

FEBRUARY 2022

ON SITEWomen in Construction profile: Smitha Mathew

TBH on its regional business, ocal trends and its aspirations

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Cover Story

The Path to Net Zero

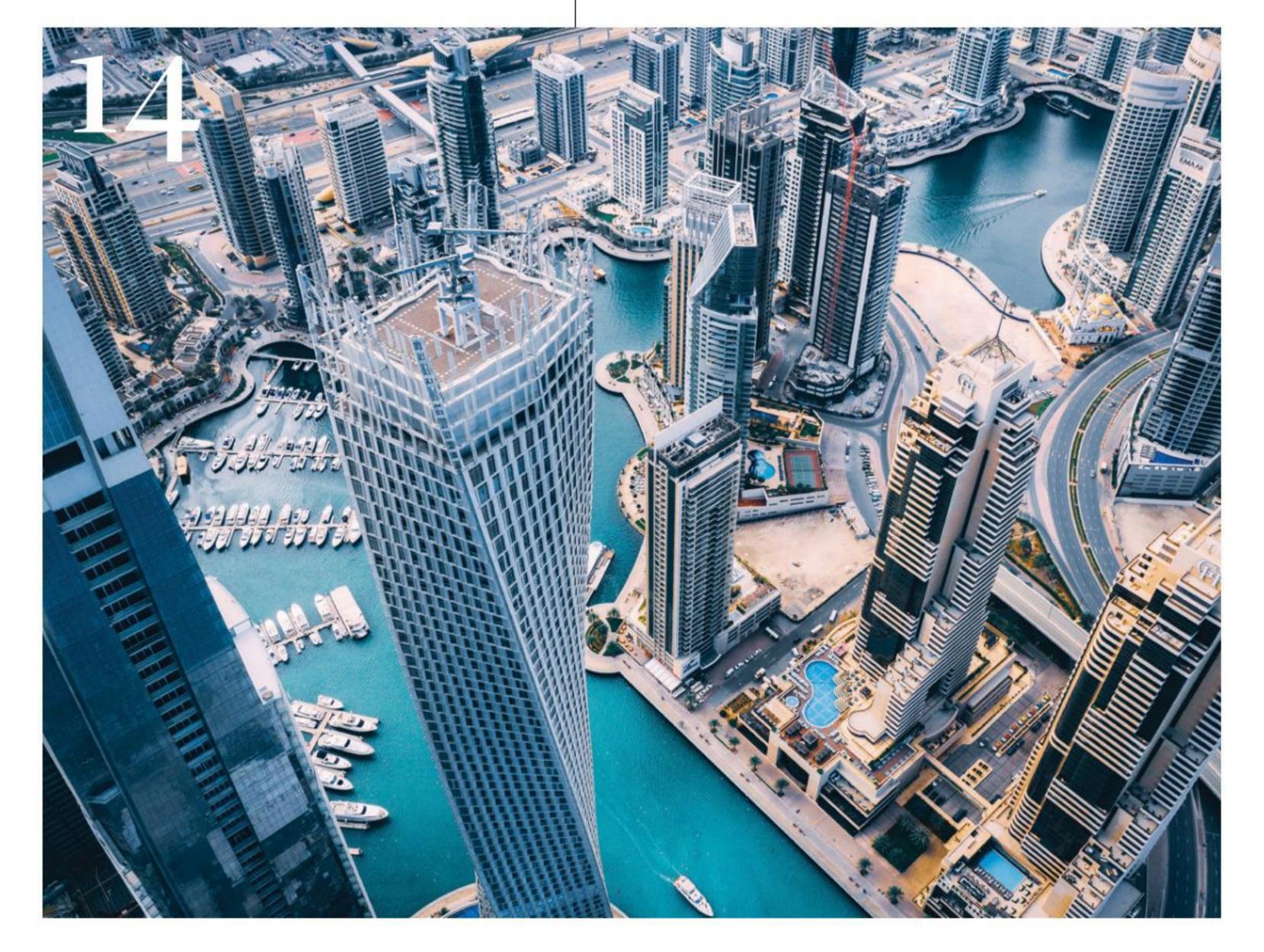
Jason Saundalkar talks to AECOM's Farah Naz about her new book and how the construction industry can transition to net zero

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The Importance of Performance

Saudi enterprises must understand that the performance of assets and the bottom line matters to investors, says Donavan Ellis, digital asset management consultant, Serco

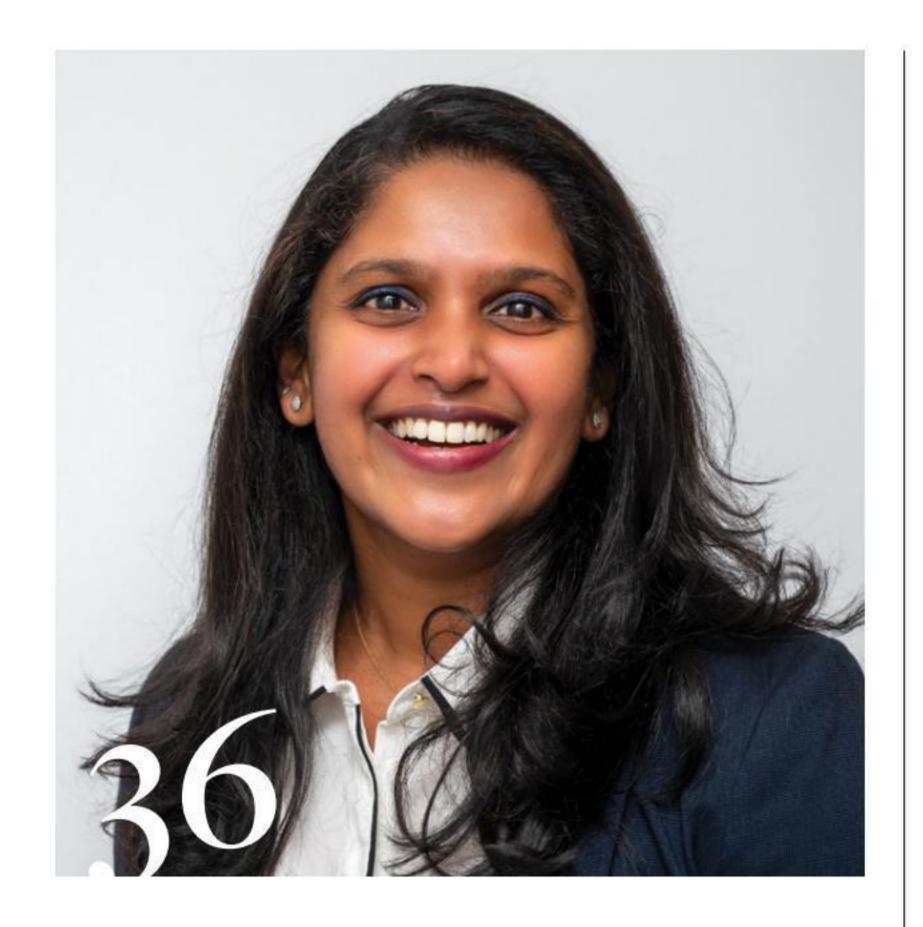




Analysis

UAE Real Estate Overview 2021

JLL reviews the supply and performance of key sectors in Dubai and Abu Dhabi in 2021



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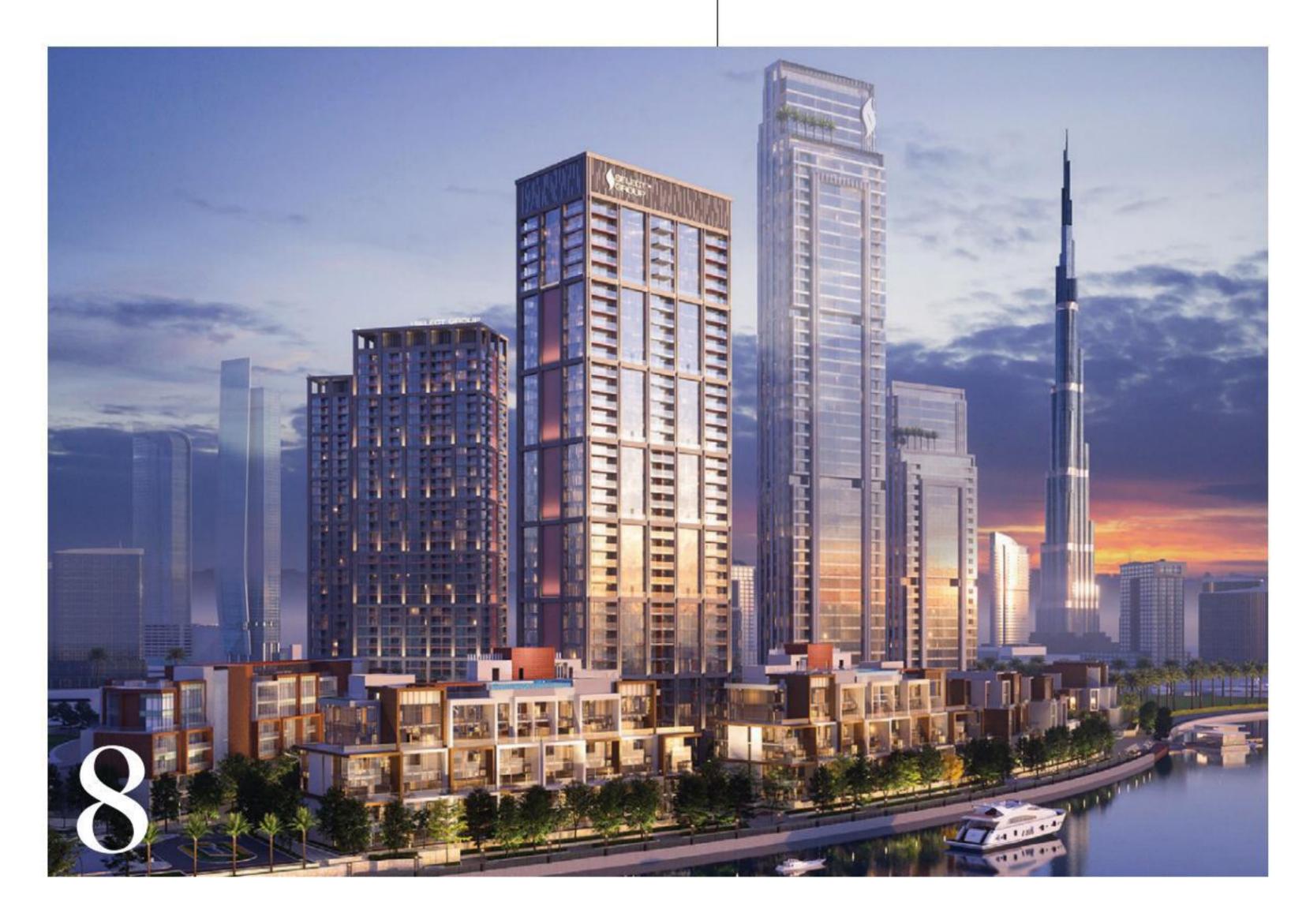
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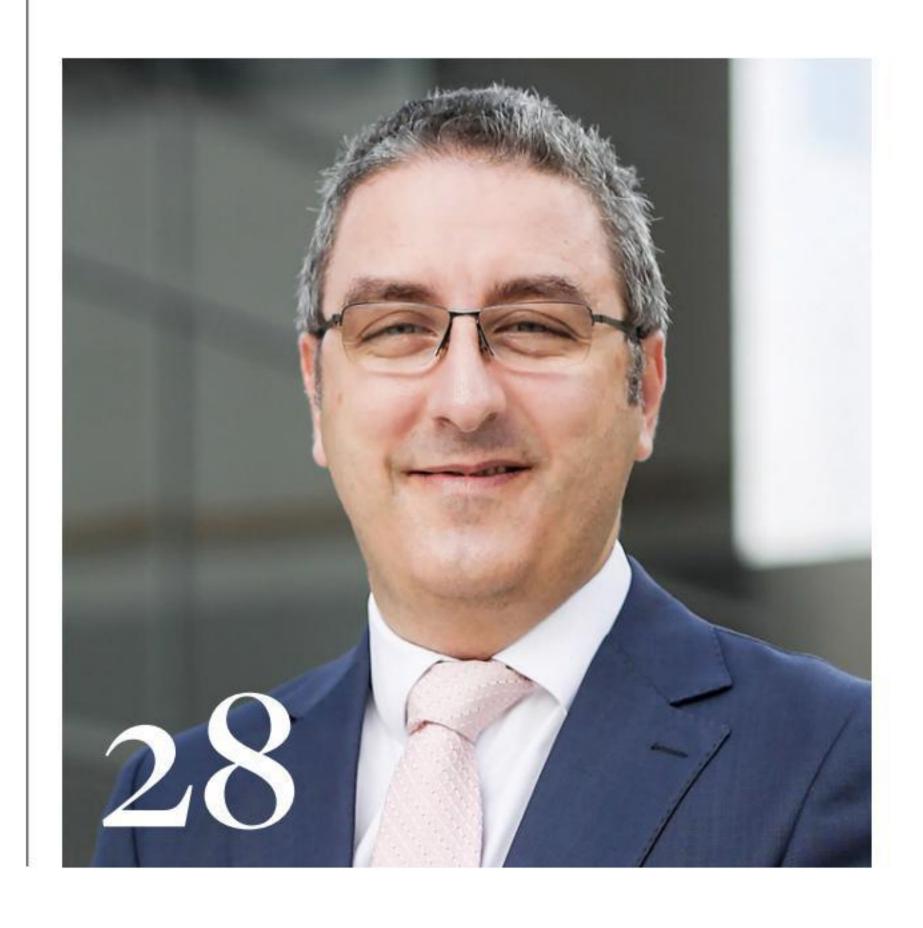
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Interview

Planning for Success

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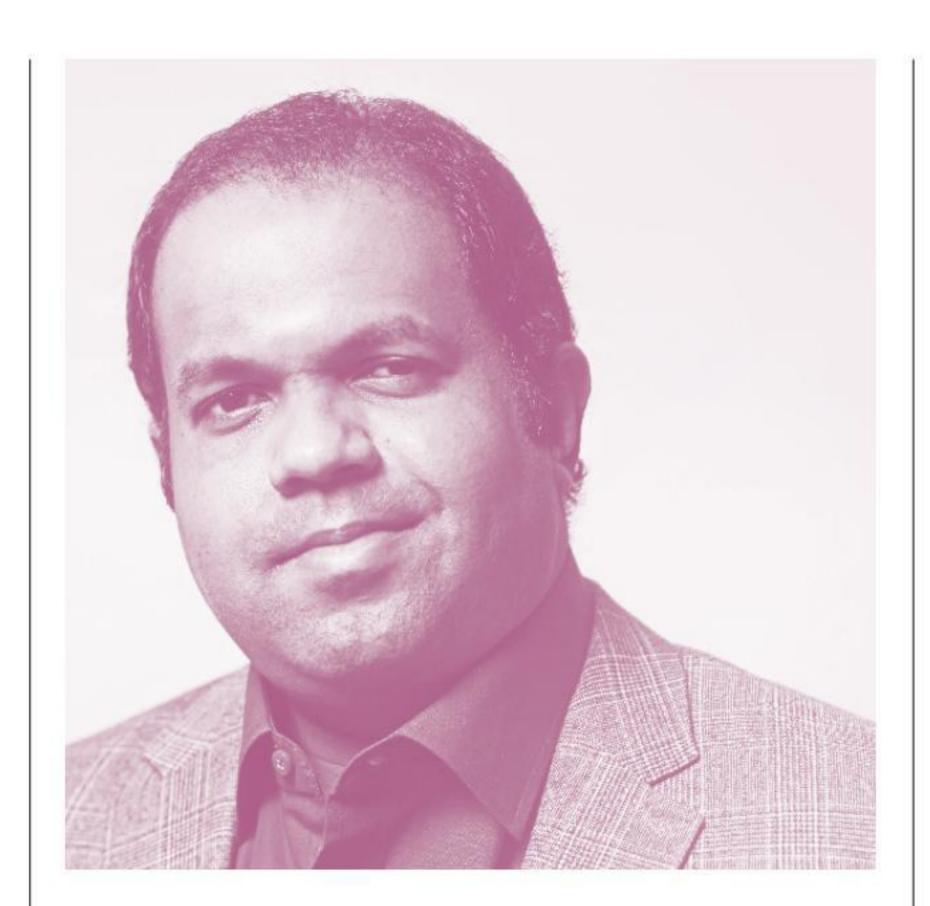


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Fifth time's the charm

Welcome to the second issue of 2022, dear readers. By the time you read this letter, the seventh edition of the annual Middle East Consultant Awards will have taken place, and we'll have recognised no less than 27 winners across our various categories.

