

TECHNICAL REVIEW

النشرة التقنية - الشرق الأوسط

MIDDLE EAST

Vol 37/Issue Six 2021

ANNUAL TRANSPORT REVIEW

Mining solutions

Towards zero emissions

Solar project

Green initiatives
redefining logistics

THE TAKE OFF

TO A NEW WORLD OF
OPPORTUNITIES

Inside

Smart Buildings
Water Security
Trucks
Air Quality

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37 Years

1984 - 2021

Serving Middle East
Business



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EDITOR'S NOTE

THE DISRUPTION, DECARBONISATION and digital transformation impacting the Middle East's crucial sectors of transport and logistics are paving the way for new age initiatives. Please check our Annual Transport Review on page 14. The Dubai Airshow and Hypermotion Dubai in November are excellent examples of events that helped reconnect industry experts and stakeholders and understand perspectives as we rebuild towards a brave new world.

Also in this issue, we delve into another important sector – mining (p22), which is working towards zero emissions. While the Honeywell research on page 27 reveals that sustainability is a top priority for Middle East businesses. As we move towards the end of another tumultuous year, here's hoping for a better tomorrow!

At Technical Review we always welcome readers comments to trme@alaincharles.com



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22



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SERVING THE REGION'S BUSINESS SINCE 1984

TECHNICAL REVIEW

النشرة التقنية - الشرق الأوسط

MIDDLE EAST

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DLD and Majid Al Futtaim drive digital initiatives across industry

THE DUBAI LAND Department (DLD) and Majid Al Futtaim Communities, part of Majid Al Futtaim Properties, have announced their plans to drive digital initiatives across the industry and simplify the process for potential homeowners.

At the forefront of these is the 'digital real estate transactions.'

A move to electronic real estate transactions is set to significantly reduce the time required to complete transactions but will also enhance the customer experience by eliminating the need to be physically present to sign and submit documentation. Buyers would be able to complete and submit the required paperwork digitally from the comfort of their own home or office, regardless of where they are located in the world.

"In a world defined by the speed and convenience of online and on-demand services, it is essential for the real estate industry to utilise digital tools and automated processes. The digital signature would make it possible to conduct real estate business from any place and anytime, at buyer or investor comfort. As Dubai continues to position itself as a global hub and innovative city, we are excited and happy to support Majid Al Futtaim Communities in enhancing the real estate landscape and driving digital innovations," said Sultan Bin Mijrin, director general, Dubai Land Department.

The competitive real estate market in Dubai has been witnessing strong growth dynamics, with many international investors showing increasing interest. The introduction of new visa reforms, the ease of business ownership, as well as the economic impact of Expo 2020 Dubai have strengthened the UAE's position as a hub to live and work and created a perfect opportunity for real estate owners and investors who are on the lookout for a strong property market.

The 'digital real estate transactions' initiative aims to increase property sales efficiencies, creating a simplified process for both investors and customers, allowing the industry to remain attractive and flexible for both investors and homeowners from around the globe.

UAE unveils US\$13.61bn railways programme



Etihad Rail is the first road transport system that connects key cities of the UAE from Ghuwaifat to Fujairah.

Photo Credit : Etihad Rail

IN THE PRESENCE of His Highness Sheikh Mohammed bin Rashid Al Maktoum, UAE Vice-President, Prime Minister and Ruler of Dubai, and His Highness Sheikh Mohamed bin Zayed Al Nahyan, Crown Prince of Abu Dhabi and Deputy Supreme Commander of the Armed Forces, the UAE Government has launched the UAE Railways Programme, the largest integrated system for transporting goods and passengers across the country.

The programme constitutes an integrated strategy for the railway sector in the UAE for the coming decades, as it includes a national network of railway projects that link the emirates and the key cities of the country. The first phase of the Etihad Rail has been fully operational since 2016, with opportunities to expand beyond the borders of the UAE.

The UAE Railways Programme falls under the 'Projects of the 50' which is a series of developmental and economic projects that aim to accelerate the UAE's development, transform it into a comprehensive hub in all sectors and establish its status as an ideal destination for talents and investors.

The programme was launched during a special event celebrating the projects of the 50, held at Dubai's EXPO 2020. The event highlighted the objectives of the programme

and the phases of the 'Etihad Rail' project, which connects Ghuwaifat on the border with Saudi Arabia to the port of Fujairah on the Eastern Coast.

His Highness Sheikh Mohammed bin Rashid Al Maktoum said, "The Etihad Rail is the largest project to consolidate the strength of the union for the next fifty years. It will connect 11 key cities and regions across the UAE."

His Highness added, "The UAE's infrastructure is among the best in the world, and the Etihad Rail will further enhance UAE excellence in the logistical field. The project comes in line with the environmental policy of the UAE and it will reduce carbon emissions by 70-80%."

His Highness Sheikh Mohamed bin Zayed Al Nahyan commented, "The National Railways Programme reflects the true meaning of integration into our national economic system, as we see the largest partnership between government entities at the federal and local levels. It comes to support a national vision to connect the country's important centres of industry and production, open new trade routes and facilitate population movement, creating the most developed work and life environment in the region."

MoIAT, DI deal to boost UAE industrial sector

THE MINISTRY OF Industry and Advanced Technology (MoIAT) and Dubai Industrial City (DI), one of the largest industrial hubs in the region, have signed a deal designed to further enhance the UAE's industrial sector while facilitating decarbonisation efforts.

The Memorandum of Understanding was signed on the first day of the Global Manufacturing and Industrialisation Summit which is held under the patronage of Sheikh Mohammed bin Rashid Al Maktoum, vice president and prime minister of the UAE and Ruler of Dubai at Expo 2020 Dubai.

It focused on three core elements, including enabling the UAE's Industry 4.0 programme, attracting foreign investors as



The Memorandum of Understanding was signed on the first day of the Global Manufacturing and Industrialisation Summit.

Photo Credit : Ministry of Industry and Advanced Technology

part of "Make It In The Emirates" campaign, and facilitating decarbonisation across the industrial sector. The partnership's objectives are in line with the UAE's industrial strategy, which aims to develop the nation's industrial sector and raise its contribution to GDP.

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Sanad signs MoU with Next50 to progress tech driven industrial solutions

SANAD, THE GLOBAL aerospace engineering and leasing solutions provider wholly-owned by Mubadala Investment Company PJSC (Mubadala), has signed a MoU to collaborate with Next50, a joint venture between ADQ and G42, to develop technology-driven services solutions for the industrial services sector

The agreement was signed by Sanad deputy group CEO, Mansoor Janahi and Ibrahim Al Mannae, Next50 CEO, at the Gulf Manufacturing & Industrialisation Summit 2021 (GMIS). The MoU will see the two companies working together to explore next-generation solutions based on IoT, data-analytics, machine learning and artificial intelligence with the aim of boosting efficiency across multiple industries.

"The signing of this agreement brings together two leading entities with a shared purpose, to collaborated on capabilities and provide digital solutions to maximise outcomes. This future-focused partnership is the direct result of Sanad's focus on delivering innovative, disruptive and technology-driven service solutions for the industrial sector and reinforces our support of Abu Dhabi's vision for a diverse, knowledge-based economy driven by advanced technologies," said Mansoor Janahi.

"With NEXT50's deep domain expertise and cutting-edge industrial solutions, we look forward to working alongside the team at Sanad on deploying technologies that advance the industrial sector and propel its growth," commented Ibrahim Al Mannae.

PMI releases 2021 Most Influential Projects Lists

RIYADH METRO NETWORK is one of several projects launched in the Middle East and North Africa recognised by Project Management Institute (PMI)'s third annual list of Most Influential Projects.

The network has been spotlighted by PMI alongside a diverse selection of MENA projects — including Iraq's Al-Nouri Mosque Complex, Morocco's Innovation Campus and Expo 2020 — as one of the top 50 influential projects of the past 12 months.

Projects are the primary way to turn ideas into reality, and an idea is only an idea until we make it real through a project. The 2021 Most Influential Projects list demonstrates how project managers and changemakers have found resourceful ways to bring projects to life amid global disruptions, including the continuing pandemic.

"As the world's leading association for project professionals and changemakers, PMI is dedicated to championing the work of truly impactful leaders and community-builders. The examples set by these leaders and organisations will inspire others to also pioneer lasting solutions to the world's most pressing challenges," said Grace Najjar, managing director of PMI MENA.

"As a for-purpose organisation, PMI is dedicated to supporting and uplifting those who are enabling change around the world," added Michael DePrisco, chief operating officer of Project Management Institute. "Our 2021 list of Most Influential Projects proves how creativity, collaboration, discipline, and determination can turn the boldest of ideas into a reality and change the world that we live in — even during the most challenging times."

The main list of the 50 Most Influential Projects includes innovation in transportation, renewable energy, architecture, technology, and more. PMI released 30 lists recognising the Top 10 most influential projects in a variety of regions and industries. In total, the lists include more than 250 breakthrough efforts across a wide range of industries.



Photo Credit: Project Management Institute

Grace Najjar, managing director, PMI MENA.

Members of the project management community — including experts, volunteers, academics, and industry leaders from across the globe — provided input and nominations for this year's list. The pool of candidate projects, which numbered in the thousands, was then vetted by a PMI thought leadership team. The final list represents PMI's vision of projects, and the project professionals and changemakers behind them represent the creative spirit shaping how the world collectively reimagines a new future, makes ideas and dreams reality, and, as a result, change the world.

ACCIONA will build Jubail 3B desalination plant, its sixth in Saudi Arabia

TOGETHER WITH ITS partner SEPCOIII, ACCIONA will undertake the construction of the Jubail 3B desalination plant and its capacity of 570,000 m³/day will supply two million people in the cities of Riyadh and Qassim. ACCIONA and its partner are the main EPC contractors in the project, which will be developed and financed by a consortium consisting of ENGIE, NESMA and AJLAN for the publicly-owned Saudi Water Partnership Company (SWCP).

SWCP has announced the financial closure of the project, which is estimated at US\$692mn.

The entry into service of the plant is



Once the plant is completed, ACCIONA will supply around 2.37mn m³/day of desalinated water in Saudi Arabia.

Photo Credit: ACCIONA

planned for Q1 2024, and it will be handed over under a 25-year build-own-operate (BOO) agreement. With this contract, ACCIONA consolidates itself as one of the main water treatment infrastructure companies in one of the areas with the highest water stress on the planet, the Middle East, and more specifically Saudi Arabia. Once Jubail 3 is completed, ACCIONA will supply around 2.37mn m³/day of desalinated water using reverse osmosis, consolidating it as the most efficient and sustainable desalination technology with the smallest carbon footprint.

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Yellow Door Energy partners with ETG on solar lease in Dubai

YELLOW DOOR ENERGY, the UAE-based sustainable energy provider for businesses, has been awarded a solar project with ETG, a diversified global conglomerate, for its agricultural processing and food storage facility in Dubai World Central Free Zone

The 383KW-peak rooftop solar plant is expected to generate 620,000 kilowatt-hours of clean energy in its first year of operation, equivalent to reducing 6,000 tonnes of carbon emissions over the system lifetime. Over 700 solar panels will be installed to cover 3,100 square meters of roof space, meeting 85% of the facility's energy consumption needs.

Tarun Chawla, chief operating officer for ETG's Pulses and Edible Nuts Business, said, "ETG is dedicated towards driving sustainability. This partnership with Yellow Door Energy will help us utilise clean energy for our processing, in turn providing eco-friendly commodities to our customer base. We aim to undertake similar measures on a global scale."

Rory McCarthy, chief commercial officer of Yellow Door Energy, stated, "We are proud to support ETG in its sustainability journey and contribute to the strengthening its food value chain. As the economy recovers from the pandemic, we encourage businesses to consider solar as part of their recovery plans so that they can immediately reduce electricity costs and regain their competitiveness. Yellow Door Energy is honored to contribute to DEWA's Shams Dubai Program and the UAE's Net Zero by 2050 Strategic Initiative."

