries making net zero/carbon neutrality commitments at a country level, this requires a significant change in the way we consume and use energy, water and waste.

To make changes in cities, we will need clean carbon free energy: solar, wind, storage, hydro and nuclear in different combinations. In this part of the world there are large solar and wind projects, such as those in the UAE, Saudi Arabia, and Oman.

We will also need a much smarter electricity grid and government interventions around the nature of the vehicles we are driving.

Bringing ESG principles into cities to make them more sustainable helps to enable this.

At Masdar City we are looking at sustainability under three pillars: environment, economic and social. Our ambition is to create communities within a walkable environment where social, economic, and environmental sustainability comes together.

### **What do our future cities look like?**

Future cities will seek to incorporate small, mid-rise communities with strong and convenient public transportation links and lots of walkable space. It will be easy to socialize, everything will be accessible, these will be walking-distance, community-based areas. Many new micro mobility options will be anticipated, such as 'last mile' options for transport, like bicycles and electric scooters for example.

Even in older cities, when you look at those communities with amenities within walking distance, they come with higher real estate prices. Basic services within walking distance drives value in real estate. This is true globally. Walkable, livable communities connected by clean and efficient public transportation will be key.

### **How can sustainable cities be funded?**

It takes money to build and renovate and there are some good options to retrofit with finance being available to make energy savings. There is also the growth of green finance: Masdar has been a pioneer in this regard, launching the first green revolving credit facility in the region back in 2018, and more recently launching the region's first sustainable real estate investment trust, the Masdar Green REIT.

1. Cities and Pollution | United Nations

2. 68% of the world population projected to live in urban areas by 2050, says UN | UN DESA | United Nations Department of Economic and Social Affairs

3. Egypt's 6th of October City joins EBRD's urban sustainability programme 'Green Cities' | ZAWYA MENA Edition

In the future, 'green' will be the only thing that will be fundable. Both regulators and investors will push for the green way of doing things. The investment and industrial community are absolutely focused on moving into net zero. Is there a clear pathway for achieving this? Maybe

Future cities will seek to incorporate small, mid-rise communities with strong and convenient public transportation links and lots of walkable space.

not yet, but entities like Masdar City are demonstrating that path, with larger and larger carbon neutral developments, clean transportation, and technology projects – which helps to put us in a more viable situation than we were 10 years ago.

#### **Are there cheaper options to make cities more sustainable?**

Of course – and some of them we should be doing immediately. Operational changes such as encouraging buildings to have their air conditioning systems properly cleaned and maintained can save up to

20% of running costs through efficiency. It's not advisable to invest any capital until you clean your air filters. Also, embrace technology changes: for example, the development and installation of LED lighting to replace incandescent bulbs reduced energy consumption by 90%.

In addition, the cost of renewable technologies like wind and solar is falling significantly which is fueling the rise of renewables as the world's cheapest source of energy. The greater the transition to the use of renewable energy to power our cities, the more sustainable they will become.

#### **At COP26, KSA, UAE and Bahrain committed to a Net Zero country target. Will awareness of sustainability in the development and regeneration of cities assist in meeting these goals? What needs to be done?**

Here in the Middle East, we should be focusing on buildings: inside and around the cities, the development of new sustainable buildings.

Countries will need to put significant money into 'green' projects. Whilst initiatives for renewable energy are doing well, the Middle East needs to increase investment in green transportation: more commitment to green transportation is needed. Water is also a big issue here because the water supply relies on desalination, and it costs money and energy to do it. We should also hold building and construction developers to a higher sustainability target.

Technology still needs to develop to help meet these targets. The role of innovation is very important, and the Gulf countries are realizing this. There is also a focus on 'in country value'. Previously we imported everything, now we want to try and create it here and that itself helps to encourage a local sustainable economy and has a positive social impact that will support a sustainable future. ●

**Damian Regan**, Deloitte Middle East's Sustainability Reporting & Assurance Leader, met **Steve Severance**, Masdar City's Head of Program Management & Investments and discussed how ESG can be incorporated in the planning and development of cities in the Middle East.



This publication has been written in general terms and therefore cannot be relied on to cover specific situations; application of the principles set out will depend upon the particular circumstances involved and we recommend that you obtain professional advice before acting or refraining from acting on any of the contents of this publication. Deloitte & Touche (M.E.) would be pleased to advise readers on how to apply the principles set out in this publication to their specific circumstances. Deloitte & Touche (M.E.) accepts no duty of care or liability for any loss occasioned to any person acting or refraining from action as a result of any material in this publication.

Deloitte refers to one or more of Deloitte Touche Tohmatsu Limited, a UK private company limited by guarantee ("DTTL"), its network of member firms, and their related entities. DTTL and each of its member firms and their related entities are legally separate and independent entities. DTTL (also referred to as "Deloitte Global") does not provide services to clients. Please see [www.deloitte.com/about](http://www.deloitte.com/about) to learn more about our global network of member firms.

Deloitte provides audit, consulting, financial advisory, risk advisory, tax and related services to public and private clients spanning multiple industries. Deloitte serves four out of five Fortune Global 500® companies through a globally connected network of member firms in more than 150 countries and territories bringing world-class capabilities, insights, and high-quality service to address clients' most complex business challenges. To learn more about how Deloitte's approximately 245,000 professionals make an impact that matters, please connect with us on Facebook, LinkedIn, or Twitter.

Deloitte & Touche (M.E.) is a member firm of Deloitte Touche Tohmatsu Limited (DTTL) and is a leading professional services firm established in the Middle East region with uninterrupted presence since 1926. DTME's presence in the Middle East region is established through its affiliated independent legal entities which are licensed to operate and to provide services under the applicable laws and regulations of the relevant country. DTME's affiliates and related entities cannot oblige each other and/or DTME, and when providing services, each affiliate and related entity engages directly and independently with its own clients and shall only be liable only for its own acts or omissions and not those of any other affiliate.

Deloitte provides audit, tax, consulting, financial advisory and risk advisory services through 25 offices in 14 countries with more than 3,300 partners, directors and staff. It is a Tier 1 Tax advisor in the GCC region since 2010 (according to the International Tax Review World Tax Rankings). It has also received numerous awards in the last few years which include best Advisory and Consultancy Firm of the Year 2016 in the CFO Middle East awards, best employer in the Middle East, the Middle East Training & Development Excellence Award by the Institute of Chartered Accountants in England and Wales (ICAEW), as well as the best CSR integrated organization.