Following the close of nominations and judging for the 2021 Middle East Consultant Awards (2021 MEC Awards), one thing became obvious to me – it may well be time for a new approach to nominations and judging.

As I'm sure you're aware through reading this magazine or following us on social media, we broke a record in terms of sourcing nominations for the MEC Awards this year - I can now reveal that we shattered the 200-nomination mark for the first time in the magazine's history, achieving 215 compared to the previous best of 184.

The increase in submissions not only show that the construction sector continues to be vibrant despite a tough couple of years but, when it came to our judging process, it required an absolutely immense amount of time and energy.

I'm very grateful to my panel of judges for the time and energy they dedicated to judging the nominations - especially as it cut into their personal time over Christmas and New Year but it became obvious that a new approach is very much needed. The timing may well be perfect, as the 2021 MEC Awards marks my fifth year presiding over the event.

I've already got several ideas about how to change things up including potentially incorporating a reader voted element but, obviously, it's much too early to discuss anything in great detail now. That said, as many of you participate in awards events locally and across the globe, I'd love to hear your thoughts and feedback on what you'd like to see Middle East Consultant incorporate. After all, these awards are all about recognising the best companies, people and projects and, through your efforts nominating, you've all demonstrated that you're more than up for a challenge.

Rest assured, all will be revealed in due course but, in the meantime, it's on to planning my next big event.

Following its success last year, I'm immensely happy to reveal that the Future of Architecture Summit is making a return in 2022. I have a rough idea of what the event will focus on but, again, I'd love to hear your thoughts in terms of what you'd like to see incorporated into the agenda. So, by all means, please do get in touch via phone or email to share your thoughts. Until next time, stay safe.

Jason Saundalkar Editor, Middle East Consultant

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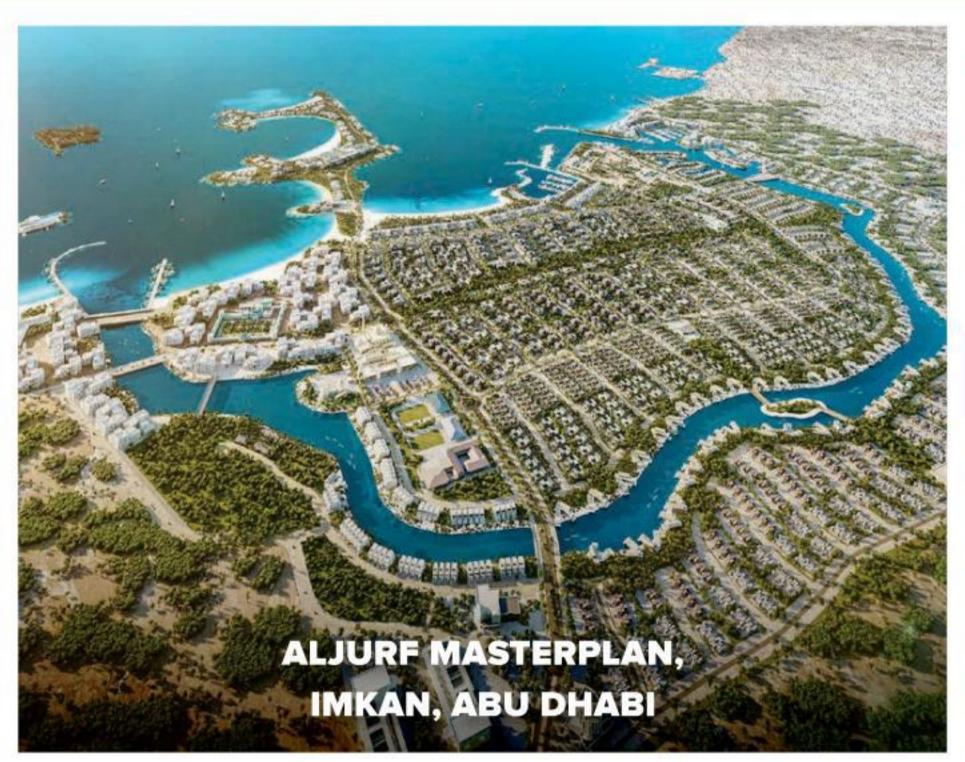


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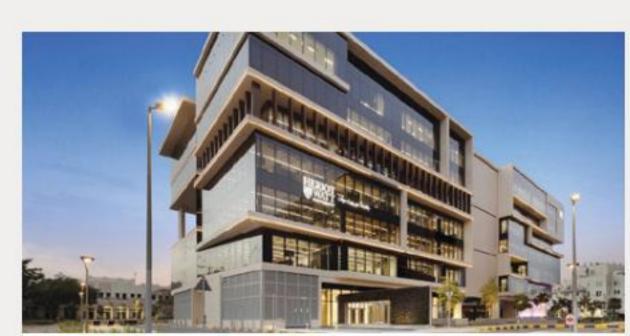
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Select Group launches
new development in
Dubai's Business Bay



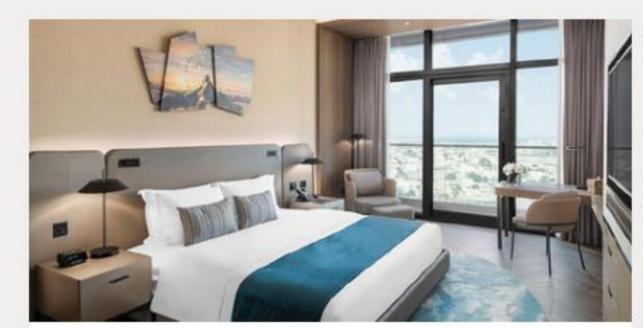
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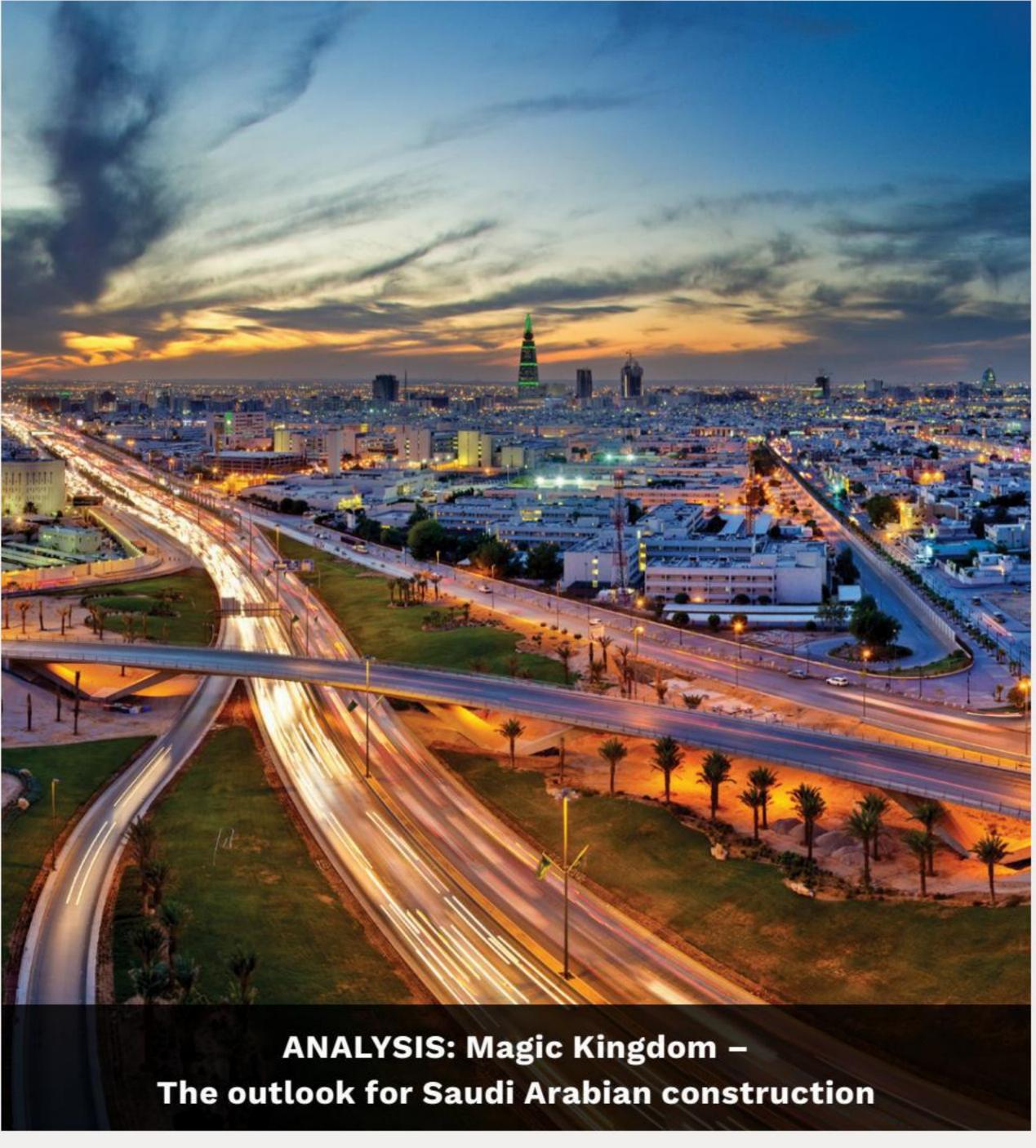
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READERS' COMMENTS

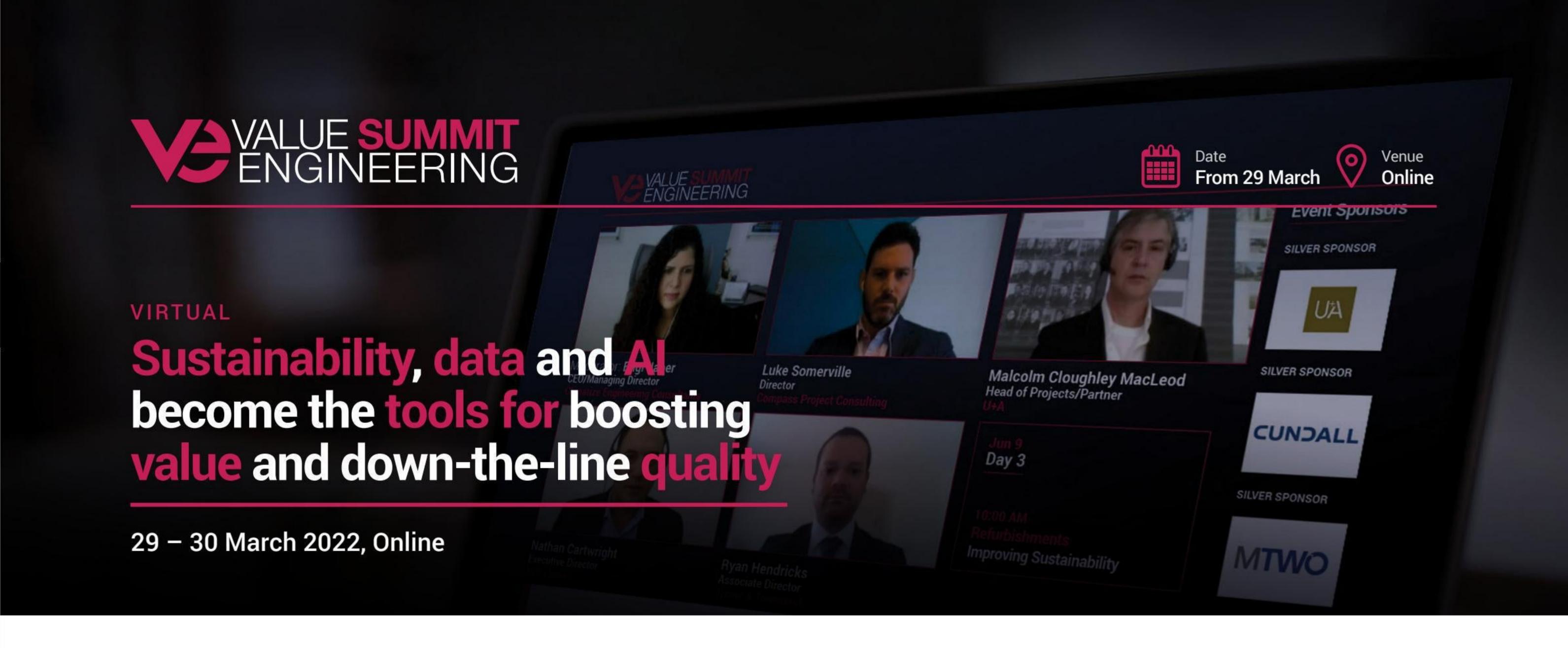


BIG PROJECT MIDDLE
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WINNERS ANNOUNCED

Congratulations to all

the winners at this year's Big Project Middle East Awards. Anyone who has received recognition this year can truly pat themselves on the back after a pretty challenging 12 months for all of us. Covid continues to cause difficulties even if it feels like the construction industry has learned to live with it over the past two years. Hopefully we can now start to look ahead and all being very well this could be the year where we see the light at the end of the tunnel. Talking of the future, I always look at the winners' podium at event like these as an indication as to where the market is heading and it was great to see so many of those collecting awards were doing it on behalf of companies that are serious about safety and sustainability.

Name withheld by request



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Virtual VE Summit

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There is a focus, too, on Artificial Intelligence and how I.O.T tech can transform on-site protocols with new standards of excellence. But are we leveraging these advances enough and fully understanding their worth? Plus, for those brave enough to innovate, the advances in prefabrication and modular construction offer dramatic savings in cost and time.

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New Appointment

Compass announces new CEO

Compass has appointed Spencer Wylie as chief executive officer (CEO) for the group, effective 16 January, 2022. In his role, he will spearhead the next evolution of operational excellence and growth for the project development consultancy.

Wylie has demonstrable specialism in the successful delivery of giga and mega- scale turn-key mixed-use developments, PMO and PMC solutions. Over the past 25 years he has realised iconic project successes, while steering business operations within international construction consultancies throughout the Middle East, Africa, and the UK, said a statement from the firm.

"I have long been aware of Compass' reputation in the Middle East and could not turn down the opportunity to join such an agile company, with a natural affinity in improving built environment, which fully aligns with my values. Building on the strong foundations already in place, as well as the support of the Dar Al Arkan partnership, our plans for 2022 and beyond will aid the groups' ambitious goals of becoming an authority in turn-key project development solutions," explained Wylie.

The firm notes Wylie is the first of multiple hires post its partnership with Dar Al Arkan Real Estate Development Company.

He will be structuring an expanded suite of service lines offering integrated property development solutions for project owners, strengthened with sustainable modern methods of construction and innovative technology methodologies, the firm added.

Peninsula Five will feature 381 units, spread between a 36-storey residential tower and two standalone blocks of waterfront duplex residences.



Spencer Wylie has over 25 years of project successes, delivering giga and mega-scale turn-key mixed-use developments within the region and overseas.

Masterplan

Select Group launches new development

Select Group has announced its latest waterfront development in Business Bay, Dubai. Peninsula Five, The Signature Collection is to be completed by Q4, 2024 and is said to represent the premiere of 'The Signature Collection' - a collection of developments that present elevated excellence in residential living for the discerning buyer.