Leadax launches the 'world's most sustainable roofing'

LEADAX HAS LAUNCHED 'world's most sustainable' roofing material, Leadax Roov at an exclusive event hosted at the Netherlands Pavilion, Expo 2020 Dubai

Like other Leadax products, this roofing product is made from recycled plastic waste (r-PVB). Leadax Roov is a circular product, specially made for flat and slightly slanting roofs and can be recycled again at the end of its lifecycle. Leadax Roov is off-white, which gives it a substantial reflection value, is lightweight, easy to process and applicable to various roof systems. Leadax Roov also has an up to 85% lower CO2 footprint than other flat roofing membranes in the market.

Global Launch

The global launch of Leadax Roov included the signing of the partnership between Wienerberger and Leadax on the distribution of this product for large parts of Europe. The agreement was signed by Solveig Menard-Galli, COO Wienerberger AG and Roeland van Delden, CEO Leadax at the Netherlands Pavilion, Expo 2020 Dubai. Leadax Roov will be available from beginning 2022 in the Netherlands and other European countries will be added by Wienerberger as soon as certification is in place.

Roeland van Delden, CEO of Leadax, stated, "For almost thirty years I have been travelling to the Middle-East to do business with waterproofing products and I still do. However, now I come back to show the future of waterproofing and roofing. To be part of this transition from a linear to a circular economy makes me proud." Roov can be recycled up to seven times, which turns PVB waste into a circular

The global launch of Leadax Roov included the signing of the partnership between Wienerberger and Leadax on the distribution of this product for large parts of Europe.



Photo Credit : Leadax

flow that was previously incinerated or dumped.

Partner at the Netherlands Pavilion

Leadax has waterproofed the Netherlands Pavilion with their circular building materials, including lead-free flashing and the world's most sustainable flat roofing.

"We are very proud to be associated with the Dutch company, Leadax, that showcases a true impact on sustainable construction methods and circular economy. It is great to see these innovations exhibited at the Netherlands pavilion and using the platform of Expo 2020 Dubai they are able to build partnerships worldwide" said Carel Richter, commissioner general for the Netherlands Pavilion.

150 Eiffel Towers

Leadax uses recycled polyvinyl butyral as a raw material for its waterproofing products, such as lead substitutes and flat roofing. In Europe alone, 1.5 billion kilos of PVB waste is available every year. By comparison, this is the weight of 150 Eiffel Towers. The award-winning manufacturer aims to redefine the definition of 'waste' globally and create a brighter, cleaner future.

Microsoft partners with the Global Manufacturing and Industrialisation Summit

THE GLOBAL MANUFACTURING and Industrialisation Summit (GMIS) and Microsoft have announced a partnership to help digitally transform the manufacturing sector by harnessing the power of Artificial Intelligence (AI), cloud technologies, and the Internet of Things (IoT).

The partnership will explore end-to-end manufacturing

solutions in the digital era, including capabilities that seamlessly connect people, assets, workflow, and business processes, empowering organisations to be more resilient. It will also highlight security, as investments are increasingly being made in building risk management and compliance solutions.

As a strategic partner to the Global Manufacturing and



Photo Credit : Microsoft

Sayed Hashish, general manager of Microsoft UAE.

Industrialisation Summit, Microsoft will participate in the fourth edition of the Summit (#GMIS2021) to share best practices as a global leader in digital transformation and cloud computing to support organisations in upgrading their businesses, increasing their productivity, driving innovation, and evolving ecosystems.

Zurich joins forces with EEG, sets sustainable goals

ZURICH INTERNATIONAL LIFE in the Middle East has announced a collaboration with Emirates Environmental Group (EEG) to improve its sustainable practises and responsible corporate livelihood, in line with

the UAE's Sustainable Development Goals. The key player in the insurance industry will bolster its sustainable development and amplify its eco-friendly efforts through a number of partnerships, including the

most recent with EEG. Through the partnership, Zurich is targeting a clear alignment to the organisation's vision and commercial goals.

Reena Vivek, interim CEO of Zurich in the Middle East, said, "We at Zurich believe that sustainability needs to be a part of every company's DNA and core business strategy. Not only do we need to have conversations around it, but as a community, we need to translate these dialogues into actions.

"In a world where risk is increasing daily due to carbon emissions, Zurich has aided in curbing the threat by reducing its paper consumption by 97.45% across the Middle East as well as lowering the use of single use plastics by 93% across the region.

"Through process automation, digitalisation and innovative solutions, Zurich has made steady progress towards its sustainability goals.

"Our work with EEG will take our commitment to the region's sustainable goals one step further and will help us make a direct contribution to the vision of a more sustainable UAE."



Photo Credit : Adobe Stock

Majid Al Futtaim and Aldar to digitalise real estate sales transactions in the UAE

MAJID AL FUTTAIM Communities, part of Majid Al Futtaim Properties, and Aldar Properties are aiming to create and implement digital real estate sales platforms for their businesses in the UAE, with the platforms set to be launched when the E-Law comes into effect in Q1 2022.

The new E-Law allows for real estate transactions to be included within its scope of application. The digitalisation of the real estate transactions will make property purchases, sales and management a simple, quick and convenient process for both UAE and overseas customers. The E-Law regulates and allows electronic transactions to be conducted with confidence by recognising that a verified electronic signature has the same legal validity as a physical signature.

The move to electronic real estate transactions not only significantly reduces the time required to complete transactions, but it also enhances the customer experience and is more environmentally friendly due to the reduction in paper usage.

The collaboration between Majid Al Futtaim and Aldar follows the recent signing of a MoU that will see both parties work together to enhance innovation, customer experience, digital transformation and sustainable practices in the real estate sector.

"The issuance of the new E-Law and the initiation of our new digital real estate sales platform marks the next step in our digital transformation journey as we aim to become the region's most customer-centric developer. As the first real estate organisations in the UAE to adopt this online system, Majid Al Futtaim welcomes this collaboration with Aldar and aims to work together to create a more innovative industry. Moving forward, this will allow our customers to experience seamless and safe transactions regardless of their location," said Hawazen Esber, CEO, Majid Al Futtaim Communities.



Photo Credit : Aldar Properties

Jonathan Emery, CEO at Aldar Development, commented, "The new E-law is a significant development for the UAE's real estate sector. It will not only improve the experience for buyers but encourage overseas investment in what is a modern and digitalised market. Together with Majid Al Futtaim – Communities, we hope to encourage further collaboration within the industry to ensure that the UAE's real estate market is at the forefront of innovation, digital transformation and sustainability."

The introduction of new visa reforms, the ease of business ownership, as well as the economic impact of Expo 2020 Dubai has strengthened the UAE's position as a hub to live and work and created a perfect opportunity for real estate owners and investors who are on the lookout for a strong property market. The new system increases operational efficiencies, which results both in cost reduction and a more seamless experience, creating a simplified platform for both investors and customers.

EXECUTIVES' CALENDAR 2022

JANUARY 2022

17-19 **World Future Energy Summit** ABU DHABI www.worldfutureenergysummit.com

FEBRUARY 2022

1-3 **LEAP** RIYADH www.onegiantleap.com

MARCH 2022

7-9 **Middle East Energy** DUBAI www.middleeast-energy.com

7-9 **Intersolar Middle East** DUBAI www.intersolar.ae

28-31 **The Big 5 Saudi** RIYADH www.thebig5saudi.com

28-31 **HVAC R Expo Saudi** RIYADH www.hvacrexpousaudi.com

MAY 2022

9-11 **World Utilities Congress** ABU DHABI www.worldutilitiescongress.com

Readers should verify dates and location with sponsoring organisations, as this information is sometimes subject to change.

WFES 2022: A global transition towards clean energy

THE WORLD Future Energy Summit 2022, hosted by Masdar as part of Abu Dhabi Sustainability Week, will hold three sustainable development events for the benefit of project owners, government entities and investors in the Middle East region. The Water Expo & Forum, the Smart Cities Forum, and the Climate & Environment Forum will feature industry-leading speakers, international technology and innovation providers, and world class exhibitors. The participants will share insights with the Middle East's most powerful investors, government and business stakeholders and project owners, entrepreneurs, innovators, and technology providers. These three events provide perfect platforms for stakeholders to network and do business in person, and in turn drive clean energy and sustainable development in the Middle East and North Africa region.

The Water Exhibition will feature world-class exhibitors including Acciona, Andritz, Jinluo Water and Utico, who will showcase their latest innovations and technologies in water desalination, water networks, wastewater treatment and smart water management. The Water Exhibition is significant to the Middle East as Arab countries have 6% of the world's population



Photo Credit : Reed Exhibitions FZ LLC

with less than 2% of renewable water supply, according to a report by the World Bank. To increase water security, the UAE has announced three additional seawater desalination plants, which are expected to be completed by 2023, with a combined capacity of 420 million imperial gallons per day. The Smart Cities Forum will help drive the next generation of urban development while the Climate and Environment Forum

will highlight the latest advances in climate resilience and environmental protection.

The World Future Energy Summit 2022, organised by RX Middle East, will be held at the Abu Dhabi National Exhibition Centre (ADNEC), from 17 - 19 January 2022. It comprises of a series of events addressing current global challenges and the means with which the world can cooperate to build a sustainable future for everyone.

ON THE WEB

A round up of the leading developments and innovations recently featured on *Technical Review Middle East's* online portal. To read more or to stay up to date with the latest industry news, visit www.technicalreview.me

Egypt 250MW wind project begins commercial operation

RENEWABLE ENERGY DEVELOPER Lekela's 250MW West Bakr wind project in Egypt has begun commercial operation.

The wind farm consists of 96 turbines, installed by Siemens Gamesa. The West Bakr wind farm will produce more than 1,000GWh of renewable electricity every year, saving more than 530,000 tonnes of carbon dioxide annually. <https://www.technicalreviewmiddleeast.com/power-a-water/renewables/>



The wind farm will produce renewable electricity.

Photo Credit : Adobe Stock

Trimble engages with Heriot-Watt University students

TRIMBLE ENGAGED WITH students of Heriot-Watt University Dubai on the future of construction industry in digital age, to prepare the next generation of construction professionals. It showcased its portfolio of technologies for the construction industry before the university's students, families and friends. WATTXPO was organised to create an environment similar to Expo Dubai for the students to interact with industry players such as Trimble. The campus was transformed into nine pavilions featuring activities and themes like art and culture, business, sustainability, environment, engineering and technology.

<https://www.technicalreviewmiddleeast.com/events/>

Nesma Contracting signs MoU with France's Bouygues Travaux Publics

THE LOCAL NESMA Contracting has signed a memorandum of understanding (MoU) with France's Bouygues Travaux Publics to bid for and potentially deliver civil and construction works for Saudi Arabia's first nuclear plant.

Bouygues Travaux has entered into a framework agreement with EDF for cooperation on future European Pressurised Reactors (EPR)-technology-based nuclear power plant projects in Saudi Arabia.

The framework agreement also covers EPR-based projects in the Czech Republic and Poland.

<https://www.technicalreviewmiddleeast.com/power-a-water>

Kuwait retenders South Al-Mutla WWTP

KUWAIT'S MINISTRY OF Public Works has retendered the contract for the construction and operation and maintenance of the South Al-Mutla wastewater treatment plant (WWTP). The project involve the construction of a WWTP with a treatment capacity of 400,000 cm/d, can be expanded to 600,000 cm/d in future.

<https://www.technicalreviewmiddleeast.com/power-a-water/>



Maintenance of the South Al-Mutla WWTP.

Photo Credit : Adobe Stock

EGA and GE sign deal to reduce carbon emissions

EMIRATES GLOBAL ALUMINIUM (EGM) and US-based GE signed an agreement to reduce carbon emissions at EGA's facilities in the UAE. The companies are planning to develop a roadmap to cut emissions from GE's



Industries will transit to low-carbon operations.

Photo Credit : Adobe Stock

natural gas turbines by "exploring hydrogen as a fuel, as well as carbon capture, utilisation and storage solutions."