The development will deliver a balanced blend of spacious and elegant waterfront residential units, combined with views of the Burj Khalifa, the Downtown skyline and the Dubai Water Canal, said the developer.

Peninsula Five is the third series of residences within Select Group's first large-



scale waterfront masterplan. Following the launch of Peninsula in October 2021, Peninsula Five is the fourth new development to be announced by Select Group within the past 12 months.

"We are delighted to unveil our plans for Peninsula Five, the first development within 'The Signature Collection' by Select Group. Having witnessed the immense appetite for luxurious waterfront residences, we feel the timing is right to introduce our latest range of elevated residences to the market. Peninsula Five allows us to offer buyers a premium level product that is currently missing in Business Bay," said Rahail Aslam, CEO, Select Group.

Peninsula Five will comprise 381 units, spread between a 36-storey residential tower and two standalone blocks of waterfront duplex residences. The tower will consist of 321 units ranging from studios starting to three-bedroom 'semi-penthouses', which offer 180-degree panoramic views of the Downtown skyline and waterways.





Farnek aims to cut its electricity, water, refrigerants, and fuel consumption by 30% by 2026. It also plans to cut its waste output by 10%.

Net Zero

showcases roadmap to Net Zero

Facilities management (FM) company Farnek has unveiled its roadmap to achieve Net Zero emissions by 2050, supporting the UAE's strategic initiative.

Using 2021 as a baseline, Farnek consultants have already identified the scope and boundaries, to accurately measure its carbon footprint. Apart from building performance, such as energy and water consumption, Farnek is also taking into account employee travel, logistics, purchased good and services, waste disposal, as well as focusing on recycling, renewables and other lower carbon alternatives, a statement from the firm explained.

"In terms of corporate business strategy, net zero is the future. If the UAE is to achieve its net zero ambitions, the private sector must support the government and with COP 28 being held in Abu Dhabi, it is vital that organisations start to plan their environmental strategy now. Sustainability also affords operational savings, competitive advantage and strengthens relationships with stakeholders. We see climate action as a business-critical issue that needs to be addressed within our own operations and across our value chain first, setting a good example," said Markus Oberlin, CEO, Farnek.

Farnek's carbon emissions will be calculated using software designed by ClimatePartner, the statement noted.

Nadia Ibrahim, head of sustainability at Farnek added, "We have already set emission targets for each category and applied an initial five-year reduction goal, which will be reviewed annually to gauge progress, make adjustments if necessary and disclose the results to be transparent. By 2026 we aim to reduce our electricity, water, refrigerants and fuel consumption by 30%. We will also cut our waste by 10% and lower emissions associated with purchased good and services by 5%."

In 2031, Farnek's objective is to decrease its emissions in these categories by up to 50% and by 2048 its carbon footprint will have been cut by up to 90% overall, the statement pointed out.

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Infrastructure

Masdar and GEDF to develop solar PV project in Georgia

A solar photovoltaic (PV) power project with a capacity as much as 100MW is to be developed, following the signing of an agreement between Masdar and the Georgian Energy Development Fund (GEDF). The project will be Georgia's largest solar power plant, Masdar noted.

As per the terms of the agreement, Masdar and the GEDF will jointly progress the development of the project, which is being carried out as part of a larger framework agreement signed with the GEDF this year to develop renewable energy projects in the Eurasian nation, said a statement from Masdar.

The agreement will support Georgia's energy diversification efforts, and will make a positive contribution on climate action, stated Mohamed Jameel Al Ramahi, CEO of Masdar, after signing the deal with Giorgi Chikovani, CEO of the GEDF.

Al Ramahi added, "As a global leader in renewable energy, with projects in almost 40 countries, we look forward to working with the Georgian Energy Development Fund and the Government of Georgia on further renewable energy opportunities and will leverage our experience to support economic development."

The joint development agreement (JDA) was signed in the presence of Dr Thani bin Ahmed Al Zeyoudi, Minister of State for Foreign Trade, and Natela Turnava, Minister of Economy and Sustainable Development for Georgia, in a ceremony at the Leadership Pavilion at EXPO 2020 Dubai.

Chikovani stated that Georgia strongly follows its route and in accordance with the country's strategy continues its utilisation of renewable energy sources. He added, "This agreement, which aims to develop a solar project with one of the world's leading renewable energy companies, is a precondition for achieving the priority goals and targets of the state energy policy. Development of similar projects will strengthen the energy security of Georgia, contribute to diversification of energy sources and increase the share of renewable energy in the power generation mix."

The GEDF is said to be a joint stock company founded by the Ministry of Economy and Sustainable Development, and is wholly state-owned.

Masdar and the GEDF will jointly develop the 100MW project, which when operational will be the largest solar plant in Georgia.





Exhibition

149,000sqm Bahrain International Exhibition and Convention Centre on track for opening

Construction on the Bahrain International Exhibition and Convention Centre (BIECC) is moving at a steady pace and the project is on track for completion and opening later this year, a senior minister has announced. The project is being built at a total investment of \$221.4m.

The 149,000sqm facility is in Sakhir and boasts 10 exhibition halls, a 4,500sqm conference hall and a parking lot for 1,600 cars. The project also features 95 meeting rooms, Royal and VIP Majlis and a 250-seat restaurant. The foundation stone for the mega project was laid by His Royal Higness Prince



Salman bin Hamad Al Khalifa, Crown Prince Prime Minister in January 2020.

The project is located next to Bahrain International Circuit and is said to comprise exhibition halls and conference rooms fitted with the latest technology to host major shows and celebrations and seal trade transactions.

Industry, Commerce and Tourism Minister Zayed bin Rashid Al Zayani stressed on the strategic importance of the project, which stems from the 2030 Bahrain Economic Vision. The milestone will be a key pillar of Bahrain's new strategy (2022-2026), which focuses on mega national projects such as the BIECC.

Al Zayani was speaking after inspecting the progress of work on the mega project in Al Sakhir. He was accompanied by Bahrain Tourism and Exhibitions Authority CEO Dr Nasser Qaidi and other officials from the Ministry of Works, Municipalities Affairs and Urban Planning.

The BIECC is being built at a total investment of \$221.4m and will boast 10 exhibition halls, as well as a parking lot for 1,600 vehicles.

New Appointment

Cundall announces MENA head of Building Services

Scott McKeever has joined Cundall as MENA head of Building Services. The newly created role will see him take responsibility for growing Cundall's building services team across the MENA region.

According to a statement from the firm, McKeever brings 25 years' experience in the construction industry as a mechanical engineer to his role. He is said to have a wealth of experience leading large regional teams and the region's largest projects.

The firm notes he is interested in driving efficiencies through operational processes and understands the importance of design automation and efficiency in the building services industry.

Commenting on his new role, Scott said: "I am very excited to be given this opportunity to join the Cundall team. The business benefits

Scott McKeever has over 25 years' experience in the construction industry as a mechanical engineer and has led large regional teams and projects.

I am delighted to become a part of this talented team. I am looking forward to combining my experience with the already great work that the building services team, and the wider Cundall business has accomplished. Cundall's march towards greater sustainability, and its carbon neutral aspirations for all designs, really speaks to me as a building services leader. We must all embrace the challenges ahead and Cundall have shown that they are at the forefront and are prepared to do what is necessary to build a better future for the next generations. I am extremely happy to have the opportunity to be a part of this."

Projects that McKeever has led and been involved with include the Security Forces Medical City in KSA, La Mer in Dubai, Lusail Plaza Towers in Doha, Diriyah Gate Development Authority Arts District in KSA.

As part of Cundall's building services sector, McKeever is responsible for the shaping and direction of the MENA building services business and strengthening links into the global Cundall building services teams.

February 2022





"We take pride in the firm's progressive design approach from a project's inception to its completion, and our collaborative work with our clients and affiliates. Not only are we proud of the diversity of our achievements, but also of our team."

Pedram Rad

Managing Director





UAE Real Estate Overview 2021

JLL reviews the performance of key sectors in Dubai and Abu Dhabi in 2021

Dubai's residential stock reached 639,000 units at the end of 2021, as over 40,000 units were completed over the course of the year. This was a little below the number (nearly 42,000) built in 2020. In Abu Dhabi, approximately 7,000 units were delivered last year – bringing the capital's total stock to 273,000.

In both Dubai and Abu Dhabi, a 'race for space' and the relative affordability of villas & townhouses during the depths of the pandemic helped to stimulate the strong recovery in sales prices – a trend which extended into Q4 2021.

In annual terms, average residential sales prices were up 9% and 6% in Dubai and Abu Dhabi, respectively, in December 2021. After posting declines in the six years to H2 2020, Dubai's residential rents are beginning to bounce back – up 8% year-on-year in December 2021. Conversely, rents in Abu Dhabi were down 3% over the same period.

The near-term outlook for the residential sector in the UAE is generally positive. Government reforms, as well as a projected rebound forecast in the labour market this year and next should help to support moderate growth in the overall population.

Office Stock Review Dubai & Abu Dhabi

Over 2021, approximately 138,000sqm and 15,000sqm of office space was completed in Dubai and Abu Dhabi. As a result, the total stock in the former city climbed to 9.1m sqm and reached 3.9m sqm in the latter. Although some Grade A office space was delivered in freezone locations in H1, the majority of new projects completed last year comprised Grade B developments. In 2022, around 70,000 sqm of office floorspace is expected to come online in Dubai and over 128,000sqm in the capital.

Following several months of muted activity, the office market in the UAE displayed signs of a recovery in Q4 2021. In Dubai's Central Business District (CBD), improving demand for good quality office stock combined with relatively limited supply in this segment translated into Grade A rents increasing by 2% year-on-year to an average of \$466 per sqm per annum. On the same basis, Grade A rents in Abu Dhabi also rose – by 5% to an average of \$450 per sqm per annum.

In addition, the availability of office space continued to edge down in both cities. Vacancy rates for Dubai and Abu Dhabi reached 19% and 26%, respectively, in the final quarter of 2021.

Over the same period, enquiries were strongest from financial, legal and technology Furthermore, pandemic-induced firms. uncertainty about future business conditions and changes in employee preferences have underpinned a surge in enquiries for flexible space options such as serviced business centres. Occupiers have also expressed interest in good quality fitted office space in an effort to minimise capital expenditure due to constrained budgets.

Hospitality Stock Review Dubai & Abu Dhabi

Dubai's stock of hotel & hotel apartment keys rose to over 140,000 with the delivery of more than 5,600 keys in 2021 – the smallest annual increase since 2013. Unsurprisingly, this was largely due to the impact of the pandemic on travel, which led developers to either delay





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8% Average rental rates change

Abu Dhabi Residential Supply



9k Expected 2022 deliveries



Dubai Office Supply

Expected 2022

deliveries



Total residential

stock





Abu Dhabi Office Supply







projects or shelve them altogether. This year, approximately 16,000 keys are scheduled to be completed.

Abu Dhabi's supply of hotel & hotel apartment keys increased by approximately 1,500 in 2021, bringing the total supply to 32,000 keys. An additional 1,200 keys are due to be delivered this year.

On the back of EXPO 2020 and strong leisure demand, Dubai's occupancy rate reached 63% in the YT November 2021 – up significantly from 40% in the corresponding period last year. Over the same period, the city's average daily rate (ADR) rose by 25% yearon-year to \$150. Abu Dhabi's occupancy rate rose to 66% in the YT November 2021, when compared with 60% a year earlier. Meanwhile, the capital's ADR increased by 4% year-on-year to \$92 in the YT November 2021.

Retail Stock Review Dubai & Abu Dhabi

The addition of around 205,000sqm of retail GLA in 2021 brought Dubai's total retail stock to 4.4m sqm. Over 520,000sqm of retail floorspace is planned to come online this year albeit this figure includes super-regional malls thus any potential change to the status of such projects will have a material impact on the aforementioned upcoming supply figure.

In Abu Dhabi, nearly 100,000sqm of retail GLA was added last year - pushing the total stock up to 2.9m sqm. As in the case of Dubai, the capital has large-scale retail developments in the pipeline; the total floorspace due for completion in 2022 amounts to approximately 341,000sqm of GLA.

Broadly, both cities' retail occupier markets remain under pressure. In the final quarter of last year, rents across primary & secondary malls

saw average annual declines of 4% in Dubai and 5% in Abu Dhabi. That said, retailers are registering a pick-up in footfall and turnover. This has been attributed to various factors, including the success of the UAE's vaccination programme, which has led to easing restrictions, a resumption of global travel, as well as the start of EXPO in October 2021.

Nonetheless, due to the uncertain economic climate, retail occupiers continue to push for incentives such as rent-free periods, contribution towards capital expenditure on fit-outs and revenue-share options.

Forecasts show, in the UAE, the recovery in tourism and rising employment will support healthy consumer spending growth over 2022-23. This should help provide a boost to retail sales, which are anticipated to broadly return to pre-pandemic levels by the end of next year.

Dubai Hospitality Supply







Abu Dhabi Hospitality Supply







Dubai Retail Supply







Abu Dhabi Retail Supply







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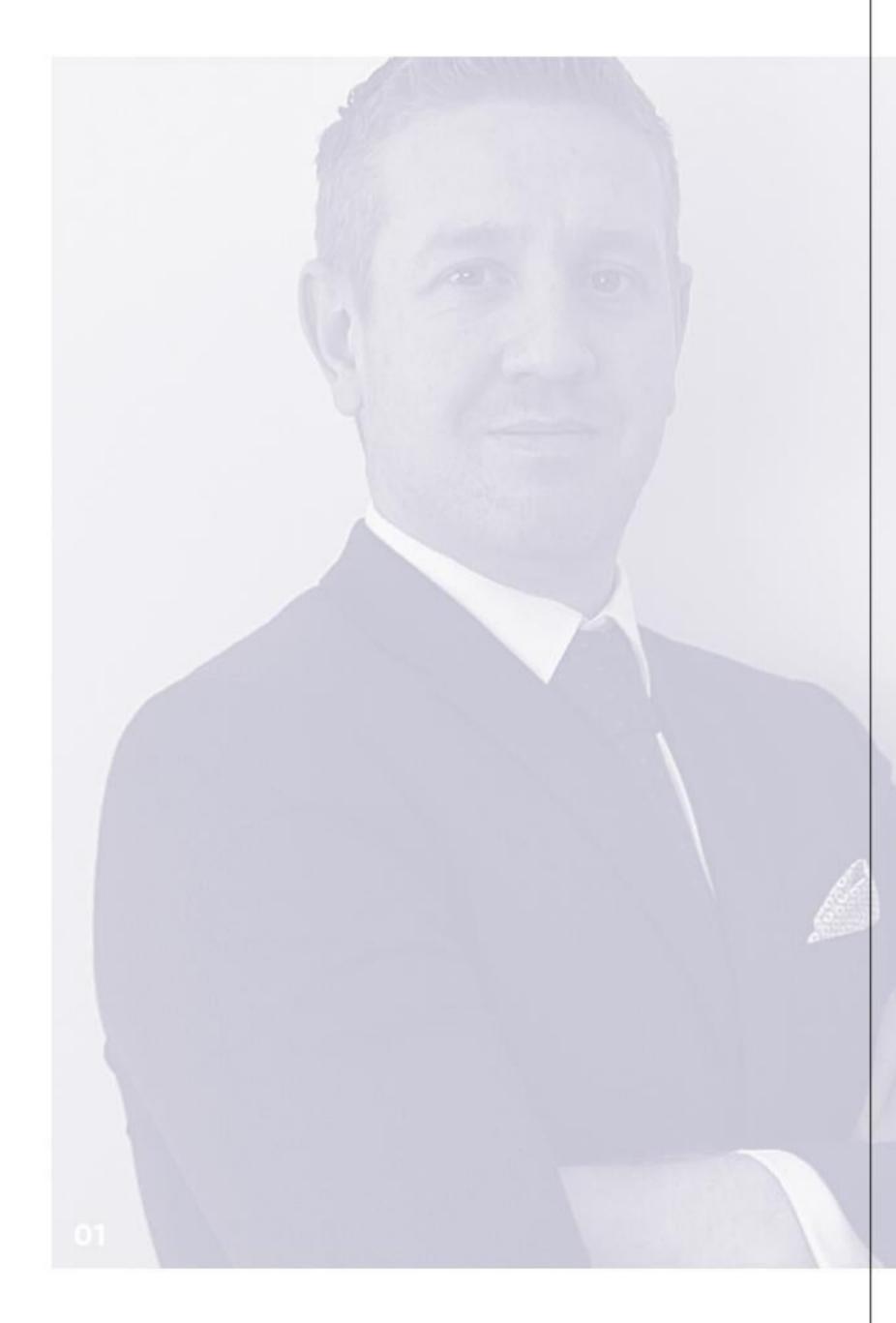
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"Each government entity that seeks to privatise must have a clear and definitive view of the assets under its ownership"

Driven by Vision 2030, a wide range of government entities in the Kingdom of Saudi Arabia are looking to privatise their organisations with the ultimate goal of diversifying revenue sources away from a reliance on oil. In a move that will further stabilise the Kingdom for future generations, privatisation will also enable the country to continue to grow exponentially through income generation from new sources.

Privatisation is no small task; it demands a broad range of activities to be completed in order to ensure that operations of these entities are profitable, making them attractive to foreign investors and driving growth.

Like any transaction, the entity looking to privatise and find foreign investment must in the first instance be an attractive proposition, enabling potential investors to conduct their due diligence and be confident that their capital is well placed. A key aspect of this resides within asset management, and the following outlines the various steps that need to be considered.

Each government entity that seeks to privatise must have a clear and definitive view of the assets under its ownership, their condition, cost to maintain and prospective lifecycle.

Having a clear link between the performance of your assets and bottom line provides potential investors with a clearer view on the investment that they are about to make, their confidence enhanced by the

transparent view of risk associated with the operations, maintenance and long-term reliability of the assets in question.

Though there have been operations and maintenance contracts in place for assets owned by these entities, it is unlikely that the latest in asset management principles has been implemented. The potential risk this poses is high, as the operational cost of assets may hinder the future profit generation of the entity in question. Like any other aspect of business, the lower the cost associated with asset maintenance and lifecycle, the less the company has to take from its revenue to cover it, therefore improving the profit margin.

A company with poorly maintained assets and an inaccurate view on their current condition, longevity and potential operational costs makes for a risky – and unlikely - investment opportunity.

Getting the Right Expertise

From the investor's perspective, it is then essential that those government entities that wish to privatise seek the expertise of an asset management company to ensure that asset registration, asset condition is accurately recorded, monitored, maintained and improved and that a clear view of potential operating cost is available.

By investing in this process as early as possible, entities seeking privatisation can create both short and long-term value in their organisations in addition to mitigating the risks for investors associated with the

purchase of assets with unknown condition and potential lifespan. This process can also help clients contribute toward smart city strategies, reducing their carbon footprint and realising a range of opportunities to optimise energy consumption.

The sooner that this is done the better, as the historical view provided by periodic audit will further reduce the risk associated with investment; trackable and traceable data surrounding asset condition will further instil confidence that the projected lifespan and operational costs are accurate.

Over and above the creation of auditable asset data is the adherence to international standards and compliance that will provide government entities with an additional feather in the cap when seeking foreign investment to support privatisation activities.

By aligning asset management policies, procedures and activities with recognised international standards, government entities can more easily convey to investors their commitment to quality and compliance whilst adding further credence to the data that they have collected.

Foreign investors can easily recognise attribution to the latest in asset management and financial business practices, again building further confidence that their due diligence prior to investment will return an even smaller level of risk.

Foreign investment is critical in supporting the privatisation activities of the Kingdom of Saudi Arabia. In doing so, diversification of the revenue streams within the Kingdom will mitigate the reliance on oil which, in the long term, will eventually become a much smaller source of revenue than it is now.

Ensuring that assets are correctly categorised and maintained in a manner that improves their value whilst reducing their operational costs is paramount in driving the value of a business seeking privatisation.

Early adoption of the latest in asset management principles will accelerate the privatisation process in the country, building confidence in foreign investors and achieving the privatisation targets of the Saudi government efficiently.

Ensuring that assets are correctly categorised and maintained in a manner that improves their value whilst reducing their operational costs is paramount in driving the value of a business seeking privatisation"

Serco is primed to support these objectives, enabling government entities seeking privatisation to maximise their value and their revenue potential upon entrance into the private sector. Our expertise in the management of assets and their lifecycle is evidenced across the globe and within the region.

Appointed in 2019 to provide management consultancy services in partnership with the Mashroat programme in the Kingdom of Saudi Arabia, Serco is contracted to deliver various phases of the Kingdom-wide asset and facilities management transformation programme and developed the new asset and facility management national standard.

Serco's end to end asset management service offering covers all stages of the asset management journey, from the asset condition survey, tagging and verification process right through to operations and maintenance. The ability to support companies along the journey rather than only at initial stages ensures that maintenance lifecycles are founded in truth, are deliverable and cost effective.



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Nurul Sabri is a senior consultant at HKA.



Nurul Sabri

"There is no doubt that narrowing the pay disparity based on ethnicity will not be an easy process. But neither is it a defence against action"

There have been many discussions about gender diversity and equality in the construction industry, as well as gender pay gap. For women working in the industry especially ethnic minority women, the challenges are even more acute. Not only is there a gender pay gap affecting women but in addition, ethnic minority women in the region are also subjected to alternate pay structures based on ethnicity or race.

The topic of pay disparity by ethnicity is not uncommon in the UK and US and has been widely discussed. It represents the unfair divergence between the pay of different groups of people by demographic characteristics.

In my opinion, addressing not only the gender pay disparity, but also the ethnicity pay disparity, is key to fostering an equal and inclusive working environment.

A critical first step to achieving meaningful change is for the industry as a whole to acknowledge the issue exists. Simply put, we cannot address an issue if we refuse to accept it exists. Next is to change mind-sets and behaviour. McKinsey research in Model for Effective Change Management states that transformations stand the best chance of success when they focus on four key actions to change mind-sets and behaviour. By understanding why or the reason for a change will inspires people to behave in support of such change.

Call to Action to Combat Inequality

There are few suggestions on actions that we can focus on to bring meaningful changes, which is divided into four key areas: Educate, Lead, Culture and Measure.

1. Educate

Eliminate Bias: It is said that pay discrimination often is rooted in different forms of bias, including biases about specific ethnicity and their value. Combating biases is critical to getting this right. McKinsey said biases can lead to blind spots, making people to overlook the individual abilities. Employees should be paid what they are worth. Value should not be determined by skin colour nor gender, but from an employee's dynamism, skills, and knowledge.

Continuous anti-bias training is also critical to combat workplace biases that devalue the contributions of specific ethnicity. To move in a new direction, the change must be led from the top. Senior leadership must challenge bias when they see it and advocate and revise company policies to promote equality in pay practices within workplaces.

Public Awareness: We should create public awareness that differentiating employees' pay within the same grade on the basis of ethnicity is wrong, unfair, discriminatory, and considered unethical. The aim is to attract people's attention towards this subject, which might lead to small talks amongst them. Hopefully this small talk

could lead an interest towards this subject and make people interested to do an in-depth study about this and take necessary action.

2. Lead

Be an ally and consistently taking key allyship actions: Being an ally (allyship) allows those who are at lower risk of discrimination the opportunity to advocate for the underprivileged colleagues to gain visibility, validity, and credibility for their work and contributions. Allyship from senior leaders and more privileged colleagues can make a big difference. However, being an ally alone is not enough. The ally should consistently take key allyship actions such as advocate for equal payment structures for all and actively confront discrimination against underprivileged colleagues.

Regulate legislation prohibiting discrimination based on ethnicity: Passing law is an important step towards the change. In the UK and the US, there are laws providing protection against pay discrimination due to

race, colour, religion, sex or national origin. The new UAE Labour Law, which takes effect on 2 February 2022, expands on general prohibition on discrimination and prohibits discrimination on the basis of race, colour, sex, religion, national origin, social origin and disability. Such a law is a great step to supporting and promoting equality and inclusiveness in the workplace.

3. Culture

Speaking up and Having Difficult Conversations: Too often employees stay in situations where they are being undervalued for fear of not finding another opportunity, or fear of ruining the relationships with the bosses and leaders that they have internally. In order to overcome this, one needs to speak up and start to be comfortable in having difficult conversations. Difficult conversations are a necessary part of working well with others. Reaching an understanding is often the first step toward creating a far better work environment for everyone.

4. Measure

Employee Engagement Survey: It is important for companies to consistently measure the fairness of its pay policy. For example, HKA, carries out an annual Employee Engagement Survey that helps the company to understand, amongst other things, employee's views on the fairness of pay scales and its process of calculating pay. The survey seeks to understand whether (i) the effort, skill and experience are accurately reflecting in the employee's pay and (ii) the process of calculating pay in the company is fair and unbiased. Such survey results are vital to help companies continuously improve in this aspect.

There is no doubt that narrowing or overcoming the pay disparity based on ethnicity will not be an easy process. But neither is it a defence against action. It will require the commitment of all levels and a strong collaborative approach. We are all accountable. Let's overcome this pay disparity based on ethnicity together. •



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The Path to Net Zero

Jason Saundalkar talks to AECOM's Farah Naz about her new book and how the construction industry can transition to net zero

As countries strive to meet the Paris Agreement's goal of limiting global warming to 1.5-degrees Celsius compared to preindustrial levels by 2050/2060 (developed/ developing countries) or earlier, the shift to net zero emission economies has begun. The move is in response to climate science that shows in order to halt climate change, carbon emissions have to be stopped - new emissions going into the atmosphere must be balanced by taking emissions out.

The construction sector has a prominent part to play in this as, according to the World Green Building Council (WorldGBC), buildings and construction are responsible for 39% of all carbon emissions in the world, with operational emissions (from energy used to heat, cool and light buildings) accounting for 28%. The remaining 11% is said to come from embodied carbon emissions or 'upfront' carbon that are associated with materials and construction processes throughout the whole building lifecycle.

It's therefore vitally important that buildings and construction decarbonise – a feat which the WorldGBC believes is possible. In 2019 the organisation outlined its vision for how buildings and infrastructure around the world can reach 40% less embodied carbon emissions by 2030, and achieve 100% net zero emissions buildings by 2050.

Enabling individuals and cities to better understand and transition to net zero is the focus of a new book titled 'Net Zero City'. The book was written by Farah Naz, lead of Specialist Services, Sustainable ESG Solution for AECOM in the Middle East and Africa, and Langdon Morris, a renowned teacher, consultant and keynote speaker on innovation and strategy.

Commenting on what inspired her to write the book with Morris, Naz explains, "We share a great concern about climate change and its impact on people and cities. The effect is already causing severe disruptions in the way we live, work and play, and in the future, it may cause more disruptions. The book is an open call for action for the global community to rise up to the challenge, and shows how we can choose a new way of thinking and doing."

She states that one of the book's main takeaways is to make people realise that the future is everyone's responsibility and that "we must all play a role".

The two began working on the book in the summer of 2020 and completed it in the fall of 2021. The book is already on sale at several outlets including online at Amazon.com and has a dedicated website and Twitter handle: www. netzerocitybook.com and @NetZeroCityBook.

Writing a book entails a lot of work including meticulous research. Asked about what the most challenging aspect of the project was, Naz notes, "There is a tremendous amount of material available on net zero but they are point solutions, so perhaps our biggest challenge was coming up with an overall strategy and roadmap that integrates all the information, numerous case

Farah Naz is lead of Sustainable ESG Solutions for AECOM in the Middle East and Africa. She is co-author of the new Net Zero City book.



24 In Practice

studies and examples into a coherent action plan. This was one of our key goals for the book, and it took quite a long time."

The book encompasses a comprehensive approach to net zero transition for cities covering five key areas: governance, urban design, circular economy, energy (food energy water nexus and energy infrastructure), innovation and data science, she remarks.

"We were able to develop a comprehensive framework that seems to be quite useful; we present a 10-year transformation roadmap for cities. We believe that cities can adopt a 'Climate Smart Masterplan' that addresses the net zero transition as an underlying urban framework. This framework would enable the city to establish and better understand the carbon emissions from key sectors like: transportation, the utilities industry, energy sector, agricultural land, forestry and fishing, building industry and materials."

Naz notes that there was also resistance from a few people during the research phase. "There were a few people who were resistive of our idea of the 10-year transformational plan. Now that the book has launched, we are also expecting more criticism, as we may disrupt the way people have started to get onboard with and

Hidden carbon in building materials, known as 'embodied carbon' makes up the majority of the carbon emissions generated by the construction sector.

thinking with the 2050 targets and actions plans. Our book calls for more urgency when many have only just come on board with ESG goals."

"It is not a time to be comfortable. Goals are not enough; action needs to start now. If our world deteriorates at the rate it is now, in 30 years' time we will leave behind our children to face a much harder climate scenario. So yes, this book actually disrupts the comfortable way of thinking, but we must not stay in the comfort zone. We have everything we need to act so let's start synthesising faster," she points out.

Transforming an Industry

Naz has over 20 years of experience in markets including the United States, the United Kingdom, Southeast Asia and, most recently, the UAE. Through her role with AECOM and other organisations, she has worked on several prominent regional projects with strong focuses on implementable sustainability and energy strategies including the Dubai Museum of the Future, the Louvre Museum in Abu Dhabi,

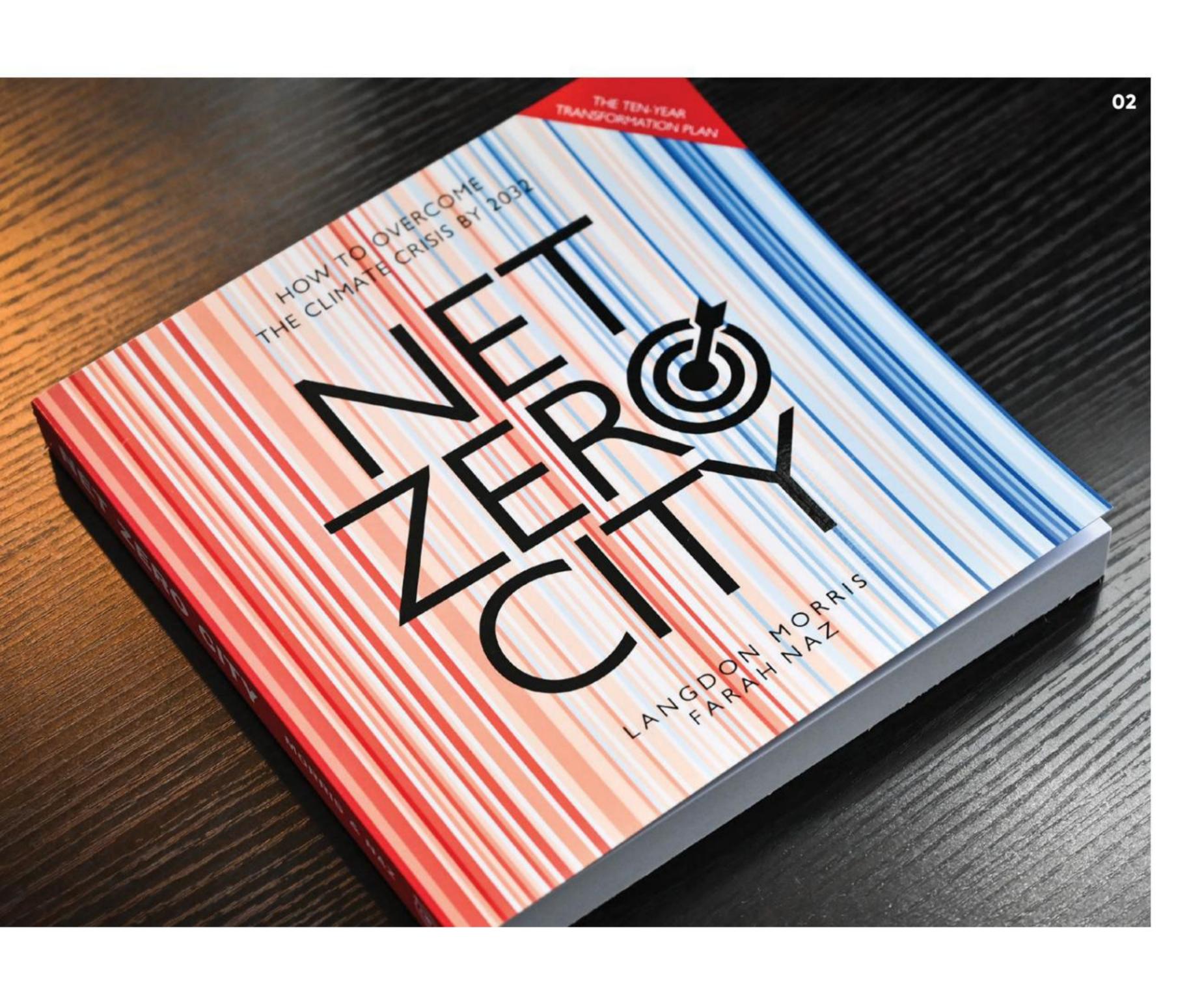
Bee'ah Headquarters in Sharjah, the EXPO 2020 Sustainability Pavilion, Masdar Eco Villa, and Masdar Housing, and master planning projects including NEOM, Red Sea, Amaala, and Hudayriat in Saudi Arabia.