<https://www.technicalreviewmiddleeast.com/power-a-water/>

Liebherr-MCCTec GmbH gets gold sustainability rating

LIEBHERR-MCCTEC HAVE BEEN awarded a gold medal from EcoVadis. EcoVadis, is the world's most trusted business sustainability ratings supplier with over 75,000 companies participating. Liebherr-MCCTec GmbH is part of the Liebherr Group and is a divisional holding company for maritime cranes, crawler cranes, duty cycle crawler cranes as well as pilling and drilling rigs for deep foundation work. The gold medal for Liebherr-MCCTec places us in the top 5% of all rated companies for sustainability and within the top 3% of manufacturing companies globally. EcoVadis score sustainability using indicators in four key areas; environment, labour and human rights, ethics and sustainable procurement.

<https://www.technicalreviewmiddleeast.com/business-a-management/>

“In our latest KPMG CEO Outlook, 78% of surveyed CEOs in Saudi Arabia pointed to increased demands from stakeholders – including investors, regulators and customers, for enhanced reporting and transparency on ESG issues. Growing exposure to global financial markets and heightened attention from ratings agencies have invigorated Saudi banks on their ESG priorities.”



Photo Credit: KPMG

OVAIS SHAHAB

Head of financial services in Saudi Arabia
KPMG

“As we hope to get re-elected in the Executive Council of the IMO for the third consecutive time, we look forward to motivating the industry to comply with new legislations and digital transformation in order to deploy advanced, smart, and innovative solutions for the sustainable development of the sector. Currently, we host more than 27,000 maritime companies in the nation, and our ports are ranked as one of the best across the globe, thus cementing our position as a leading maritime hub globally.”

HE HASSAN MOHAMED JUMA AL-MANSOORI

Undersecretary for the Infrastructure and Transport sector
UAE Ministry of Energy and Infrastructure

“This partnership is a continuation of Aramco’s long-standing relationship with a number of leading French companies. It represents an opportunity to promote hydrogen as a low-carbon solution, not just for motorsport, but eventually for mass transportation as well. Such collaboration helps us to advance economic growth in the Kingdom as part of the Namaat industrial investment programme and takes us a step closer to our shared vision of a more sustainable future.”

AMIN H NASSER

President and CEO

ARAMCO

(On the agreements between ARAMCO and five leading French companies to explore hydrogen-powered vehicle business)

“ADIPEC 2021 returned as an in-person event at a crucial time for the energy industry as we take stock of the outcomes of COP26. This week we have seen organisations from across the energy world come together at ADIPEC 2021 to explore, collaborate and chart the next stage of sustainable growth for our industry, delivering more energy and fewer emissions. We must do more to accelerate decarbonisation, but we cannot simply unplug from today’s energy system and into a cleaner energy model of the future.”



Photo Credit: ADIPEC

TAYBA AL HASHEMI

CEO
ADNOC Sour Gas

“It is our great pleasure to announce that Mugharraq Port, one of the high-performing ports located within the Al Dhafra Region, has been officially recognised as an international port facility. This achievement will greatly accelerate the port’s potential in securing interest from the world leaders of industry, particularly those involved in the global energy market, while simultaneously opening up new opportunities in other industries and segments for us to target. We look forward to reinforcing Mugharraq Port’s logistical capabilities even further, as well as cultivating the port’s reputation not only as a vital maritime facility in the Middle East but also its footprint within global trade.”

SAIF AL MAZROUEI

Head of ports cluster

AD Ports Group

“The Mirdif Hills project located in the Mirdif area was conceptualised to offer residents with amenities and facilities truly exemplifying the mixed-use community lifestyle and the Mirdif Hills Avenue Mall within the Al Multaqa Cluster is designed to offer customised retail spaces, serving as perfect investment opportunities, creating significant value for all stakeholders. With 1,500 residential units within the community, Mirdif Hills unique features promoting a walkable urban development is already attracting footfall from the surrounding areas, promoting Mirdif Hills as a retail venue across the Mirdif area.”

OBAID SALAMI

General manager

Dubai Investments Real Estate

“This prestigious hotel collection will set the stage for a new level of global hospitality. These hotels and resorts will not only complement the Kingdom’s rich culture and heritage but also its ambitious future plans in

line with His Royal Highness The Crown Prince Mohammed Bin Salman's Vision 2030. We are honoured to have attracted such iconic brands to the destination, and look forward to unveiling the hotels' next-level offerings for Saudi Arabia's visitors and locals over the forthcoming months. This news marks a very special time for the development, and it is a superb example of Vision 2030 being implemented."

JERRY INZERILLO

Group CEO

DGDA

(On the unveiling of the first 14 hotel brands of the Global Hotel Portfolio)

“GE’s commitment to developing talent has always been ingrained in its strategy. As a pioneer in corporate leadership development and home to a thousand researchers and innovators changing the technology landscape, we are excited to share some of these learnings to the future female leaders in STEM. Our commitment to the UAE dates back 50 years, and today’s camp is another step to demonstrate our humble support to the nation in its ambitious journey towards its centenary. We admire the UAE’s leadership in its ability to continuously re-invent itself, break boundaries and reach for the stars and as a global company operating with a local mindset, we are proud to be developing some of the future leaders of tomorrow who will make the UAE aspirations a reality.”

DR DALYA AL MUTHANNA

GE UAE president and global chief of strategy & operations

GE International Markets

“A circular economy requires a framework for composing a nation’s development. Infrastructure, transportation, manufacturing and food production must all be orchestrated. Decarbonisation and circularity are not just for one

company or even for one industry. They are for the whole of society and the economy. The solution has to be generated through collaboration not only within the chemical industry but also across multiple industries in the value chain.”

YOUSEF A. AL-BENYAN

Chairman

Gulf Petrochemical and Chemical Association

“We are delighted to partner with Al-Futtaim for the Festival of Arts competition, an initiative which emphasises the importance of the arts as a key pillar of UAE culture. This partnership reaffirms our commitment to supporting ingenuity as a drive for the cultural and creative industries, enabling a sustainable and prosperous ecosystem which supports Dubai’s economic growth and strengthens the emirate’s position as a global centre for culture, an incubator for creativity, and a thriving hub for talent.”



Photo Credit :Dubai Culture & Arts Authority

SHAIMA RASHED AL SUWAIDI

Director of marketing & corporate communication

Dubai Culture & Arts Authority

“PMI has long been dedicated to helping people, organisations and communities realise their potential. The world's leading association for project professionals and changemakers, we believe — wholeheartedly — in the power of the project management mindset. Over the years, we have seen just how important project management has been in bringing the most ambitious construction projects to life. Be it with our courses and learning solutions, networking or advocacy, we are committed to empowering construction professionals across the Middle East and North Africa to upskill, acquire new tools and continue delivering truly impactful projects.”



Photo Credit :PMI MENA

GRACE NAJJAR

Managing director

PMI MENA

“BlackRock is pleased to work with Saudi Aramco and Hassana on this landmark transaction for Saudi Arabia’s infrastructure. Aramco and Saudi Arabia are taking meaningful, forward-looking steps to transition the Saudi economy toward renewables, clean hydrogen, and a net zero future.”

LARRY FINK

Chairman and CEO
BlackRock

(On the US\$15.5bn gas pipeline deal between Saudi Aramco and a consortium led by BlackRock Real Assets and Hassana Investment)

The way people travel, transport, and deliver goods is set to shift considerably, experts reckon.



Brave new world

The Middle East transport sector is set for major shifts over the coming decades as sustainability, decarbonisation and digital transformation drive structural changes.

AUTOMATION AND SUSTAINABILITY remain major drivers shaping the transport sector in the Middle East, setting the scene for some major structural changes in the decades ahead.

The way people travel, transport, and deliver goods is set to shift considerably, experts reckon, as a result of technology disruption, decarbonisation efforts and digital transformation.

It presents an exciting glimpse into the future — but also a challenge for businesses.

The Dubai Airshow held in November proved to be an opportunity to reconnect industry leaders and stakeholders, helping to understand the latest perspectives on rebuilding the aviation industry, along with airline growth and sustainability plans as well as new innovations.

At the Hypermotion Dubai showcase, held in early November, experts said that road and urban transport may be about to undergo their biggest transformation since the invention of the internal combustion engine in the 1880s.

It could mean more smart highways and

driverless cars, reduced vehicle ownership, and more shared car journeys — it could even mean going underground, according to Dr Nahid Sidki, chief technology officer of Riyadh-based Research Products Development Company (RPDC).

“There will be fewer roads,” said Dr Nahid, “and there will be underground roads, with NEOM in Saudi Arabia among the few in the world now emphasising underground networks for transportation and utilities.”

Asset sharing of trucks and buses is also likely to become more popular — on any given day, many of the millions of trucks and buses on the roads moving goods and people travel half empty. Sharing could immediately reduce total mileage covered and cut overall emissions.

Gaurav Biswas, founder and chief executive of Trukker, a digital freight platform for the MENA region, said technology has already evolved to help transform the industry and move it in such a direction.

“Technology is now at the point where we can capture the data and connect demand with supply,” he said.

The general shift to greener roads and travel also throws up a multitude of challenges for policymakers and regulators.

Anthony Foxx, a former US Transportation Secretary, and now chief policy officer of ride sharing app Lyft, said at the event, “The intensity of urban growth will put pressure on the transport system. We have to think differently about the future than we have in the past.”

Recovery and regional development

Where there are challenges, however, there are also opportunities, especially as the Gulf’s economy picks up once again.

For starters, there is no doubt that activity levels are rebounding once again after the economic jolt from the lockdowns imposed by governments around the world in the wake of the Covid-19 crisis.

The launch of the new Bahrain cargo airline MENA Cargo, highlights a general uptick in air transport after Covid-19, and underscores growing commercial ties between the Gulf and Asia Pacific.

Meanwhile, ports giant DP World said it handled 58.4 million TEU (twenty-foot

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equivalent units) across its global portfolio of container terminals in the first nine months of 2021, with gross volumes up by 11.9% year-on-year.

It said that growth was mainly driven by Asia Pacific, India, the Middle East and Africa and Australia, citing strong performances at both Jebel Ali in the UAE and Sokhna in Egypt.

DP World's chairman and chief executive Sultan Ahmed Bin Sulayem sounded a word of caution, however, citing ongoing supply chain disruptions and geopolitical uncertainty as two potential drags on further recovery.

The company is deploying state-of-the-art technology to improve cargo flow at all its ports, highlighting the growing shift to automation.

DP World Jeddah recently launched its CARGOES TOS+ Operations and Planning System (OPS) module to further improve automation at a facility which manages billions of dollars in traded goods every year.

Mohammad Al Shaikh, chief executive of DP World Jeddah and country head for Saudi Arabia, said CARGOES TOS+ OPS — a DP World-developed system — is one of a number of other smart trade digital transformation projects in the pipeline.

Investment in the Gulf's rail infrastructure also hints at a confidence in the future, despite the economic hiccups of the past year or two and the challenges posed by sustainability.

Big initiatives include the UAE's Etihad Rail project, a major part of plans to build out a regional passenger network.

Most recently, the UAE Railways Programme was launched during a special event celebrating the Projects of the 50, held at Dubai's EXPO 2020, in the presence of Sheikh Mohammed bin Rashid Al Maktoum, Vice President and Prime

Minister of the UAE and Ruler of Dubai, and Sheikh Mohamed bin Zayed Al Nahyan, deputy supreme commander of the armed forces.

Etihad Rail signed a strategic partnership with Herrenknecht, one of the oldest and largest companies specialised in tunnelling solutions, to develop new tunnel design and construction technologies.

Construction works have also been completed for the second stage of the project, which extends over 139km, and connects through Al Ghuwaifat on the border of Saudi Arabia with stage one, which extends for 264 km from Habshan to Al Ruwais.

Throughout 2021, Etihad Rail was also successful in reserving 40% of the network's annual capacity, which by the completion of stage two will amount to 60 million tons of goods per year.

It includes commercial agreements with Stevin Rock, one of the biggest quarrying companies in the world, Western Banoona Group, and Al Ghurair Iron & Steel (AGIS).

The expansion of the railway is expected to remove both passengers and freight from the region's congested roads, potentially reducing emissions by around 75% compared to trucks carrying the same amount of goods.