Given her broad experience, Naz is aware of issues that construction industry stakeholders can start tackling immediately, on the path to net zero buildings and cities. She comments, "COP26 showed us the urgency of taking action towards a net zero future, with the UAE and Saudi Arabia committing to a 2050 net zero target. What brings these pledges to life is conscious leadership and actionable commitments. There is no doubt that the destiny of humanity lies in our cities. In around 2010, we passed the halfway point to becoming a fully urbanised civilisation, and each day the populations of our cities continue to increase, while rural populations decline. Key actions can be taken in two scales: building level and city level."

On the building level, she states, "The construction industry accounts for 40% of the global Green House Gas (GHG emission). The recently published UN Environment Global Status Report states very clearly that building operations account for only 10% of the total CO₂ emissions in the lifetime of the building, whereas the building materials are responsible for 90% of a typical buildings' CO₂ emission. It's the hidden carbon in building materials, known as 'embodied carbon' that makes up the majority of the carbon emissions generated by the construction sector. This information refocuses the way we look at the carbon emissions of buildings and validates the urgency for the construction industry to understand and act upon findings."

She says that one action the industry can take immediately - at a building level - is to estimate the embodied carbon footprint of their buildings. She points out that this should be linked to the asset owner's overall ESG (Environmental Social Governance) strategy and their net zero transition plan. On the bill of quantities for construction materials, we should add an extra column that shows the carbon emission factor (kg CO2eq per unit).

Shifting gears to the city-wide scale, she adds, "As I mentioned earlier, cities can adopt



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a 'Climate Smart Master Plan' that addresses a net zero transition as an underlying urban framework. This framework would then enable the city to establish and better understand the carbon emissions from the key sectors I mentioned earlier."

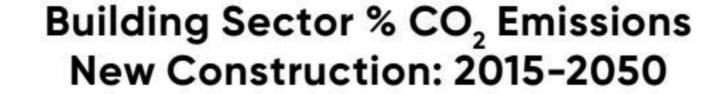
She adds, "The one commitment that every business can make, is to adopt a robust Environmental Social Governance (ESG) strategy action plan. In the construction industry, the ESG strategy could be linked with the client's own net zero transition plan (both building and city level). As an example, at AECOM we have adopted our Sustainable Legacies strategy that is based on strong ESG principles - we have committed to sciencebased targets for the decarbonisation of our own business activities, and we have linked it to our own net zero journey. We are sharing the lessons we learn with our global clients to assist them with their own net-zero transition."

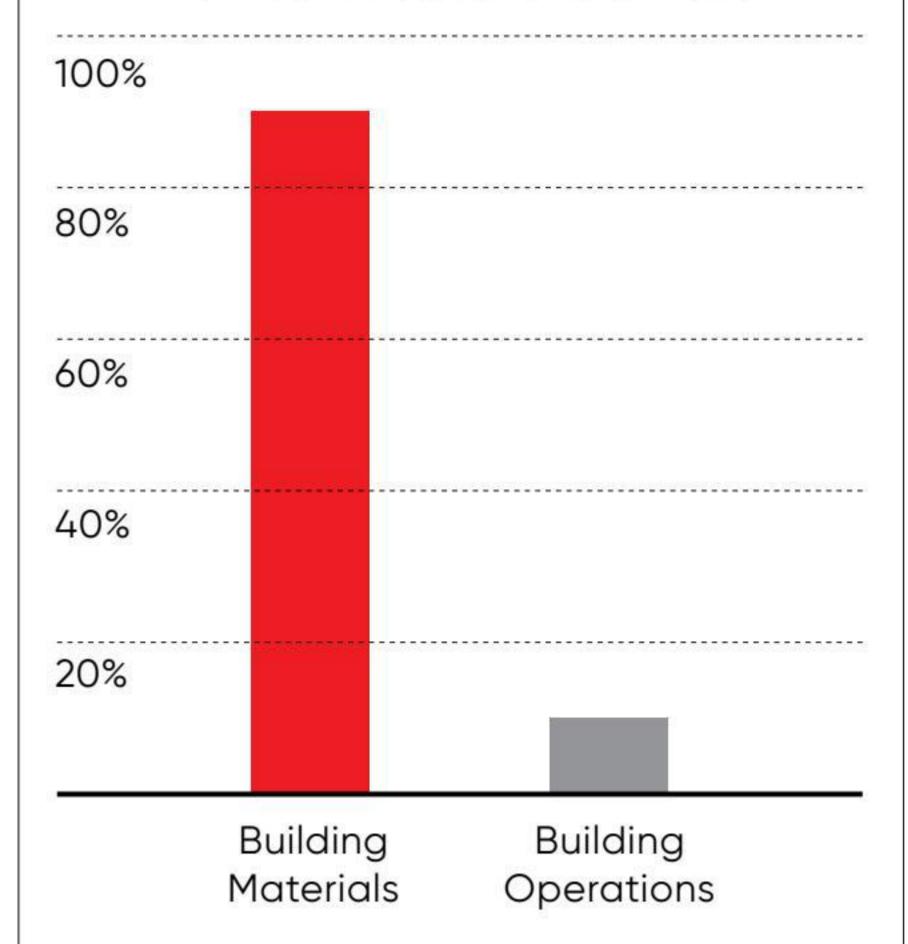
hundreds of countries organisations have committed to the path to net zero, there are a number of obstacles that will have to be overcome.

"Urban growth is occurring in a time of great turbulence, and due to particularly worsening climate change, the fate of these very cities is now in question. Will they thrive, or will they be overwhelmed by tumultuous storms and bitter droughts brought on by climate change? Much of the human situation during the next century will be defined according to our capacity to adapt to this new, entirely unprecedented, and frightening set of climate conditions. We have no choice but to adapt, which also means that we must innovate, and prolifically. So perhaps it is our ability to innovate that will largely determine our fate," Naz remarks.

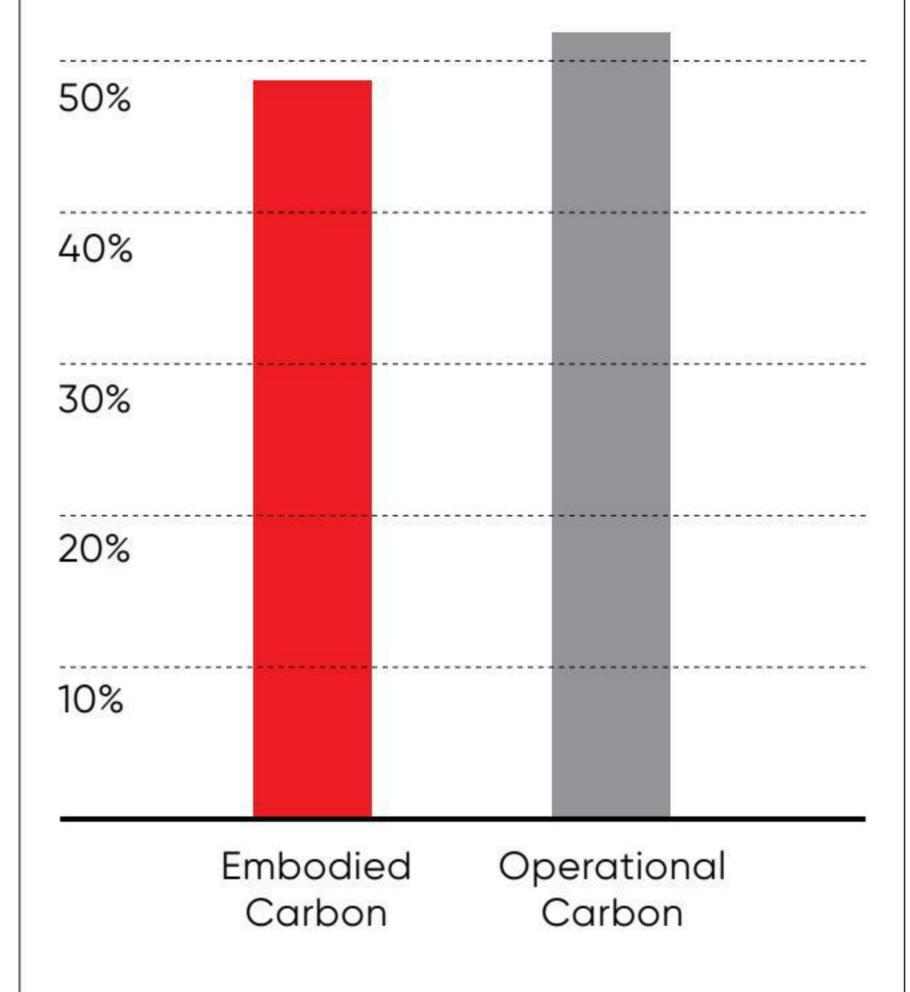
The necessary innovations will be developed across countless dimensions of modern society. They will involve how we build, what we build, and what we build with. They will impact our systems of food and water, our ideas about a healthy economy, our approaches to governance and decision making, and our use of technology, she notes.

Naz continues, "The biggest challenge might be that this will involve a fundamental change to the energy infrastructure of civilisation, both where we get our energy from





Total Carbon Emissions of Global New Construction: 2020-2050



and how we use it. CO2-producing fossil fuels will have to be replaced by sources that do not produce greenhouse gases, a switch that's going to be expensive and disruptive, which means it's a technological, economic, and social transformation. But with it also comes a unique and enormous opportunity."

"While many have resisted the need to abandon fossil fuels since to them it means sacrifice, in fact the necessity to innovate at this scale, across the entirety of human society, is a very rare gift. We can now focus our efforts on assuring sustainability, livability, equity, and quality of life for everyone. Thus, the climate emergency actually offers us the chance to remake critical aspects of our society to be much better than they ever were during the fossil fuel era. This transformation will be led by our cities. Cities are the unique milieu where civilisation was created, and today they are the innovation catalysts where the transition to a new and sustainable society will emerge to change the world."

Changing Perceptions?

There is a belief that building sustainable buildings and cities is linked to greater cost and investment. Given that Middle East markets are still heavily price driven when it comes to projects and developments, changing this mindset could be quite a challenge.

Asked about her views on this, Naz says, "The reality is that no-one knows what 2022 will bring due to the ongoing pandemic and the climate crisis. What has been interesting to see is the predictions globally especially by my co-author Langdon Morris, where he states the two major shifts would be the coronavirus and inflation. The coronavirus has affected the supply chain, timeframe and delivery, as well as taking away the freedom of movement. This inherently influences inflation globally."

"BlackRock, a top investment firm in the US, is adopting a net zero strategy as part of their top three agenda. In the United Kingdom, a UN supported initiative — the Net-Zero Asset Owner Alliance — is an international group of 69 institutional investors with \$10.4tn in assets under management. They are committed to delivering net zero GHG emission by 2050. They recognise the netzero climate transition as a \$16bn investment opportunity and support carbon pricing to bring equilibrium to this challenge."

She adds, "Most of the companies listed in the Fortune 500 have an annual revenue bigger than the budget and it is becoming intensely clear that the next phase of the climate agenda will be driven by investors and asset owners. If so, this will drive decisions and directions, in a worldwide policy. What is becoming clear in the construction industry is that project financing is being linked to carbon KPIs. Carbon conversations are driving the value engineering and the capital pricing of the building. Especially for an owner and operator, the lifecycle costs

in the operational phase are often reduced to make projects more valuable to potential owners and occupiers. We are also seeing an embodied carbon approach to materials selection, allowing the design team to reduce the overall weight of the building materials and choose optimised structural systems."

"What our industry urgently needs is a cost and carbon optioneering tool provided early on, where the designers with the client test their design ideas, linking cost and carbon simultaneously. By quantifying cost and carbon together, comparing options and selecting low carbon options from day one, we can support clients to achieve the best balance between both."

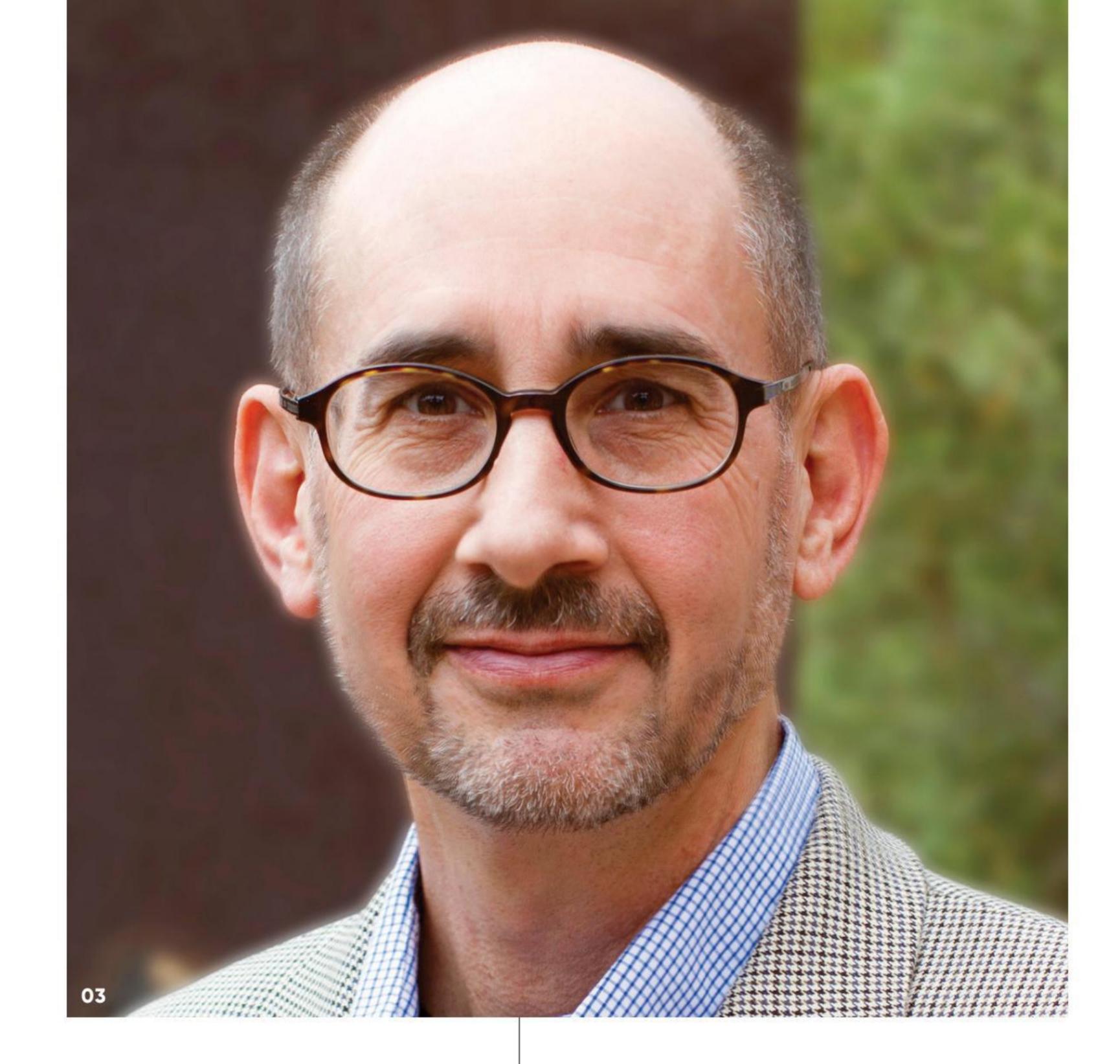
At AECOM, we are redefining that space with ScopeX, she says. The tool includes an attached process to advise clients to cut carbon in the design stage.

She notes, "This has been extremely effective in costing and mapping out the carbon journey for some of our mega projects in the region. It considers embodied and operational carbon across the entire project lifecycle. The ScopeX approach considers materials, site locations, logistics and construction methods to reduce and eliminate the impact of projects on the natural environment. We minimise energy use, optimise sources of renewable power and, where feasible, we work with and enhance natural habitats to eliminate carbon emissions. We believe that ScopeX will be our biggest contribution to help end the climate emergency. Decarbonising the built environment and supporting our clients to achieve their net zero agendas, we're striving to improve the cities and communities we serve, thereby delivering a better world."

This is a time for cross-societal, cross-cultural, and international collaborative action to shape the future. This is the opportunity to include, integrate and innovate to co-create the future we want, she comments.

Nurturing Future Leaders

Middle East Consultant reckons it's vital that the construction industry continue its engagement with future leaders, to better prepare them for their careers, the challenges of climate change and the urgent need for net zero buildings and cities.



Langdon Morris a renowned teacher, consultant and keynote speaker on innovation and strategy. He is the co-author of the Net Zero City book.

Asked about what more the industry can do, Naz states, "The youth are the future leaders of the nation and are vital in realising the United Nations Sustainable Development Goals, as well as their respective country's net zero journey. There are positive examples in this region showing how the industry is engaging with students and young professionals to charter a path into the industry."

"Through my voluntary role as the Chair of the CIBSE UAE Chapter, I have a strong agenda for all volunteer committee members to engage with university students and fresh graduates

The climate emergency actually offers us the chance to remake critical aspects of our society to be much better than they ever were during the fossil fuel era. This transformation will be led by our cities"

to have 'future ready' conversations and share practical knowhow. Running for two years now, the CIBSE UAE Chapter has organised student design competitions, giving students design challenges related to the current industry as well as future trends."

"The creativity of the students and young graduates is phenomenal across the seven emirates. Industry professionals are keen to volunteer as part of the judging panel and share their expertise, valuable time and resource. Such efforts really encourage the young leaders to think collaboratively, using the latest technologies to solve tomorrow's challenges," she notes.

"During the pandemic I chaired a 'Net Zero Global Virtual Conference' and a 'Virtual Health and Wellbeing conference' organised by the CIBSE UAE Chapter, which was attended by people from across 60 countries. We found out that 45% of the attendees were students and young professionals globally who joined the knowledge share session, which was very encouraging."

She concludes, "The COP26 Conference held in November last year was a pivotal moment for the world, as 200 countries gathered in Glasgow and agreed to the Glasgow Climate Pact. By any measure, this is a historic agreement, and one of which all parties can be proud, but now it is time to act and engage with the young professionals in the net zero conversation."



About the

Future of Architecture

The second Future of Architecture Summit (FOA) will build on the breakout success of the inaugural edition with a captivating and insightful agenda that will be discussed and debated by some of the region's best and brightest minds.

The Summit will provide a platform for construction industry stakeholders to discuss a multitude of topics including future city requirements, net zero building design, resilient design strategies, future transport infrastructure, nurturing future talent and much more. Along with a rich agenda, the summit will also provide unparalleled networking opportunities in full compliance with all local COVID-19 related regulations.

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Planning for Success

Jason Saundalkar talks to TBH's Chris Nicolas about the intricacies of seeing regional project through to successful, on-time and on-cost completion



February 2022



Tracey Brunstrom & Hammond (TBH) is a specialist planning and management consultancy that has been in business for 55 years and now has clients in the public and private domains in Oceania, Asia, the Middle East, and North Africa. Here, Jason Saundalkar talks to Christopher Nicolas, director at TBH about the firm's regional business, trends and the firm's aspirations.

Share a snapshot of your business in 2020 and 2021. Which sectors and markets do you anticipate will be key to your business in 2022, and how do you plan to tackle the year?

2020 and 2021 were busy and exciting for TBH. After concluding our very successful and productive 12-year alliance with Faithful + Gould in late 2019, TBH launched its own independent office in Dubai to service the GCC and the Middle East in early 2020. We just recently opened our office in Riyadh, Saudi Arabia to enable us to provide an even greater level of support to existing and future clients in the Kingdom.

Transportation infrastructure will continue to be a key sector for us across the region, particularly rail. Etihad Rail in the UAE will expand to include passenger train services running across the country, and this will hopefully promote the revival of a GCC-wide network.

Large and complex mixed-use programmes of work, particularly giga projects in KSA, will continue to be key to our business in 2022 and beyond. These programmes require expertise across all project lifecycle phases. With experience across all major sectors, we are well placed to support our clients to successfully deliver such large programmes of work.

We hope to tackle 2022 with the same energy and passion as we continue to grow our presence in the region to support our clients in solving their most complex problems.

How did the outbreak of COVID-19 impact your business and how did you mitigate these challenges?

The outset of COVID-19 was particularly challenging, given that we were establishing our own independent office in early 2020.

TBH has worked on the Etihad Rail project, which will expand from freight to passenger services across the country in the future.

However, we were able to quickly adapt with the wonderful support of our IT team and shifted to working from home swiftly and seamlessly. The flexibility and proactiveness of our clients across the region to shift to virtual interaction where possible, made the transition much easier.

What are some of the prevailing construction/projects trends you see in the market and how do you think these will develop in 2022?

A very exciting evolution which is of relevance to the delivery of our services, is the growth of artificial intelligence, through data-derived forecasting of likely project durations. This involves the collection of built data of thousands of past projects, to create models that forecast the outcomes of future projects. Such data is vital in identifying key problems areas that impact projects. It is a remarkable change in the way project durations are established, and will no doubt become the norm in the future.

I very much hope to see modularisation and prefabrication continue to grow and start to become the norm in 2022 and beyond. There are so many repetitive tasks undertaken on project sites that can be addressed with modularisation or prefabrication, yet the industry continues to adopt traditional construction methodologies. Done properly, modularisation and prefabrication helps save time, improves quality, reduce the volume of construction wastage, and provides costs savings.

What are three of the main reasons projects are delayed or go over budget? How can these issues be addressed when it comes to complex projects?

There are numerous reasons why projects are delayed or go over budget but the three prevailing causes we see time and time again are incomplete design, ongoing scope changes, and late decision making. This includes the late provision of information, delayed commercial appointments, and prolonged review and approval periods.

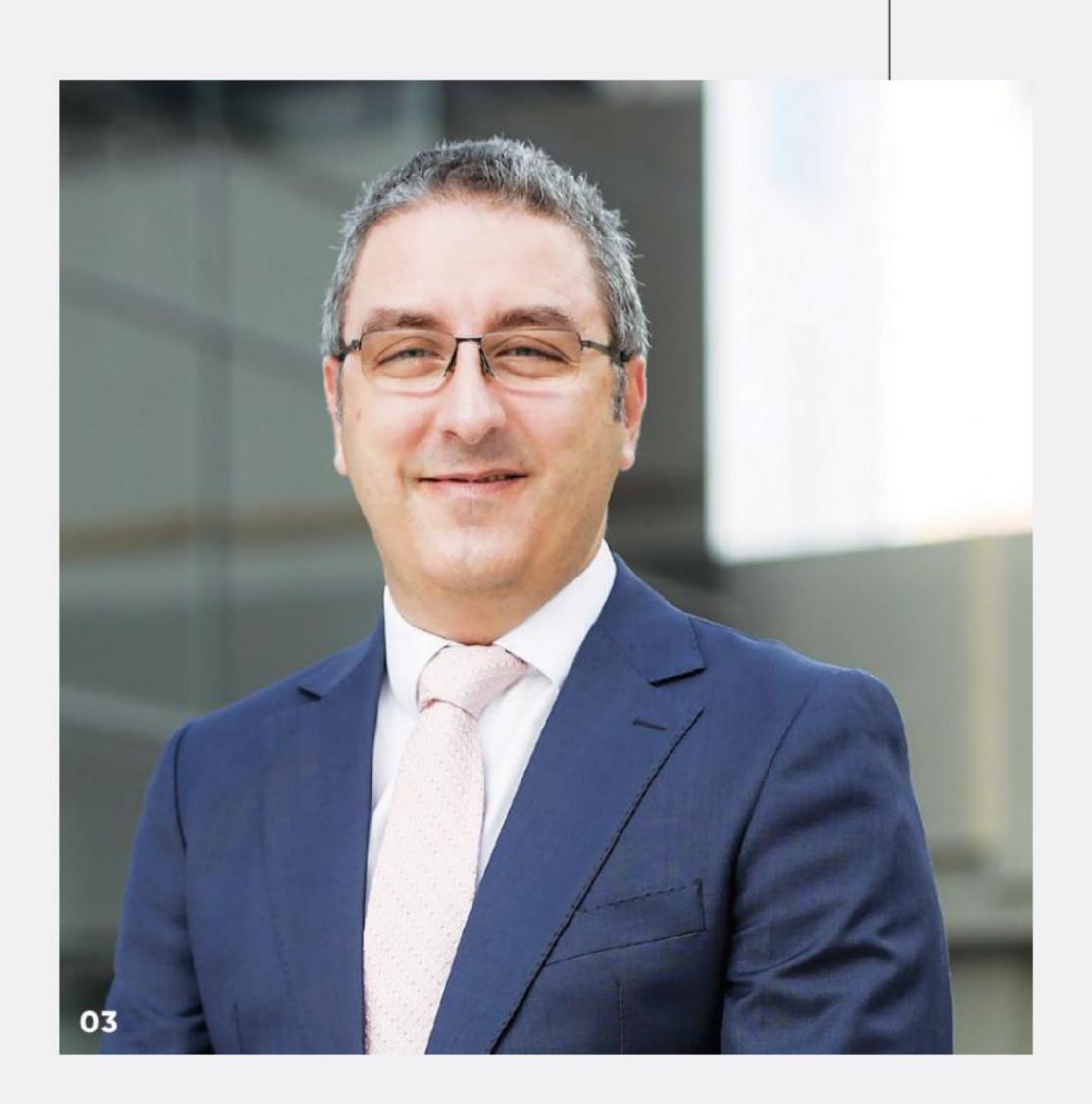
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Whilst every project is different, there is significant importance in timely planning and action. This may include detailed reviews of the proposed construction methodology, constructability, and timelines to establish realistic project durations at project initiation, as well recovery and mitigation strategies to assist in getting delayed projects back on track. It is this due diligence that can help set up projects for success.

What steps can project stakeholders take to avoid disputes/disruptions? What role can technology play in reducing project risks?

Employing the following measures can help project stakeholders avoid or mitigate disputes and disruptions:

- 1. Setting a realistic project timeline from the start Starting a project under undue time pressure, will inevitably see the project suffer the long-term consequences as a result of poor planning. A realistic timeline for a construction project should be driven by the scope and needs of the project
- 2. Regular monitoring and reviews Ensuring a close eye is kept on the progress
 of the construction timeline is vital. From
 commencement, the project must be monitored
 through regular reporting of progress
- 3. Compliance of the parties' contractual obligations It is of course important from the beginning to ensure that each party is





The firm was appointed by Atkins to prepare the contract programme, establish project controls and planning systems and provide claims services on the Doha Metro Gold Line.

committed to complying with its contractual obligations in a timely manner, as set out in the contract. The client, engineer, contractor and other project stakeholders can unduly critically delay progress due to a number of factors including the late provision of information, delayed appointments, and prolonged review and approval periods.

4. Timely resolution of disputes - The early adoption of a proactive approach to achieving commercial resolution to contractual matters eases the pressure of protracted disputes amongst the project participants. Instilling a culture of pre-emptive claims avoidance from the outset through contract drafting and the

establishment of mechanisms in the contract promotes the timely resolution of major disputes, easing the risk of protracted and costly litigation.

Many projects are fast tracked in the region – what are some of the challenges that arise from this and how can these issues be avoided?

The challenges are very much the same as those that cause projects to be delayed or go over budget. Fast tracked projects, in most instances, must progress with an incomplete design which invariably causes scope changes, and both contribute to prolonged review and approval periods. However, clients across the region want to see progress, and proceed without adequately addressing these challenges from the outset.

Identifying and understanding key projects risks, their likelihood, and their impact, allows all project stakeholders to address the challenges of fast-tracked projects from project commencement. Again, the key theme is timely planning and action.

Supply chain issues have been plaguing industries since the initial outbreak of COVID-19. How will this develop in 2022 and what can be done to mitigate these challenges apart from sourcing materials locally?

Since the outbreak of COVID-19, the construction industry has faced material cost inflation, supply chain disruptions and increased international freight charges. This has not only impacted the supply of completed construction materials and products, but also raw materials. All have significantly impacted projects that were already in progress, particularly those that had recently started. This has in many instances negatively impacted project budgets and timelines, and we have seen this lead to contractual dispute for many of our clients.

As we move to increased vaccination globally in 2022, it is hoped that there will be an increase in the supply of materials as industries return to normal, which should hopefully ease the time and cost impact of COVID-19.

A comprehensive analysis of a project timeline and the associated supply chain time and costs risks is vital in again establishing key

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projects risks, their likelihood, and their impact. Project stakeholders can identify which risks may or may not critically delay the completion of a project in advance, which allows for timely planning and action. This may include a detailed review of the proposed construction methodology and constructability, which is cognisant of supply chain issues, allowing for project stakeholders to modify their approach in order to minimise or avoid such impacts.

Given the scale of some of the recently announced mega projects, what's your view on available human resources to enable clients to realise their aspirations?

Resourcing large projects swiftly is always a challenge in any part of the world. However, the region is witnessing a massive transformation. I am firmly of the opinion that these projects will continue to draw the best talent to the region from around the world. The sheer scale of the projects will also provide enormous opportunities to GCC citizens with governments increasingly partnering with the

O3
Christopher Nicolas is director at TBH.

The King Abdulaziz
International Airport in
Jeddah is one of the
Kingdom's largest and
busiest airports. The airport
has undergone several
expansions since it first
opened in 1981.

• Identifying and understanding key projects risks, their likelihood, and their impact, allows all project stakeholders to address the challenges of fast-tracked projects from project commencement"

private sector to diversify the economy and create jobs.