Roads and trucks innovation

Individual transport companies have also been tasked with upgrading their fleets in response to the myriad of challenges faced.

At the same time, customers continue to demand all the same things as previously, high performance, durability, after-care, and competitive pricing.

MAN Truck & Bus recently introduced its new TG Range in the Middle East and other territories, which is adapted for an array of applications across diverse topographies and operating conditions.

It prioritises greater efficiency, safety and

performance and includes an improved powertrain to ensure continuance of reliability, with a distinctive new cabin look.

"These trucks are built to be highly reliable, able to withstand rugged use over their typical operating life, while delivering best-in-class performance," said Joerg Mommertz, senior vice president, head of sales area Middle East, Africa and Latin America, MAN Truck & Bus SE.

"As a result, customers get the optimum uptime and attractive total cost of ownership."

In June, FAMCO (Al-Futtaim Auto & Machinery Company), the UAE's leading heavy vehicle and machinery importer, launched its new cutting-edge Volvo Trucks range.

The new-generation FH, FM and FMX heavy-duty trucks have been redesigned to deliver higher levels of productivity, class-leading safety, as well as a more driver-friendly experience.

These advanced models deliver a stronger return on range, giving users an environmental and financial saving in the process.

The Volvo FMX features the heaviest addition to Volvo's chassis range — a 38-tonne bogie that allows for a Gross Vehicle Weight (GCW) of up to 58 tonnes.

For particularly rough applications like mining, it comes with an optional steel roof hatch with an emergency exit handle that removes the entire hatch.

Frank O'Connor, vice president, Middle East and Turkey, Volvo Trucks International, said it was a real team effort to launch the range "in these challenging times".

He said the strong focus on the driver environment, safety and productivity can help to reduce emissions and fuel costs, as well as helping to cut the risk of accidents, injury and unplanned downtime "all of which will make them more competitive and profitable."



Photo Credit: Etihad Rail

The second stage of Etihad Rail extends over 139km, and connects through Al Ghuwaifat on the border of Saudi Arabia with stage one, which extends for 264 km from Habshan to Al Ruwais.

Automation and energy efficiency

While rising crude oil prices will benefit the region's economies overall, driving growth and activity, transport emissions and fuels are likely to take on a more prominent role in the coming years amid rising climate change concerns.

This has intensified in recent times after Saudi Arabia, the Gulf's biggest economy, pledged to reach 'net zero' emissions by 2060.

Bahrain has pledged the same, while the UAE has said it will do so by 2050.

It poses additional challenges for truck manufacturers and haulers who must begin to transition to alternative fuels and electric vehicles.

This trend has been underway for some while, but looks set to intensify in the decades ahead.

At the recent COP26 climate summit in Scotland, UAE officials unveiled a Hydrogen Leadership Roadmap to support domestic, low-carbon industries and support the country's net zero ambitions.

This will cover a whole range of sectors

including energy and infrastructure, as well as transport.

The roadmap is underpinned by various projects which include a green hydrogen demonstration plant, initially for road transport, then expanding to e-kerosene synthesis and ocean shipping.

Automation is an area which will shape transport in the coming years, including seeing more driverless vehicles on the roads

Automation is another area which will shape transport in the coming years, including seeing more driverless vehicles on the roads and in other applications.

Evocargo presented its unmanned electric logistics platforms EVO.1 (3.5 tonnes full weight) and EVO.3 (44 tonnes full weight) in Dubai recently, opening a new regional office too.

"Evocargo's end-to-end robotisation logistics service, based on the EVO.1 and EVO.3 platforms, can decrease transportation costs by up to 60%," said Andrey Bolshakov, the company's founder.

The use of autonomous technology in the transport sector could slash overall delivery costs and create tremendous new possibilities for operators.

In conclusion

The future of transport has all the sci-fi touches which are no longer confined to movies and fiction.

New age transport initiatives such as the Fifteen-Minute City where traffic jams, polluted air and long commutes will become things of a not-so-distant past and the Hyperloop, are all turning into reality.

The future of travel is here and it is definitely exciting. ■

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Paving the way for a mobile future

GM Africa & Middle East is setting its sights on a sustainable future, launching 13 electric vehicles by 2025.

ANNOUNCED AT THE company's Exhibit Zero Africa event, which took place at the Dubai World Trade Center, GM Africa & Middle East is leading the continent to a sustainable and mobile future by launching 13 new electric vehicles by 2025.

The launches will be spearheaded by the Chevrolet Bolt EUV, GMC Hummer EV and Cadillac LYRIQ.

The company, which has been based at the Dubai World Trade Center since 1976, is aiming to deliver the best and broadest range of electric vehicles in the region. The upcoming slate of launches will span the Chevrolet, GMC, and Cadillac brands.

All new vehicles will target every customer and every budget, comprising trucks, affordable sedans, luxury vehicles and high-performance machines.

Supporting the company's 'Zero Crashes, Zero Emissions and Zero Congestion' world vision, the electric vehicle slate is driven by its leading modular propulsion system and a flexible third-generation vehicle platform powered by Ultium batteries.

The Ultium-based vehicles, when produced and on the roads, will be capable of travelling from 0 to 60mph in approximately three seconds.

Complementing their performance will be the vehicles' impressive range of more than 600km on a single charge, depending on the vehicle.

“The future is now, and GM’s plans align with ambitious and visionary regional government goals to reach net zero.”

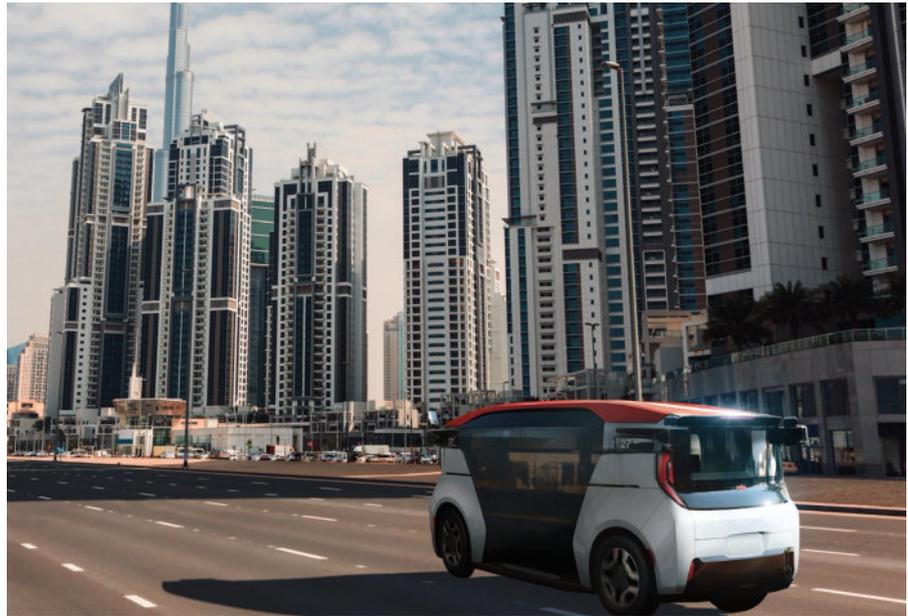


Photo Credit : GM Africa & Middle East

GM will launch 13 EVs across the region by 2025.

The Ultium platform has already reduced battery costs by 40% and, as electric vehicle adoption and production rates increase, costs will continually decrease.

In support of the company's announcement and four-year vision, GM will invest US\$35bn in electric and autonomous vehicles by 2025, launching more than 30 new vehicles globally (with 13 launching in the Middle East and Africa region).

The automaker is projecting an increase in electric vehicle revenue from around US\$10bn in 2023 to approximately US\$90bn annually by 2030.

Luay Al Shurafa, president and managing director of General Motors Africa and the Middle East said, "I am proud to make this announcement that will change the industry in our region and marks a new era in electrified mobility. We are building a multi-brand, multi-segment EV strategy because we want Everybody In.

"The Middle East is one of GM's most important international markets and a

region of the world known for early adoption of technology. The future is now, and GM's plans align with ambitious and visionary regional government goals to reach net zero, while illustrating GM's commitment to a more sustainable and brighter future. It also establishes our place as more than an automaker – we are an innovator changing the world."

Along with the new vehicles launching through 2025, the company also launched OnStar in the UAE on 2 December 2021. The in-vehicle safety and security technology provides customers with a suite of connected services. According to forecasts, the software could generate US\$2bn in annual revenue.

Gary West, managing director of OnStar and Future Mobility for GM Africa & Middle East commented, "OnStar is a service like no other, offering unparalleled levels of safety and security backed by human touch.

"It is already the leading connectivity platform globally with more than 16 million connected vehicles on the road today." ■



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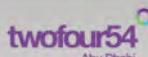
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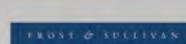
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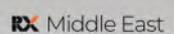
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The Quester is one of UD Trucks' most established, durable and efficient trucks.

UD Trucks Quester and Croner: Going the extra mile

An interview with Mourad Hedna, president, UD Trucks Middle East, East and North Africa, on the journey of the Japanese manufacturer in the region, the upgrades on its new range and a message for the future.

The new Quester and Croner models include upgrades to minimise environmental impact, improve efficiency and profitability, while optimising the Total Cost of Ownership.

How has the journey of UD trucks progressed in the region?

UD Trucks has been present in the region for more than 50 years and our products have always been associated with durability and reliability.

Over the last five years, we have introduced the medium-duty and the heavy-duty ranges. We are improving every year and introducing new features suitable across various sectors.

We are an organisation with strong values, promoting a family approach. Further, our local network dealers and partners are integral in taking care of our customers in the GCC, the Middle East and Africa.

What are the feature upgrades introduced in the latest range?

UD Trucks has launched the Euro 5 versions of its popular Quester and Croner trucks in the region for the first time. The new trucks

feature significant upgrades to minimise environmental impact, improve efficiency and uptime, increase profitability, and optimise the Total Cost of Ownership.

The Euro 5 range reduces NOx emissions by about 43% compared to Euro 4 and significantly reduces the carbon footprint of the vehicles.

The Quester Euro 5 range, with 460 hp and 2250 Nm torque, delivers improved fuel economy by about 10%, assisted by the ESCOT automated manual transmission feature leading increased focus and safety for the drive, a lighter tare weight and optimised driveline.

The Croner is available in three models - MKE, LKE and PKE - with wheelbase variants that offer up to 21 different configurations to suit the specific demands of various industries. With improved fuel efficiency, partly due to a more aerodynamic cab design that reduces drag by 5% compared to previous models, the Croner

is designed to put driver comfort first with numerous active and passive safety features to protect the driver, cargo, and surrounding traffic.

How important is digitalisation to UD Trucks?

Digitalisation or Connectivity is one of the three pillars of ACE or Automation, Connectivity and Electrification, which we believe are the future trends.

The world is progressing through different stages towards autonomous vehicles. In the case of Electrification, it needs to be supported by the entire eco-system with suitable infrastructure and efficient charging stations, powered by clean energy. In my opinion, Connectivity will be the quickest to achieve in the region.

Every truck build by UD Trucks is equipped with innovative UD Telematics — a high-tech wireless communications system, which allows transportation companies to maximise efficiency with real-time vehicle tracking and geo-fencing. Telematics help the drivers, owners as well as fleet managers and many of our clients in the Middle East and Africa have provided feedback that it is really beneficial to them.

Additionally, the new range of Quester and Croner trucks, both Euro 5 and Euro 3, features a new instrument cluster with real-time fuel coaching. This enhancement provides the driver with immediate and specific feedback on driving techniques that are more fuel-efficient.

How has UD trucks addressed sustainability in the new range?

The new launch is linked to the Dubai Expo, which upholds the importance of sustainability, mobility and opportunity that are relevant for our industry, too. While opportunities are expected to increase, there are challenges due to growing customer demands for improved efficiency on the one hand and the concerns of climate change on the other. This product, in fact, came into being to deliver increased efficiency and reduce emissions.

We are looking forward to the opportunities for growth while offering the best sustainable solutions for the environment.