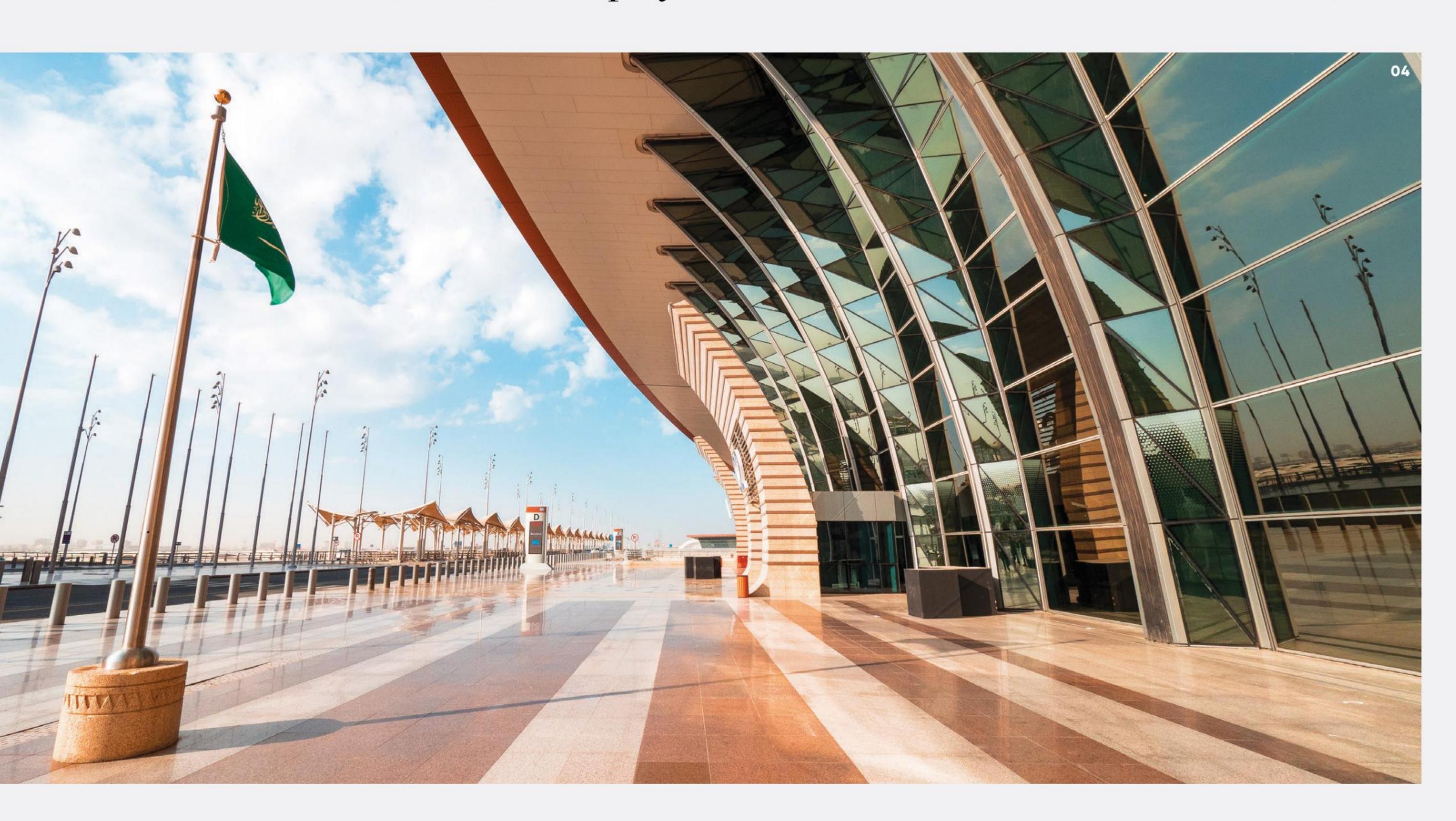
The biggest challenge is timing. Having the right team deliver a project is no doubt vital to its success. So many mega projects are being delivered within similar timelines, meaning that they are all vying for the best talent at the same time. This may prompt broader phasing of mega projects to address such challenges.

What is the one issue that the industry should come together around as a whole?

Safety-there is so much more that can be done as an industry to ensure project sites are safer. This requires a concerted effort by all stakeholders, not only the contractor. Notwithstanding, I have seen a vast improvement in health and safety on project sites in the region over the past 15 years. Let's hope that this continues into the future.

Anything else to add?

It's such an exciting time to be in the region!
The sheer size and complexity of the project
pipeline remains highly attractive to all
construction professionals globally.



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Technology: The New Design Frontier

NEB's Razan Najee talks to Paul Godfrey about how the new era of predictive algorithms and technology is impacting traditional values of interior design...

How is technology and the near-universal need for connectivity creating new paradigms and requirements for interior design, whether at home, work or for homeworking? How do we create interiors that meet these fast-changing requirements? Plus, are these central to the working philosophy of today's interior designers?

"I want to mention first and foremost that as interior designers our task is to create spaces that best reflect the needs of human beings, and the fact is, that today, the rise of technology is very much changing the way we are using space. So yes, of course, I have to be aware of what's happening," says Razan Najee, interior designer at NEB.

"I have recently been reading two powerful books which give terrific insights into these topics and the new priorities of the technology culture. The first is A Brief History of Tomorrow, by Yuval Noah Harari. The other is AI and the Problem of Control, by Stuart J. Russell. For me, these really set the scene in terms of the lessons that we have to learn and the new ways in which we have to think. Harari, for example, believes that what he calls 'the train of progress' is now leaving the station for the very last time. As he says: "those who miss the train will never get a second chance" - and the gap between them and the tech-savvy will be the same as that between Homo Sapiens and the Neanderthals."

So - what does this mean for the world of interior design? "Well", says Najee, "our lifestyles are changing, so we as designers need to think in a different way, to accommodate the shifts that are happening. This begins by understanding how we are functioning - for example, everyone is plugged in and 'connected', so now we need to think outside the box and there need to be areas for remote charging, so everyone has round-the-clock access to the internet and fully-functioning devices. This isn't the old-fashioned world of choices about where to put the plugs and charging points, but creating the freedom to simply leave a device on a flat surface and have it recharged. Just as you can in one of today's luxury automobiles, like a Mercedes, for example."

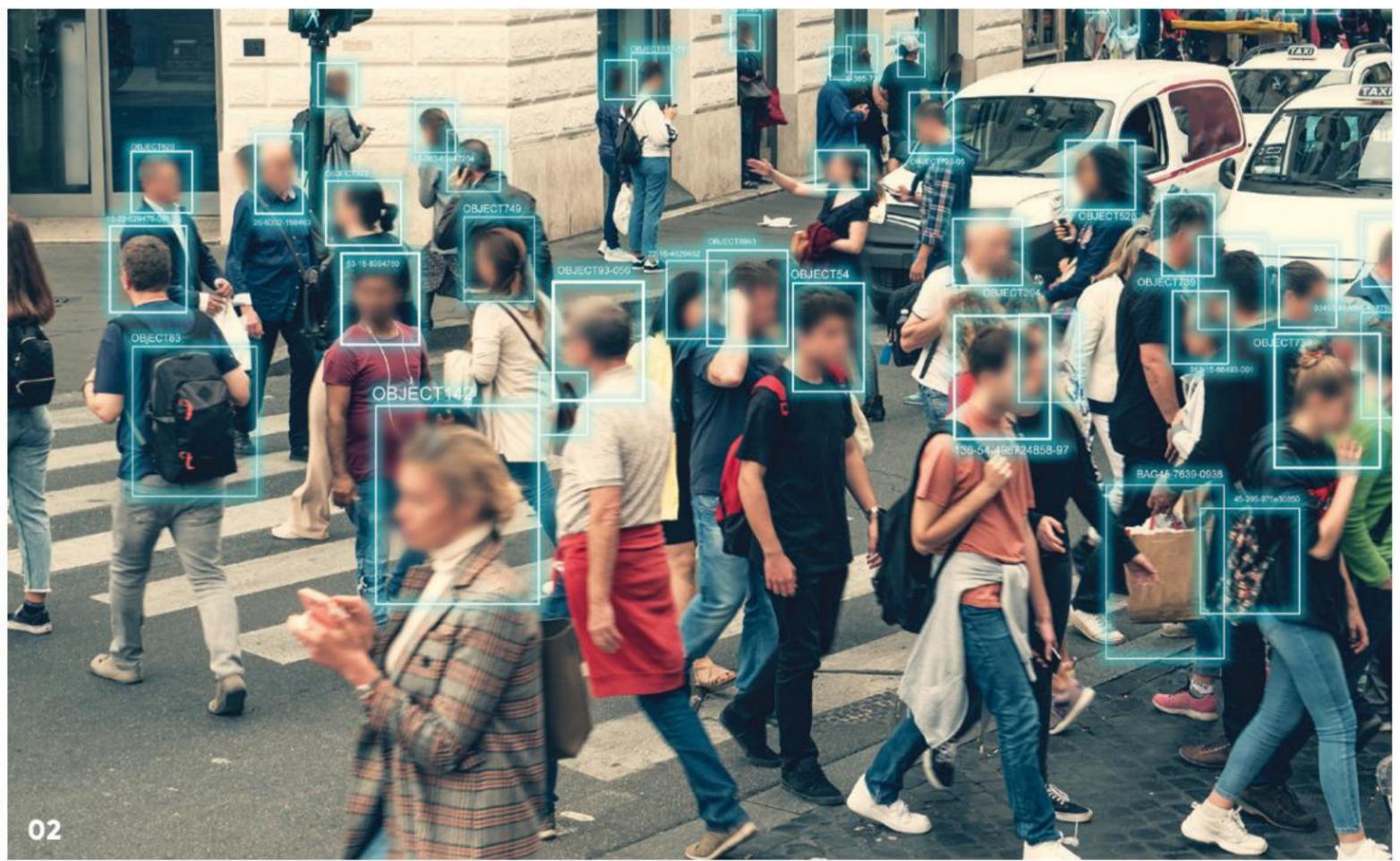
"The big question is: how can we use technology to enhance the way we live? This is the new priority of interior designers and we have to respond to it in every way we can."

The power of the Algorithm

One of the features of both Augmented Intelligence and Artificial Intelligence is the 01 Razan Najee, interior designer at National **Engineering Bureau** (NEB).

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increasing use of algorithms which closely observe what we are doing and then feedback to us the experiences and buying decisions that we will most likely prefer. Can this same approach be used by a designer? Najee believes that yes, it can, but that there's one particular aspect that has real relevance to the world of interior design. "We have to consider," argues Najee, "how technology has changed human interaction and we need to study what this new interaction involves. We need to work in the same way as an algorithm - observe the changes in lifestyle (perhaps even within one group or demographic) and how these can translate into living spaces that meet and encourage our lifestyle patterns."

"Right now, here at NEB, we are working on a project - which has to remain highly confidential - where the new narrative is a combination of a fast-paced life with an accentuation on technology. In demographic terms, it caters for people largely below the age of 45. So the blueprint here is structured Technology is having a profound impact on individuals and society as a whole, and interior designers must design spaces for this new world keeping the human connection in mind.

• The big question is: how can we use technology to enhance the way we live? This is the new priority of interior designers and we have to respond to it in every way we can"

around the way that this demographic works: what are the lifestyle choices it makes, where does it like to shop, how does it study, and what type of exercise does it prefer? In other words we're designing a bespoke lifestyle-centred proposition that is perfect for this age group and its expectations."

Losing identity?

She continues, "I also believe that because of technology, the younger generation is risking losing part of its identity - there's a danger that we are now increasingly all becoming the same. Algorithms keep feeding back to us what we already want - so lifestyles and preferences are becoming circular. This means a very peculiar kind of progress, where there is a vibrant style, but the focus of the content is always driven by technology. Surely, in a world of this kind, there needs to be a certain set of standards, where there is a specific code? A classic example would be the new genre of self-driving cars. Whose fault is an accident and who will be held accountable? Does the traditional approach to 'accountability' even apply anymore?"

"As designers, we are now designing for that new world; but I believe that at a time when change is all around us, there is one constant. When we design spaces, we still need a human connection: the best of interior design should still reflects the way that people live. More than ever, we need to be smart about our choices when we are designing spaces."

"I'm often asked if clients are up to speed with all this? The answer is, yes, they can be. A great example is a new nursery we have recently designed. It's structured around the seven areas of childhood development, so there's an organic and psychological link between how the space is shaped and shared, and how the child's mind actually grows and learns."

"Complementing this, each area in the nursery is called a 'pod'. Everything about the actual environment helps children evolve and embeds technology in a subtle way."

"Now of course, some clients are more visionary than others, and some will still say they want to stick to the 'basics'. Yet I want to emphasise here that clients shouldn't feel that they should be constrained from adopting this approach by the size of their budgets. This

03

There is potential for interior designers to design physical spaces in the real world and work with coders to create spaces in new virtual worlds like the Metaverse.

'smart' approach doesn't necessarily add to the budget at all. It's not about the budget - it's about how you think!"

The Regional Advantage

Take a walk around EXPO 2020 Dubai and it's clear the GCC pavilions lead the world when it comes to focusing on the world of AI and how technology will transform life and society. The international press have dedicated huge column inches to describing the vast commitment to tech made by the Saudi Arabian and UAE pavilions in particular. What does Najee feel about this very developed local sensibility about the power of technology?

"Here, Dubai is ahead of the rest of the world. Many interiors in Dubai in the future will build in features we've never seen before. EXPO is a great example and can give you a hint of what the future can be like. In my view,

many other nations are not keeping up with Dubai in this regard. Just look at how two of Dubai's leading businesses - DP World and Emirates - have chosen to take part in EXPO and the extraordinary visions for the future that they present there. Dubai is stepping up the game for the rest of the world - just look at its recent announcement about the quest to find 100,000 programmers, so that it has more coding power than any other country and can become an international programming hub."

The Role of the Metaverse

Will the 'Metaverse' impact interior design? Najee says, "First there was BIM, and now we are talking more and more about Digital Twins. In effect, Digital Twins are opening the door to the Metaverse - a parallel, artificial world that we can use either as a new platform for shaping and designing the real world, or treat it as a separate universe altogether. Both of these aspects offer vast potential for designers."

"For example, you can be working from a Metaverse cafe wearing AR goggles and think you are working from the office. So as an interior designer, we can design the actual, physical metaverse café. But we can also work with programmers and design within the Metaverse itself! That's where a huge opportunity lies. What's more, this will probably start happening very soon."

"For the time being, it's true technology is changing the type of projects we are working on - and as I've said, particularly in terms of the need for connectivity. In a house for example, it's no longer just about balconies, natural light, and so on. It's also about working from home and the requirements that homeworking technology will put on the homeworking space, influencing its design. There's a need to ensure that if people are spending more time at home, there should be a differentiation between work spaces and living areas. In other words, the inner narrative of the dwelling should take people on a journey that has a lot of variety - not letting them feel stuck in one place."

"You could say in today's world, designers need to behave like an algorithm: you need to see and learn people's behaviour, and offer the environment that will not only make them feel most comfortable, but encourage them to keep on doing what they like doing most."



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Smitha Mathew

"Never be afraid to step up and be a driving force behind the change that our industry needs"

Following our special edition dedicated to women in the construction industry, *Middle East Consultant* continues to share the inspiration and experiences of women working in the male-dominated industry across the GCC. Here, we catch up with Smitha Mathew, engineer at Cundall.

What drove you to get into construction and your first role?

My first role was by chance. Just after college, I secured a job in ELV design where I learned about the industry and the various elements that need to be integrated into a design. My very first project involved working onsite for a government client with high, exacting standards and a very tight schedule. This was a steep learning curve and I was proud to be rewarded with a letter of appreciation at the end.

Seeing a project come to life gives me a sense of purpose. Every day has been a learning experience that enriches my understanding of the design process, client engagement and project management.

Recent advancements and the rapid adoption of technology have led to the development of incredible designs that live in harmony with the architecture and intent of a building. These developments have continually influenced and helped me evolve my own approach to project design.

Share a brief about your career, mentioning key achievements.

I am proud of how my responsibilities and roles have evolved throughout the course of my career. I started as a pre-sales engineer on the contracting side of engineering, before moving on to handling design, client interaction and project management. I've had the chance to work on some incredibly complex projects such as airports that involved having to learn many new systems and guidelines very quickly in order for me to deliver.

I have also thoroughly enjoyed having the chance to mentor younger engineers: sharing my knowledge, providing meaningful opportunities for growth and helping facilitate their early careers in the construction industry.

How have you made your mark in the industry and what is your proudest moment?