At launch, the new Euro 5 models will be available in the UAE and Qatar. At the same time, regional markets such as Saudi Arabia, Bahrain, Kuwait, Pakistan, Iraq, and others will benefit from new, improved versions of the Euro 3 Quester and Croner models.

The launch of the new Euro 5 trucks comes ahead of the introduction of new regulations in fast-growing regional countries such as the UAE, which currently has a Euro 4 emission standard, and Qatar, which will be adopting Euro 5 emission standards by mid-2022.

In the rapidly changing trucks industry, launching the Euro 5 trucks is a core focus for UD Trucks. The Quester and Croner Euro 5 models reflect UD Trucks' 'Better Life' commitment. The launch is another example of offering optimum support for our customers as we make sure they are ready for any new regulations in such a fast-growing region.

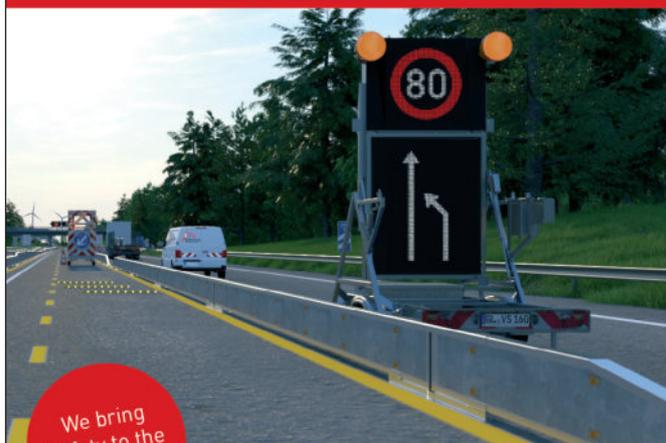


The Croner is available in three models - MKE, LKE and PKE - with wheelbase variants that offer up to 21 different configurations to suit the specific demands of various industries.

Our message today is that we are looking forward to the opportunities for growth while offering the best sustainable solutions for the environment. ■

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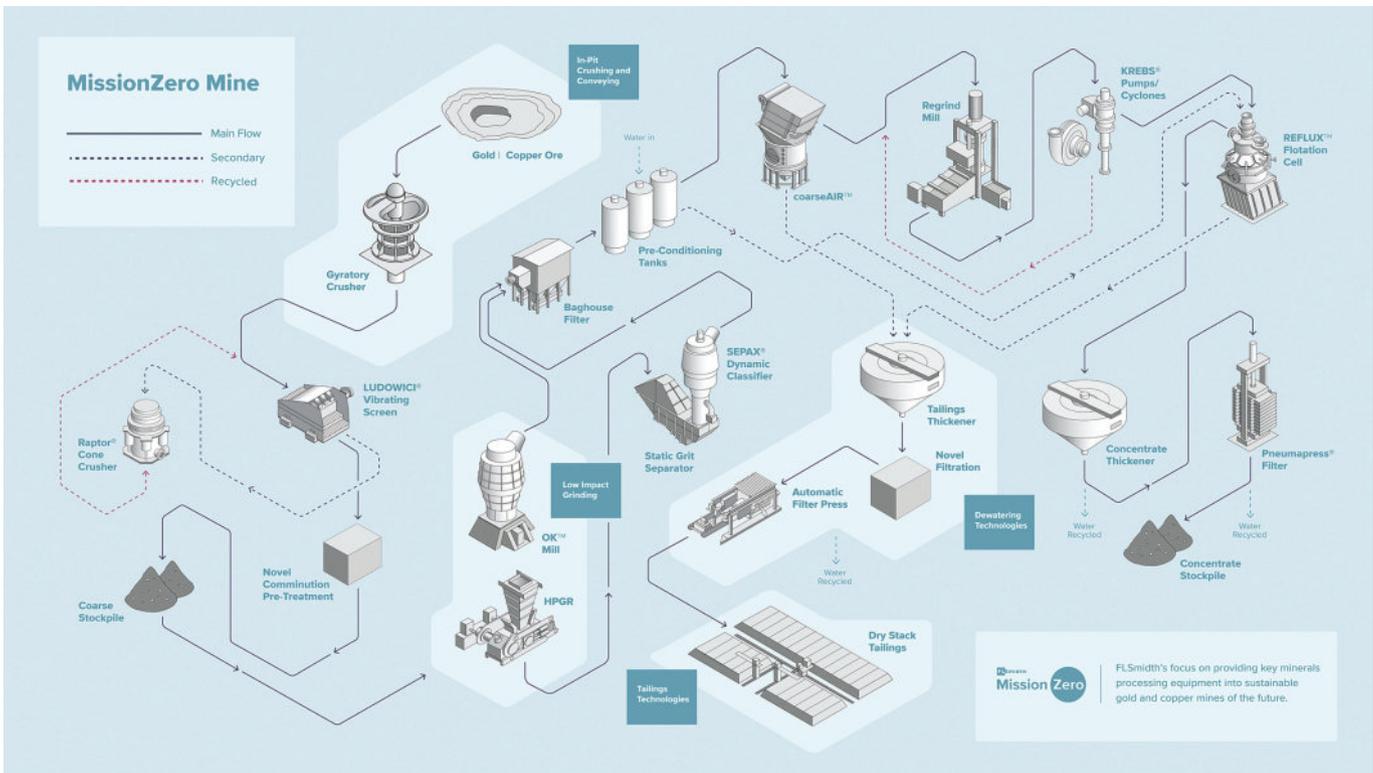


Zeroing out emissions in mining

Deon de Kock, president, sub-Saharan Africa, Middle East and South Asia and Alistair McKay, vice president Mining, sub-Saharan Africa, Middle East and South Asia, FLSmidth, speak to Technical Review Middle East regarding FLSmidth's MissionZero programme enabling mining and cement industries and its focus in the Middle East and Africa region.



Deon de Kock, president, sub-Saharan Africa, Middle East and South Asia, FLSmidth.



It is important to collaborate with customers, governments, and technology partners.

How is the MissionZero programme enabling zero emissions for the mining and cement industries? How are FLSmidth's digital solutions helping to enhance productivity?

Deon de Kock (DDK): MissionZero is more than just zero emissions, it is our ambition to assist customers to operate cement plants and mining processes with zero energy waste and zero water waste, as well, by 2030. This requires a paradigm shift in collaboration, innovation, and adoption of newer technologies in the industries.

For the cement industry, MissionZero firstly enables fossil fuels substitution. The next step is to reduce the clinker factor with industrial-scale clay calcinations. Lastly, it involves carbon capture, carbon storage and its use.

For each of these stages, we have technology and solutions, for example, products using alternative sources of fuel to replace fossil fuels. We already have pilot projects with partners in Europe for clay calcinations.

It is important to collaborate with customers, governments, and technology partners. What is of foremost importance is to ensure that your existing plants are operating at full capacity. We can assist customers with increasing production and reducing energy consumption, hence protecting the environment.

Alistair McKay (AMK): The digitalisation drive is integral to MissionZero. I think digital solutions bring an additional push to plant operators. For instance, in South

America where it was implemented, the FLSmidth LoadIQ smart sensor technology helps bring an additional 11% a year, in terms of throughput. For a massive copper mine, this translates into approximately US\$150,000mn a year.

FLSmidth aims to create products that use automation and digital technologies to increase efficiency, reduce energy consumption, extend the lifetime of the equipment, and streamline operations. FLSmidth ENABLR™, for instance, is a suite of smart solutions that utilise data to optimise processes.

To summarise, MissionZero comprises different components all gearing up to higher throughput, higher yield with less energy and water consumption. So, effectively it helps to do more with less.

It has placed FLSmidth as the go-to-partner for sustainable productivity – positioned to meet customer challenges, such as increasing costs and risk, tighter regulations and changing societal expectations.

How important is the Middle East and Africa region for FLSmidth and its MissionZero programme?

DDK: The Middle East is undoubtedly, a strategic growth area for FLSmidth and there is a huge focus in terms of our commitment.

Further, we are keen to enable the transfer of knowledge to the region, from a more established mining legacy. We have established an office in Saudi Arabia, and will continue to expand our footprint there, in alignment with the Vision 2030 goals and its emphasis on mining. This focus transcends into other areas such as Jordan and Oman.

AMK: For the cement sector, the region represents some of the biggest industry players and our focus for MissionZero is on



FLSmidth aims to create products that use automation and digital technologies to increase efficiency, reduce energy consumption, extend the lifetime of the equipment, and streamline operations.

optimisation for their operations. The focus in Central, West and South Africa is predominantly in mining. We see ourselves as a part of the communities we operate in. After the pandemic, we have learned that it is important to have local responsiveness backed by the global momentum of a multinational.

How is FLSmidth helping to increase production and reduce costs through process optimisation?

DDK: The real added value that FLSmidth provides is our ability across the full flow sheet. The emphasis is on areas where it is possible to reduce water use, energy consumption, emissions and waste.

We understand the full value chain. What we have found is that often it is the case of the technology not being well-integrated with customer needs. As a technology provider, we aim to be the sustainable productivity partner, and consider earlier engagement with customer as crucial for success.

AMK: Digitalisation is a critical factor for

sustainability and MissionZero. Before it can provide marginal improvements on a consistent basis, it helps ensure that all elements are in harmony and well-coordinated.

FLSmidth is dedicated to the development and co-creation of digital and socially acceptable mining, because improved sustainability and better productivity go hand-in-hand.

What changes has Covid-19 brought to FLSmidth?

AMK: Globally, due to the pandemic, we have embraced technology like never before. The pandemic in fact, helped accelerate the MissionZero initiatives and helped us serve customers seamlessly through services including remote diagnostics and troubleshooting. Our remote services enable swift responses, with experts available over phone, online or even the helmet camera technology. We offer expertise and insights through our apps to support our customers. Whether it is an emergency troubleshooting or ongoing support, we are here to help. ■

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Building the future

Safdar Badami, managing director, Al Muqarram, says that despite challenges, the construction sector in the Middle East is recovering.

THE CONSTRUCTION SECTOR in the Middle East was among the most affected by the global crisis.

However, experts predict that the building sector is on the right path towards achieving the required revival by the end of 2021 and the beginning of 2022. There are, however, several challenges that have to be taken into consideration.

According to Global Data, the growth of the building sector in the Middle East and Africa decreased by 4.5% in 2020 and the sector partly recovered with a growth rate of 1.9% in 2021 and then a predicted rate of 4.1% in 2022.

Recovery expectations

If we take the Emirati market as an example, the building sector declined by 4%, according to the recorded annual data in 2020, and experts expected a growth of 3-4% in 2021. This is because of the execution of newly adopted building laws that would pave the way to support the building and construction activities in the country.

Building and construction experts in other countries in the Middle East as well, expect the sector to grow and prosper in the coming year. Eng Mamdouh El Morshedy, Member of the Board of Directors of the Egyptian Federation for Construction & Building Contractors, said that the Egyptian construction sector witnessed the injection of around 400 billion EGP in 2021. He also noted that it is expected that these investments would increase by 100 billion EGP in 2022, to reach 500 billion EGP.

According to the Middle East and Africa Construction Industry Report, Q1 2021 Updates - ResearchAndMarkets.com, "The onset of the coronavirus and subsequent decline in the oil prices had a negative impact on the construction sector. Although construction activities were affected, the

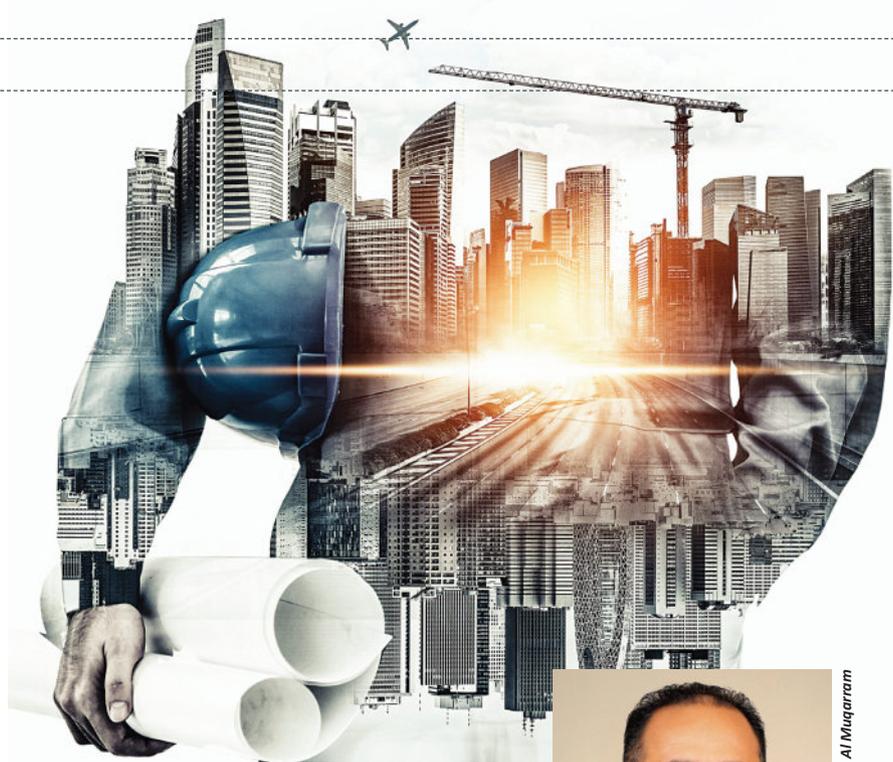


Photo Credit : Adobe Stock

work continued but with reduced productivity, while keeping social distancing norms in mind. However, the sector is expected to recover in 2021 with various upcoming construction projects across the Middle East."

Adapt to grow

International research institutes predict further development of the building sector in the Middle East and in Africa in the coming years as well. Business Wire noted that the building sector in the Middle East and Africa will witness an annual growth of 7.1% by 2024. The main concern is the delayed delivery schedules due to the spread of Coronavirus. However, the building sector would have to adapt to the new conditions in order to continue working on various projects.

There are some challenges, nevertheless, the sector has to deal with in order to achieve the desired growth. Among the most important problems is the increase of the prices of various building materials. This affects the profit margin of construction companies and results in delays in scheduled deliveries. Nevertheless, building materials' producers started putting this issue into consideration and began providing products that are featured with the highest standards of quality with competitive prices.

Other challenges include the lack of skillful workers. Due to the spread of Coronavirus in 2020, a large number of construction workers had to leave the Middle East and return to their homelands. These professions include civil engineers, technicians, architects, and construction

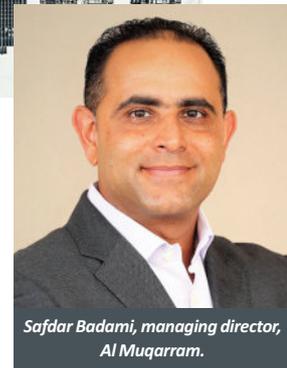


Photo Credit : Al Muqarram

Safdar Badami, managing director, Al Muqarram.

workers. Several countries in the Middle East started decreasing travel restrictions and a large number of workers are expected to return to their work once again during the coming period.

In order to attract workers and employees in the construction sector, companies have to abide by the regulations of the Occupational Safety and Health Administration, OSHA, and other procedures to guarantee the safety of workers in building sites.

Overcoming challenges

There are also the challenges imposed by the tendency towards achieving sustainability and decreasing emissions. According to the World Green Building Council, the building sector is responsible for 39% of the emissions all over the world. Construction corporations should begin taking tangible steps towards obtaining the LEED certificate.

They also have to begin considering the construction of buildings that saves energy and resources, and provide a healthy lifestyle for residents. Many initiatives around the world aim to achieve zero carbon emission by 2050. Construction companies will surely play an important role in accomplishing this objective. ■

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The latest digital engineering tools also offer high quality and realistic 3D visualisations of temporary works on a build.

Digital construction: Catalyst for change

Wassim Daher, chief engineer Middle East, RMD Kwikform, explains how digital construction can help reduce project revisions, eliminate redundant conversations and ensure quick solvability of engineering errors.

Digital engineering represents a significant opportunity to help businesses in the industry remain competitive.

WITH A WIDE scope for improved efficiency, the construction industry is seriously considering why now is the time for significant, long-lasting and transformative changes to the industry's working practices.

There is no denying that the Covid-19 pandemic has impacted the construction industry around the world. As countries within the Middle East started to experience outbreaks, governments made decisions to protect their people resulting in varying degrees of disruption to construction works. The pandemic has resulted in the introduction of additional health and safety measures, restricted movement of labour, supply chain difficulties, project delays and

in some cases, suspension of projects.

Nevertheless, while construction in the Middle East has faced a wide range of challenges, there is the opportunity to overcome historic barriers to change. The nature of the external pressures exerted by the global pandemic has meant the industry has been forced to adapt and work differently. In fact, for many within the industry, the global pandemic has, in fact, accelerated and put innovation in focus to improve on previously set methods to manifest efficiency.

Now more than ever, digital engineering represents a significant opportunity to help businesses in the industry remain competitive and innovative. Many believe

that in the years to come, this period will be viewed as a pivotal time, leading the construction industry into a stronger and more robust future.

In the Middle East

And yet, the uptake of digital construction in the Middle East is still behind other regions around the world. While the UAE has taken great strides and is generally viewed as the regional leader when it comes to digital transformation, there is still plenty of work to be done to convince decision-makers about the benefits of digital engineering capabilities. But given the benefits to efficiency, quality and safety, its in everyone's interest to boost technology adoption across the region.

Seizing digital opportunities

One important benefit to digital engineering tools is how seamlessly they can help everyone involved view, interrogate and communicate information and questions about a project. The latest digital engineering tools also offer high quality and realistic 3D visualisations of temporary works on a build, helping to break down any communication barriers and ensure transparency across the supply chain for any specified systems. The outcome is reduced risks, as any potential issues can be quickly raised and remedied by contractors when seeing a temporary works solution in-situ. Digital solutions also streamline work processes, as the systems and product details can be viewed in an accessible and easily digestible format.

Furthermore, digital technology not only helps to improve productivity and

streamline decisions across the supply chain but can also play a crucial role in helping contractors win tenders for important projects. Early collaboration at the pre-tender stage can reap real rewards. By using digital engineering technology, recommendations on project structures and construction phases, not to mention the ability to identify any potential challenges, can be ascertained.

During the design phase, digital construction technologies can also help reduce revisions, eliminate redundant conversations between parties, and ensure any errors are quickly identified. Improved health and safety standards, and better workforce planning, are possible too. BIM, for instance, models all components of the construction process. This includes tools, people, resources, materials and so on, throughout a building's lifecycle.

In addition, digital tools can help illustrate to users how to best assemble, manoeuvre and dismantle equipment ahead of delivery, ensuring site operatives always stay in line with social distancing measures, or even map out areas of work so that touchpoints can be better controlled.

Keeping Etihad Rail on track

The first national freight and passenger railway network connecting the seven emirates of the UAE, Etihad Rail is one project that has benefitted from RMD Kwikform's LocusEye software. Providing a high quality and realistic 3D visualisation of temporary works on a build, LocusEye helps break down any communication barriers and ensure transparency across the supply chain for any specified systems. The

Digital tools can help illustrate to users how to best assemble, manoeuvre and dismantle equipment ahead of delivery.

outcome is reduced risks, as any potential issues can be quickly identified by contractors when seeing the temporary works solution in-situ, and streamlined work processes, as the system itself and product details can be viewed in an accessible and easily digestible format.

The 1,200km railway project is estimated to cost US\$11bn (AED40bn) and is expected to serve about 16 million passengers and 50 million tonnes of freight. RMD Kwikform has supported the supply of formwork and shoring systems on several of the construction packages, with 3D modelling courtesy of LocusEye enabled decision-makers to easily understand what the temporary works systems would look like on-site.

In PwC's 23rd Annual Global CEO Survey, even before the disruption of Covid-19, 77% of engineering and construction CEOs were already planning for more 4IR operational efficiencies to drive growth. Today, digital engineering capabilities are set to become even more of a key differentiator for contractors seeking efficiency gains, while helping the industry navigate disruptions and mitigate risks.

So, while the impact of the Covid-19 pandemic on the construction industry cannot be underestimated, the sector should also try and see this as an opportunity to embrace digital construction, smarter project management, and better health and safety procedures. Not only do digital engineering tools help hugely with collaboration, but they provide vital opportunities to manage and control costs, while also preventing waste and better controlling risks.

Ultimately, the region needs to embrace the opportunities that digitalisation offers, which will help drive substantial operational improvements and add real value for those in the industry. ■

Photo Credit: RMD Kwikform



LocusEye helps break down any communication barriers and ensure transparency across the supply chain for any specified systems.

'Sustainability a top priority for Middle East businesses'

Honeywell research reveals that businesses are turning to technology to improve energy and cost efficiency, as well as occupational health and safety, as part of accelerated ESG initiatives.

A SURVEY COMMISSIONED by Honeywell on building sustainability and energy management has revealed that surveyed Middle East business leaders and decision makers consider environmental, social and governance (ESG) initiatives to be a top business priority, with a focus on energy management and occupant safety and well-being.

The survey of more than 300 business leaders and decision-makers in the UAE, Saudi Arabia and Egypt revealed that over the last two years, ESG has grown in importance within organisations, driven by an increased focus on the need for sustainability improvement, and an immediate requirement to support cost-efficiency improvements and occupational health and safety resulting from the pandemic.

Major findings:

- At least 89% of respondents say that ESG considerations are important to their organisation's strategy with 84% saying that energy management and sustainability are important to their organisation today
- At least 80% of respondents say that the importance of energy management and sustainability in their organisation has increased over the last two years
- Occupant health and safety is the most commonly invested in area of ESG (50%)
- At least 40% of respondents say that Covid-19 helped accelerate their

organisation's energy management and sustainability initiatives, versus only 21% who say the pandemic hindered such initiatives

Technology taking centre stage in ESG initiatives:

- Energy efficient lighting, predictive maintenance software and HVAC optimisation are now common areas of investment among building managers, with approximately 76% of respondents in the UAE and KSA and 58% in Egypt confirming that their organisation implemented air quality measures in their building during Covid-19
- At least 80% of respondents believe that an autonomous control or a predictive maintenance solution would improve their organisation's energy management operations
- At least 80% of respondents believe that digital-based solutions available today are effective in improving energy efficiency of buildings

Smart buildings

Honeywell's building technologies help enable smarter buildings and building portfolio management, simplify facility operations, and increase operational and energy efficiency driving business growth. Honeywell Forge enterprise performance management software-as-a-service can drive digital transformation in buildings while reducing energy consumption and



Photo Credit : Honeywell

George Bou Mitri, vice president and general manager, Honeywell Building Technologies, Middle East, Turkey and Africa.

delivering operational efficiencies. For example, Honeywell Forge Energy Optimisation, is a patented, cloud-based, closed-loop solution that connects to a building's existing HVAC systems to optimise energy consumption. This closed-loop solution operates without the need for human intervention by regularly analysing near real-time conditions data – such as weather and occupancy – with predictive, machine learning models that compute and adjust set points automatically over a facility's entire HVAC distribution system. With Energy Service Company (ESCO) accreditation in the UAE (Dubai, Sharjah, Abu Dhabi, Ras al Khaimah) and Saudi Arabia, Honeywell is licensed to provide energy services to customers in building management through Energy Service Performance Contracting (ESPC), Energy Performance Contracting (EPC) and building retrofits. Globally, Honeywell has completed more than 6,000 EPC projects, delivering more than US\$10bn in guaranteed energy and operational savings.

"As an active ESCO in the region, we understand the challenges of driving energy efficiencies across facilities. By treating buildings as dynamic entities and deploying the right technologies, it's possible for building owners and managers to achieve both goals of meeting their energy efficiency targets and creating a healthier indoor environment for their occupants," said George Bou Mitri, president, Honeywell Building Technologies, Middle East, Turkey and Africa. ■

Honeywell Forge Energy Optimisation connects to a building's existing HVAC systems to optimise energy consumption.