Cundall is being bold in its pursuit of its goal to be the most inclusive consultancy in our industry. This means constantly challenging the status quo and building a culture that embraces all aspects of diversity. In my opinion, a huge part of achieving diversity in this industry lies in understanding the different perspectives brought to the table by different genders.



One of my proudest moments came last year when I led the design of a large bank in Oman. The client wanted to create an architectural masterpiece and steer clear of the traditional 'building block layout'.

The building's design was a majestic - a unique geometric structure conveying the idea of a 'symbol of infinity' to anyone who viewed it externally. The smooth, curved arrangement presented many challenges in terms of design and product selection and overcoming these is one of my career's proudest moments.

What are some of the barriers to women entering the construction industry? What was your personal experience?

One of the key barriers holding women back in the workplace is people's mindsets. In order for women to be successful, the general mindset must be altered from the offset, and a belief distilled that she can and will perform to the same level as her colleagues. Overcoming this personal barrier is the key to being successful, not just in construction but any other field.

The GCC construction sector is still male dominated, however diversity is beginning to increase. If you agree with this statement, comment on what is driving this and how you see the GCC markets changing in the coming years? If you do not agree with the earlier statement, please share your thoughts/views of the market.

The GCC is still very much male dominated, and gender diversity is not something that happens overnight. In order to bridge this diversity gap, we must actively encourage more women to come forward and apply for these roles.

The market is constantly evolving, and the past few years have seen more woman leaders emerge within the industry. Employers across construction must work together, with urgency, to effect change in how we attract and retain great people.

Everyone has a part to play in diversity and equal pay. What

would you like to see government authorities and construction firms do to increase diversity and make pay a level playing field?

The UAE government has always been a strong advocate for gender diversity, equality, and parity in pay. However, what governments must also do is implement laws that support this. The ownership to maintain pay parity currently lies heavily with individual companies. While some employers have been creative in carving restructures and designations that support pay equality, there is still a lot more than needs to be done.

In an ideal world, more companies would step forward and take on responsibility for ensuring equal pay and opportunities, but in reality it is legislation that is needed. I firmly believe that we can reach a day where no inequality exists in terms of gender, race, ethnicity or nationality.

Besides authorities and construction firms, who else can play a part in increasing diversity and balancing pay scales?

I believe that any market is dictated by the needs of the customer. There should be an increased demand from the customer to ensure that diversity is well documented and established. The selection of partners and suppliers should also not be solely based on price but on social responsibility.

As a woman in the industry, what has your experience been working in the GCC construction sector? If you have worked in markets outside the GCC, how does your experience here compare with what you've experienced and observed in other markets?

I am fortunate that my primary experience has been in the GCC market. While I have faced challenges in finding the right employer, I feel lucky to say that I have not faced any gender-based discrimination in any of my roles. I would say that I have been very lucky to work across diverse and complex projects that have challenged me to step outside of my comfort zone and quickly pick up new skills.

In an ideal world, more companies would step forward and take on responsibility for ensuring equal pay and opportunities, but in reality it is legislation that is needed. I firmly believe that we can reach a day where no inequality exists in terms of gender, race, ethnicity or nationality"

In your opinion, what is the biggest challenge women in the construction sector face in GCC countries? How can these challenges be addressed?

While there are many challenges in the construction industry, I believe that maintaining a work-life balance is one of the biggest that many people, particularly women, face.

For many people in this industry, it can seem impossible to find that sweet spot between work and home life. Working in a supportive organisation, like Cundall, where my colleagues understand the importance of this balance, and are always available to connect makes all the difference.

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In doing your job, what sort of discrimination (if any) have you faced and how did you/employer address it?

I have been fortunate to not experience any discrimination in my career. Cundall has been a pioneer in ensuring and committing to gender equality, sustainability, and diversity in ethnicity.

Since it is engrained in the work culture, I believe that every activity around staffing and recruiting has been very organic in achieving diversity. The key to bridging the diversity gap is communication within the organisation. We are always encouraged to talk about and discuss issues at work and to bring these to our colleagues' attention

when faced with a problem. Work stress is always there but this is greatly reduced by having clear communication, irrespective of the diverse cultures that we all come from.

Do you feel there's a limit with regards to how far you can progress within your respective organisation?

I believe that the limits are self-determined by each individual. I make sure that every day I work hard and continue to be inspired. I strongly believe that hard work, dedication and sincerity never goes unnoticed. Cundall provides all employees with opportunities to thrive and reach their potential, regardless of their gender or any other factors. I strongly believe that there are no limits within Cundall.

How does Cundall approach diversity in the workplace? What more can your firm do to increase diversity?

Cundall is dedicated to transforming the future of the industry and has taken many steps to achieving a diverse workforce.

Over the past year we have seen a lot of positive change including the adoption of new D&I policies such as the Rooney Rule for all leadership-level recruitment and our first neurodiversity policy. We have also seen the number of women in leadership roles double.

Cundall is ensuring that D&I remains central to how things are done, and is a fundamental component of the company's culture and identity. We have launched many campaigns and initiatives that celebrate diversity and advocate for inclusion, as well as actively participating in industry groups such as the Emirates Green Building Councils Women Network.

How do you personally push for diversity and equal pay in the construction sector? Are you involved in any groups/councils etc. that focus on increasing diversity and equal pay?

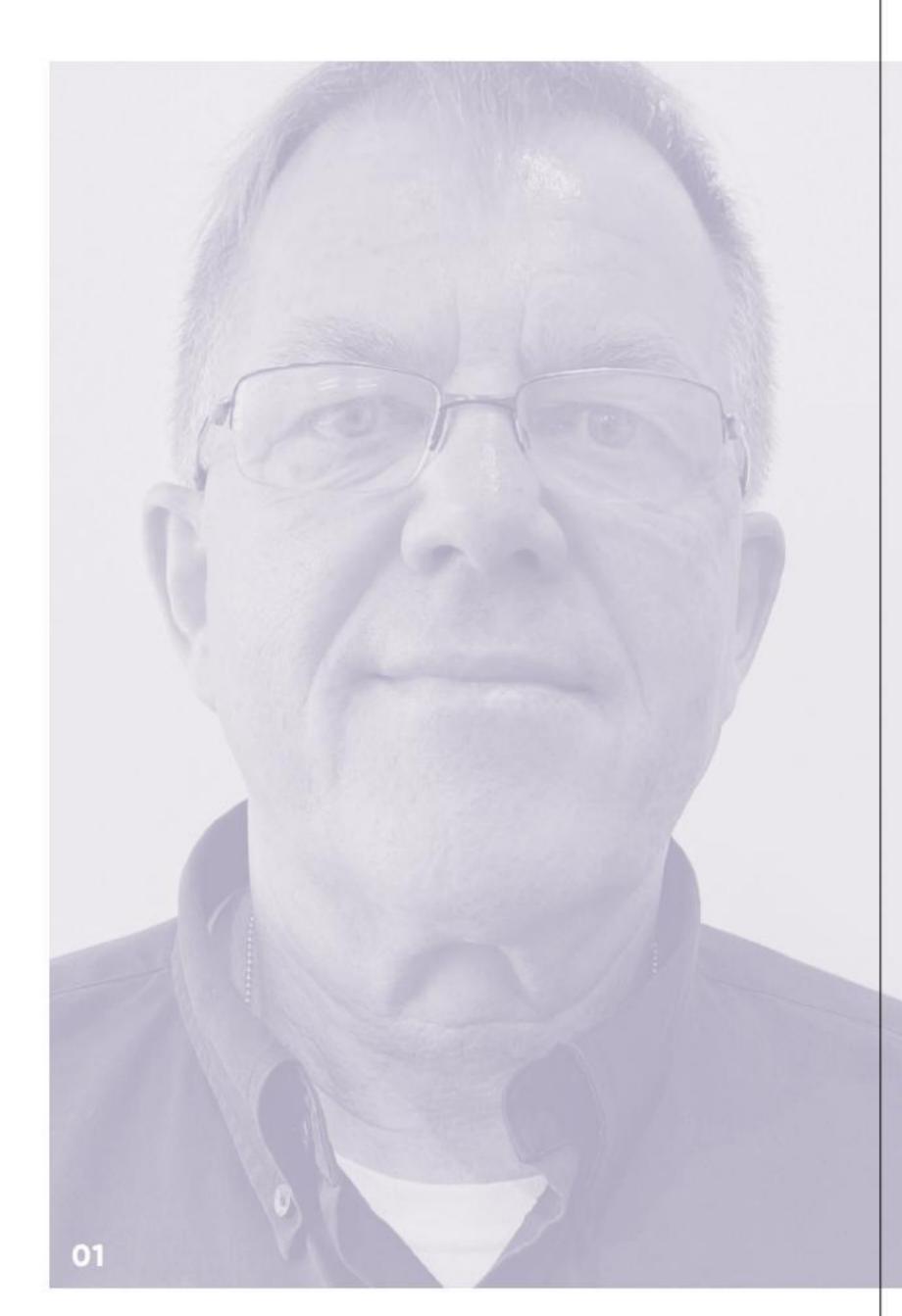
Diversity is a continual process that ensures we are constantly changing and creating new dynamics that will strengthen a company in the long run.

I believe that we must all educate ourselves and take the time to learn about our colleagues, to gain a greater sense of cultural appreciation and sensitivity. I'm proud to be part of Cundall's GAIN affinity network which provides support for women and gender minority colleagues across the business.

What advice would you give to a woman entering the GCC construction industry today?

My advice is to work hard and be confident whenever you are either offered a challenge or a demanding role. You should never be afraid to step up and to also be a visible driving force behind the change that our industry needs. •

Johan Ekstrom is business development manager, senior application and product specialist at Husqvarna Construction.



As technology becomes more pervasive in construction sites, the industry will see an increase in productivity as well as a truncated construction schedule. To benefit from the technological advancements in the industry, it is advisable for construction sites to join the bandwagon and move at the same technological pace as other industries.

The Middle East and Africa Construction equipment was valued at \$125.3bn in 2018 and is estimated to reach a value of \$285.4bn in 2024 at CAGR of 9.4%. Key drivers for technology adoption in construction are efficiency, productivity improvements, safety

Johan Ekstrom

"By using powerful tools and cutting-edge technology, developers are able to build stronger, taller, and more energy efficient structures"

as well as cost reductions. The main drivers and benefits include:

1. Timely completion of projects

Construction delays result in increased costs to the original program scope. One reason behind specific concrete job delays can be the use of manual machines or traditional methods used to cut, drill the concrete, resulting in timeconsuming processes and involving safety risk.

Light construction equipment has evidently brought a period of change in the industry. It offers numerous benefits to the contractor such as precision engineering, speed & efficiency in the job, modern engines with low fuel consumption and lower emissions.

With the help of the right type of equipment and diamond tools, fitted with cutting-edge technologies, smart application and bespoke approach contractors can ensure the cutting time is safe, efficient and is as per the requirements.

Heavy-duty machines that are embedded with advanced technology can do twice the amount of work and other tasks in less time and more efficiently. The innovative utilisation of high-frequency current and digital processing can bring a whole new level of efficiency and usability to the game, increasing performance, productivity, and mobility.

2. Increased cost savings

The reliability of the heavy-duty construction equipment also translates into higher profitability resulting in reduced defect-related

claims, professional quality outputs and a higher quantity of jobs done in the same day. To gain the maximum efficiency, selection of right diamond tools for the application that contractors is performing is crucial. For that, the advice from concrete cutter or demolishing specialists that have expertise in using complex solutions will help avoid costly mistakes.

3.Increased safety and less hazardous

Construction equipment housed with the latest technology are less hazardous, resulting in considerably reduced CO2, helping companies apply a greener footprint. An electric power cutter is an ideal solution to reduce work hazards, including inhaling exhausting fumes and dust at indoor jobs.

4. Longer lifetime

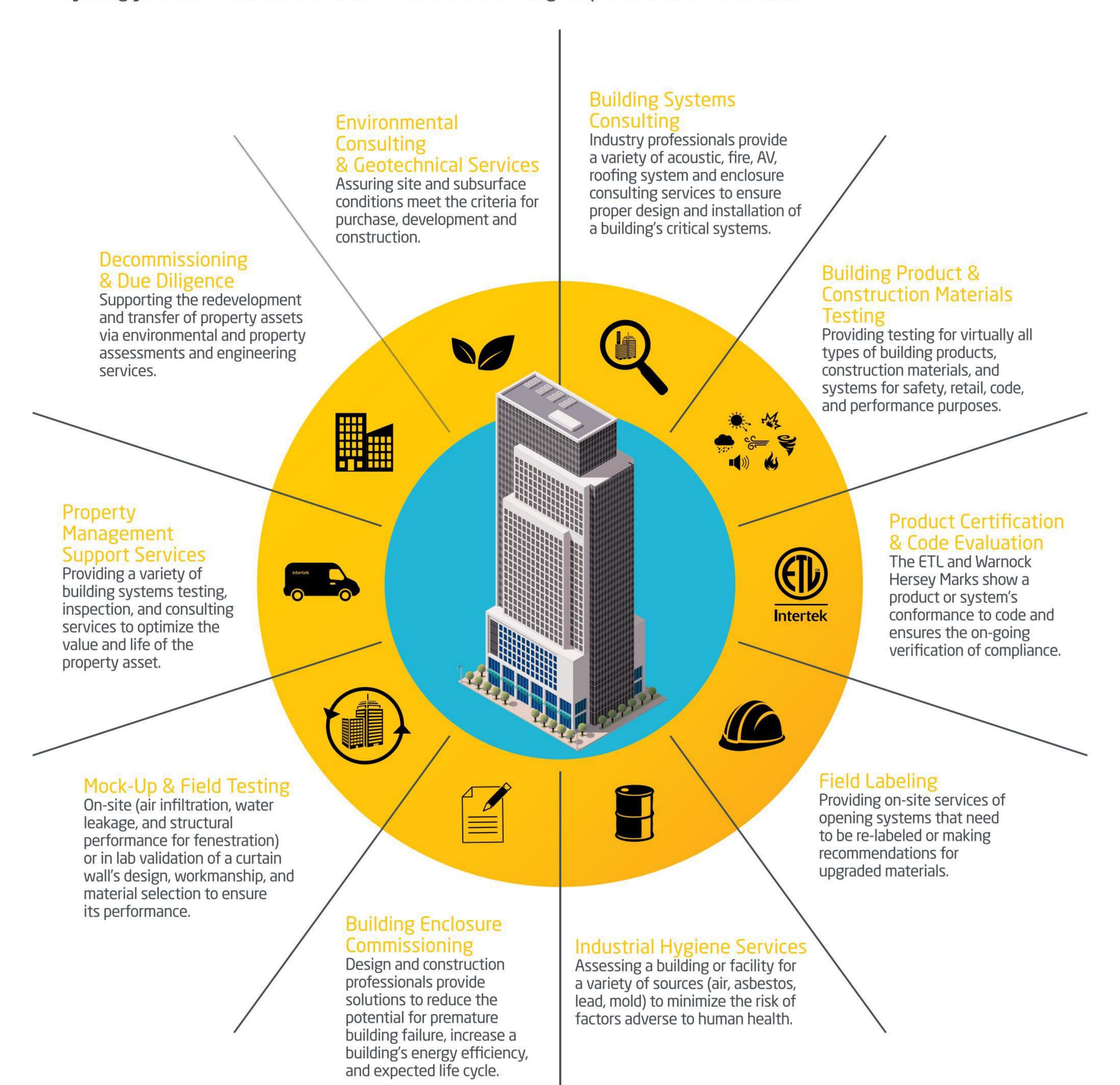
Using a power cutter on a daily basis for different applications has a longer lifetime use compared to other small power tools used to cut concrete. Combined with the right diamond tools for different application, it provides the contractors and application specialists to perform multiple jobs for long without major wear and tear.

By using powerful tools and cuttingedge technology, developers are able to build stronger, taller, and more energy efficient structures, contractors benefit from increased productivity, improved collaboration, and be able to tackle more complex projects and for construction professionals it has made the sites safer. •

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