Severstal is forging new partnerships for projects in MENA.

Tailored solutions: key to success

The Middle East offers a large scope for any company which aims for long-term participation in regional unique projects.

Photo Credit: Severstal

AFTER A DROP in demand in 2020, which was primarily a case of delays for two or three years, rather than cancellations, we expect that large new projects are ready to be implemented in the following years. Over the last two years, some Russian large diameter pipe production companies were able to build up its network and go through customer qualifications. In fact, they have been successfully undergoing audits at production sites by clients of the Middle East. One of the most noticeable examples is Severstal. Since 2018, the Company has passed 36 qualifications from leading market participants, including ADNOC, EGPC and GASCO. With a serious market history of selling steel pipes to the European, North and South American markets and MENA, Severstal has ambitious plans for work the region. It is already one of the major suppliers of LDP to many major oil and gas and EPC companies, such as Gazprom, Eustream and Petrojet.

This became possible, among other things, due to the fact that the company offers unique solutions on the large diameter pipes market including specific products tailored to work under non-standard conditions: LSAW pipes and rolled metal plates for pipe production companies made of steel grades able to prolong the service life of pipelines transporting hydrogen sulfide-containing substances (Severstal already has such experience with a special supply project in Romania), CO₂-containing substances. Pipes with high deformation capacity are also worth mentioning, because they ensure the reliability and durability of pipelines, as well as the safety of gas transportation used for the sections of gas transportation in seismically unstable regions.

Up to date, Severstal has successfully completed a number of well-known projects in Europe "Turkstream" and "Polish Slovak Gas Interconnector", and "Barcarena LNG Terminal" that called for implementing tailored solutions.

For example, For Turkstream, a large volume of 260,000 tonnes of pipes for offshore section has been delivered, where increased requirements for the geometry have been met and a solution to reduce the cost of the project has been implemented.

Also, For the Polish-Slovak Gas Interconnector, more than 11,500 tonnes of large-diameter pipes have been shipped, 1.016 mm in diameter and 18 m in length. The application of 18 m long pipes enables cost reduction for the construction of pipelines and enhances reliability and efficiency. To deliver the pipes to the client,

a multimodal transportation logistics has been implemented, including pipes transportation by road, sea, and rail. This approach provides higher flexibility and efficiency of the logistics chain.

In addition, For Barcarena LNG terminal (Port of Vila de Conde, Brazil) a whole range of additional customer requirements were implemented which have been met successfully. The company shipped 508mm diameter pipes with varying length and 12,7 mm wall thickness. The project is very demanding due to very complex engineering decisions, but that what makes it a good experience for us in the future.

This flexibility is possible due to several key things.

Firstly, a vertically integrated company (which includes the entire cycle from the extraction of raw materials to the final production) can develop very specific products due to the use of unique engineering solutions at different stages.

Secondly, complex logistics solutions allow not only to create specifically-tailored solutions, but also delivering them on time, and often even exceeding the customer's expectations

Thirdly, the company's extensive experience in providing special solutions for customers allows to confidently take on new challenges on any market while maintaining the highest quality of the products.

Being one of the leaders on a global large diameter pipes market, Severstal extensively evolves its R&D and product development units. Lean and agile approach let it in some cases reach a very ambitious 3-6 months 'time-to-market' for some products which is considered a serious achievement in the industry. Moreover, this seems to be even more important considering rapid development of hydrogen energetics which require new technology to handle it because of how steel behaves being exposed to pure hydrogen under pressure.

This market is yet to develop, but its potential importance and volume is very perspective. European countries are already very actively developing hydrogen projects and the MENA region is no exception.

By meeting the specific needs of customers and offering cost-effective solutions with on-time deliveries, Severstal is forging new partnerships and helping oil and gas companies implement challenging projects in MENA. ■

For more information, visit <https://www.severstal.com/eng/>

Tackling water scarcity with sustainability

Fady Juez, managing director of Metito discusses how the organisation's sustainable water management solutions enable a circular economy.

TRME: What are Metito's sustainable water systems and how do they help improve the water scarcity problem in the region?

Fady Juez(FJ): Metito is committed to a sustainable environment by providing effective water management solutions and treatment systems. These are built with environment-friendly technologies and alternative energy solutions to reconcile the ever-growing demand for water and its dwindling natural resources. Our founders set out with a clear commitment to a cleaner environment, long before environmental debates were central to investment themes, and we have been at the forefront of the water industry working closely with governments, industries, and communities to provide clean and safe water in the most challenging and arid areas around the world.

We are continuously rethinking the linear urban water model of "take, make, consume, and waste" by providing a systemic and transformative approach to delivering water supply in a more sustainable, inclusive, efficient, and resilient way. To do this, we look through a circular economy and resilience lens to offer our clients an opportunity to tackle the current unsustainable linear model.

TRME: What are the latest technologies Metito has introduced for water reuse and recycling?

FJ: All our work is geared towards pursuing the vision of a smart water ecosystem. Through high value engineering capabilities, we are integrating intelligent digital technologies, reducing freshwater and energy use, and recovering nutrients and materials – with an aim to be a carbon free, sustainable hydrological cycle, in line with the concept of a resilient circular economy. Innovation is essential to achieve this.

In our quest to continue to fulfill this



objective, Metito has introduced several new technologies in its projects which include:

Membrane storage tanks: Above-ground and underground-engineered geo-

Biochip media is used for biological treatment of municipal and industrial wastewater for Moving Bed Biofilm Reactor systems.

membrane storage tanks that are made of a soft material that is more cost-effective, quicker to implement and environmentally friendly compared to concrete or steel tanks.

Copper-silver ionisation (CSI): This is the most effective technology for the systemic eradication of bacteria such as legionella in potable water systems, ensuring a high degree of disinfection. The treatment action is attributable to the positively charged copper and silver ions forming electrostatic bonds with negatively charged sites on micro-organism cell walls.

Chip based biomedica: Biochip media is used for biological treatment of municipal and industrial wastewater for Moving Bed Biofilm Reactor (MBBR) systems. Due to the light configuration of biochip media, it uses a fine bubble-diffused aeration system which leads to a lower carbon footprint and high efficiency of the system.

ION and OBI AI software: These are based on artificial intelligence that collects operating data to better plan preventative maintenance, reduce power consumption and ensuring enhanced plant reliability.

TRME: What are some of Metito's recent projects to ensure water security in the region?

FJ: We can see a strong relationship between water security and economic growth. In the ever-growing climate emergency, water has taken centre stage and improving its efficient use holds the promise to bring urban stability.

Metito is a key enabler of this. In Egypt for instance, which is currently facing acute water shortages, we are working with the government on several noteworthy projects across desalination, agricultural reuse, and wastewater treatment to transform its agricultural sector and developing sustainable communities.

Metito was awarded the largest Sea Water Reverse Osmosis (SWRO) plant in the country, Al Galalah Project that is serving 1 million residents in the eastern coastal city. In 2021, Metito led the largest-ever agricultural waste treatment plant in the world – Al Hammam project – with a capacity of 7.5 mn cubic metres per day. The treated water is intended to irrigate up to 515,000 acres west of the Nile Delta area.

In Kigali, Rwanda, Metito's bulk water project, the first public private partnership project (PPP) of its kind in sub-Saharan Africa, was able to achieve various SDG goals including SDG 6, universal access to safe drinking water.

The project reached commercial operation in January 2021, and is now supplying 40% of the water needs of the city of Kigali and the surrounding communities. The positive impact on the local community and appreciation for having regular running water for some of the remote areas has been overwhelming.

In Jordan, we work with the Ministry of Water and Irrigation to provide 10 mn cu m of treated effluent water per year with a goal to reduce greenhouse emissions by approximately 6,600 metric tonnes annually.

TRME: How are Metito's initiatives helping to promote sustainable water management solutions? How do they impact the environment and help improve water quality?

FJ: Metito has always been committed to working with governments, industries, and communities to meet their environmental and water needs by delivering sustainable infrastructure solutions. With the increased demand for water reuse projects, Metito is a key enabler of a circular economy, as well as having pioneered decarbonisation projects in desalination. For desalination, we are addressing the energy intensive process of desalination in two ways: one through high value engineering – through our work with membrane technology providers and improving pump efficiencies, we have been able to significantly reduce the energy consumption across projects. The second is through utilising solar energy in desalination plants to partially offset the energy intensity.

Metito was the first company to introduce the Reverse Osmosis (RO) technology for desalination outside the USA in 1972, and till date continues to

develop desalination projects that prioritise innovation and protect the environment to enhance water security in all countries it has a presence in.

Metito's commitment to support this is reflected in its desalination facilities set up in Saudi Arabia to serve Jubail, home to the largest industrial city in the world and NEOM. In Jubail, Metito has developed one of the largest seawater desalination plants in the Kingdom and is in the process of building another one that will utilise the most advanced technology in reverse osmosis applications.

The NEOM project has been designed using the most advanced reverse osmosis membrane and hybrid technologies to achieve efficiencies and cost reductions. The plant is partially powered by solar energy and is an exemplary project for the region and beyond. Using photovoltaic panels, the plant has integrated an augmented reality technology for all the supplied equipment, a first in the region, to optimise energy usage.

In Sfax, Tunisia, Metito and its partners are building a 100,000 cubic metres per day seawater desalination plant that is set to begin operations in February 2024. ■

Beyond COP26: What's next for CEOs?

AHEAD OF COP26 this year, the UAE pledged to reduce its carbon emissions by 23.5% compared to business as usual for the year 2030, effectively translating into absolute emission reduction of approximately 70 million tonnes. It also announced an ambitious target of reaching net zero emissions with US\$163bn invested in clean and renewable energy sources by 2050, becoming the first Middle Eastern country to commit to a net zero emissions target. While the policy work continues, many senior executives of UAE corporations will raise the question, "What do we do after COP26?"

According to Tom De Waele, managing partner, Bain & Company Middle East and Torsten Lichtenau, partner, Bain & Company London, the first thing they will have to do is recognise that with all the attention on climate change this year, things are speeding up in some important areas.

Regulations: Carbon-taxation and emissions-trading schemes will expand, and the price of carbon will probably rise. Governments will also promise more subsidies to spur change, such as initiatives designed to reduce the cost of green hydrogen.

Financial disclosure: Companies will face more requirements to report on their climate risks, through a set of common reporting standards and climate-change disclosures, for example.

Science-based targets: More companies will set ambitious decarbonisation targets and sign onto initiatives to track these goals and will aim to include Scope 3 emissions in their plans.

Scrutiny from investors: Sustainability, and climate change in particular, will become even more important for investment decisions.

Fund managers are starting to respond: The Net Zero Asset Managers Initiative brings together 128 fund managers with



Sustainability and climate change in particular, will become more important for investment decisions.

US\$43tn under their care in a pledge to make investment decisions that support the goal of net zero emissions by 2050 or sooner.

Customer expectations: Pressure from customers will lead more companies to look beyond their own operations and across their supply chains and use of their products. BMW plans to reduce carbon emissions across the entire life cycle of its vehicles, from production through ownership, by at least 40% by 2030.

De Waele opines that most importantly, the focus is going to shift from setting targets to delivering results. Until now, executives may have been rewarded just for stating goals; from here on, they will need to show real reductions. The transition away from carbon and toward net zero emissions is likely to be a top priority for many executives for the rest of their careers. For most companies in the UAE, the window for consideration has closed. It is time to act and deliver.

Lepidico to set up lithium production facility in KIZAD

The company aims to build a sustainable lithium industry and strive for a zero waste process through innovative and proprietary technologies.

KIZAD, A SUBSIDIARY of AD Ports Group's Industrial Cities & Free Zone (IC&FZ) cluster, has announced the signing of an agreement with Lepidico Ltd, a global lithium exploration and development company, for establishing the first lithium production facility in the Middle East, utilising a first-of-its-kind design process.

Covering a land area of 57,000 sq m, the first phase of Lepidico's development for the US\$95mn chemical plant will house clean-tech L-Max and LOH-Max process technologies. The process extracts lithium and recovers valuable by-products from lithium-mica and phosphate minerals. As an eco-friendly, zero-waste facility, the residue predominantly gypsum, will be repurposed for use in the construction industry.

Abdullah Al Hameli, head of Industrial Cities & Free Zone Cluster, AD Ports Group said, "AD Ports Group is committed to supporting cutting edge innovative solutions that advance industrial development within the UAE. Lepidico's process technology also aligns with our sustainability principles, and our vision to support innovative environmental solutions that contribute to the long-term sustainable development of Abu Dhabi, as outlined by the leadership of the emirate."

"We are pleased to host an innovative and environmentally conscious company like Lepidico, which aims to establish the region's first lithium production facility in the Middle East, located in KIZAD. The project is a critical enabler for developing an electric vehicle supply chain in the Middle East."

Joe Walsh, managing director, Lepidico, said, "The signing of the agreement represents an important milestone in developing the first phase of the new chemical plant and enables critical path geotechnical, and infrastructure EPCM works to commence.

"In our endeavour to develop a sustainable lithium industry, we plan to integrate social, economic, environmental,



Photo Credit : AD Ports

and health and safety opportunities as part of the project design criteria and strive for a zero-waste process through our innovative and proprietary technologies. We look forward to working with AD Ports Group as we bring the lithium chemical industry to the UAE and wider Middle East region."

The vertically integrated Phase 1 Project (P1P) comprises two small-scale open-pit mines that will feed a mineral concentrator in Namibia, following which the lepidolite

“AD Ports Group is committed to supporting cutting edge innovative solutions that advance industrial development within the UAE.”

concentrate will be shipped to the facility being developed in KIZAD via Khalifa Port.

An innovative developer of sustainable lithium hydroxide and chemicals for the 21st century, Lepidico plans to invest approximately US\$95mn for the chemical conversion plant in Abu Dhabi for an initial term of 25 years, which will employ the company's proprietary process technologies, L-Max and LOH-Max. The project is a significant step forward in developing a sustainable lithium hydroxide industry and supports the global clean energy revolution.

Established in 2010 and operational since 2012, KIZAD is a subsidiary of AD Ports Group, as part of its Industrial Cities and Free Zones cluster. Strategically located between Abu Dhabi and Dubai – with the deep-water Khalifa Port as its maritime gateway – KIZAD is Abu Dhabi's integrated trade, logistics and industrial hub facilitating sustainable growth in metals, polymers, food, automotive, water and oil and gas. KIZAD is one of the world's largest industrial zones, spanning 410 sq kms. ■

'Four in five UAE residents consider air quality important'

Khansaheb Industries, which has developed a suite of products to improve indoor air quality in HVAC systems, have shared results from their inaugural UAE Indoor Air Quality Audit.

KHANSAHEB INDUSTRIES HAS launched the inaugural edition of the UAE Indoor Air Quality Audit. Collecting responses from 1,000 residents across the UAE, the Audit indicates the attitudes of general consumers toward the importance of air quality at home, in relation to their health, in schools, and in the workplace. The audit found that well over four in five consider air quality important in the home, with those who have good home air quality reporting very good well-being and sleeping habits.

A high quality of indoor air quality is more important for UAE residents when choosing a home than the proximity to transport links, distance from a main road, close proximity to schools, whether there is outdoor space, story height, and parking availability. Only 45% of UAE residents consider their indoor air quality to be very good in the home, with only 42% of residents in Dubai stating that they had good indoor air quality.

Abdulrahman Khansaheb, managing director of Khansaheb Industries, commented, "Indoor air quality is an often overlooked but evidently critical topic for UAE residents across the nation. Following the pandemic, those living in the Emirates are wanting to ensure the air they and their children breathe in their home, their workplace, and their schools is of a high enough standard to offer long-term health benefits. The inaugural edition of the UAE Indoor Air Quality Audit demonstrates those concerns clearly and visibly."

The audit found that well over four in five consider air quality important in the home, with those who have good home air quality reporting very good well-being and sleeping habits.

Nearly 91% of UAE residents consider indoor air quality to be important for their day-to-day health, with 75% considering it to be very important. Almost two-thirds of UAE residents consider good indoor air quality as leading to improved overall wellbeing, and 58% consider that it leads to an improved immune system response. 89% of consumers stated that they would consider indoor air quality when choosing which hospital they would go to.

"Following the results of our initial audit, real-estate developers and contractors across the nation need to take indoor air quality



Abdulrahman Khansaheb, managing director, Khansaheb Industries.

Photo Credit : Khansaheb Industries

into consideration when planning and constructing property in the UAE – be that residential or commercial in nature. Khansaheb consistently advocates for the implementation of the highest quality indoor air standards across the UAE to ensure the health and wellbeing of all. As such, steps taken to improve indoor air quality standards in the UAE are critical. With the implementation of a thorough mandatory regulatory framework for the implementation of ventilation and ductwork in UAE buildings, residents can enjoy higher-quality air in their day-to-day lives," added Khansaheb.

The audit comes amid increased public focus on the importance of indoor air quality for health and wellbeing. As UAE residents return to schools and offices following remote working, ensuring indoor air does not represent a vehicle for disease transmission is a key public health priority. Focused on indoor air quality across the home, workplace, hospitals, and schools, findings from the Khansaheb Indoor Air Quality Audit can inform future development of buildings with safe indoor air quality.

Khansaheb Industries, a subsidiary of Khansaheb has been created to recognise the UAE's evolution into a mature and thriving economy driven by knowledge, innovation, sustainability, and world-class manufacturing. Their leading product, Spiralite, delivers better indoor air quality over conventional air-conditioning systems. ■

60 years of a digital journey

In 1961, Rudolf Loh bought an old weaving mill in central Hesse, Germany and founded Rittal. The idea: standard enclosures in standard production, immediately available from stock, faster and better than the individually manufactured enclosures for control components of machines at that time.



From steel manufacturer to an international digital company - Rittal celebrates its 60th anniversary.

A LOT HAS happened since then. The standard enclosure is now used in millions of product solutions in more than 90% of all industries worldwide. A small steel manufacturing company has become a global digital enterprise, and is the innovation and world market leader for enclosure technology and IT infrastructure. Rittal solutions are used in control and switchgear engineering as well as in IT and the energy market, in shipbuilding, hospitals and soccer stadiums. Around 58 subsidiaries handle sales and service of Rittal products worldwide.

From the system to the cloud

In the course of industrial automation, Rittal developed the enclosure into an entire enclosure system. The products were intended to solve several of the customers' problems at once, for example with climate control and power distribution solutions. To this day, the company and corporate culture are characterised by the system. Energy efficiency, climate change or fail-safe power distribution are highly relevant topics, where Rittal makes its customers successful with innovative solutions for industrial and IT infrastructures of all sizes.

In parallel, Rittal built up Eplan, now one of the world's leading software providers for electrical engineering. Together, Eplan and Rittal now optimise and industrialise the



Prof. Friedhelm Loh is the owner and CEO of the Friedhelm Loh Group.

entire value chain for customers in control and switchgear engineering. Automation solutions such as machines for processing control cabinets are just as much a part of the programme as sophisticated control cabinet system technology.

Rittal has recently invested more than 250mn euros in the construction of a completely digitally integrated plant in Haiger, which went into operation in 2020. Hundreds of machines and workstations were networked to digitally handle highly complex processes, from ordering to production and logistics. In the course of this, the company created intelligent edge and cloud solutions together with their sister startup German Edge Cloud, tailored to the needs of the industry.

"Rittal is ahead in recognising the evolving needs and trends of the industry," said Xander Kruger, managing director of Rittal Middle East.

People matter in the family business

Rittal, the largest employer in the Central Hesse region, is a family business – responsibility, solidarity and social commitment have always been a top priority. Every year, the employees of the Friedhelm Loh Group – Rittal and its sister companies – jointly donate huge sums to social projects, already totalling well over five million euros. On the occasion of the company's 50th anniversary, owner and CEO Prof. Friedhelm Loh established the Rittal Foundation, which has been supporting projects and institutions in the fields of social welfare, education and culture ever since.

"I am very proud of 60 years of success that we have written together with all our employees," said Prof. Friedhelm Loh. "What makes us tick is curiosity, customer orientation, the courage to take risks and the joy of shared success. Because we love the future." ■



Xander Kruger, managing director, Rittal Middle East.



Photo Credit : Adobe Stock

Optimistic about growth

KPMG conducted a global survey of 1,118 executives across automotive and adjacent industries in August 2021.

IN THE NEXT five years, the global auto executives are confident that the market share of electric vehicles will grow by 2030, according to a new survey by KPMG. The survey also found that the expectations for the EV market are based on when EVs will reach cost parity with internal combustion engines. Start-ups are raising billions, and executives believe tech companies will enter the market. The rise of new entrants and the shift to everything digital as the technology and automotive industries are converging, are leading to new alliances and new entrants.

While at the same time, supply chain issues and labor shortages are of great concern. KPMG's 22nd Annual Global Automotive Executive Survey of 1118 executives across automotive and adjacent industries found that 53% are confident that the industry will see more profitable growth, compared to just 38% who are concerned about profit prospects. The survey, which included 372 CEOs, found that executives' confidence extends to other areas as well, including the industry's ability to withstand the next great disruption.

"It's encouraging to see such widespread optimism about the growth prospects for the auto industry," said Gary Silberg, global head of Automotive at KPMG. "Car manufacturers have rarely faced such an array of technological and business-model changes since the dawn of the automotive industry 130 years ago. Flying taxis, cars by subscription, ubiquitous and fast EV charging stations, big-tech car entrants – these are some of the developments we can expect in the next 10 years."

However, the executives are worried about a range of issues affecting the supply chain, including the price and availability of semi-conductors, steel, rare earth elements and other scarce materials.

"There are urgent questions executives need to answer right now: Have they learned recent lessons to build more resilient supply chains and address labor shortages?", Silberg said. "Auto manufacturers are competing for talent not only among themselves but also against other industries. We will likely see executives taking lots of time in the coming years to problem solve these risks."

Executives expect the market share of EVs to grow dramatically, though there is no consensus about what market share it will capture. EVs' popularity may depend partly on significant investments in DC fast-charging infrastructure; 77% of executives expect consumers to require charge times under 30 minutes when traveling. The survey also found that expectations for the EV market are based on when EVs will reach cost parity with internal combustion engines. Most believe EVs can be widely adopted without government subsidies (77%), but the majority still support such programs (91%). Furthermore, 78% of executives agree that there will be a fundamental change in how vehicles are purchased in the coming years, saying that most will be sold online by 2030. And about three-quarters predict that more than 40% of vehicles will be sold directly by automakers to consumers, bypassing dealers.

With the move to digital commerce, executives expect that automakers will monetise the vast amount of data they will collect; 43% expect that automakers will sell data to auto insurance companies. ■

MB Crusher acknowledges importance of size grading in a quarry

WITH QUARRIES PROVIDING a whole range of important resources, and the diverse differences between each individual location, MB Crusher has assessed two key problems that commonly appear on quarry-based job sites.

Operators struggle to manage the extracted materials (after extraction has taken place) and productivity rates throughout the job site timeframe.

Within its fleet, MB Crusher offers a range of solutions to these key problems - increasing the quarry's profitability and transforming expenses into advantages, in spite of the type of material extracted.

The sandstone range tackles the mixture of sizes that debris in sandstone quarries come with. The MB-S18 screening bucket, equipped commonly on a Kobelco SK220SD, separates coarse materials from fine materials, providing clean material that's ready-to-use as foundation for new roads or in the construction industry. The excavator's hydraulic systems allow the units to work on a range of machines.

On chalk quarries, the MB-R900 drum cutter can excavate smaller-sized materials. The smaller aggregates allow the operators to immediately send the materials to the stationary crusher plant and increase hourly production. The finish product is then able to be sold as a base for plaster.

The BF120.4 crusher bucket has been deployed in copper mines, working day and night to crush inert material before it's screened by the MB-S18 screening bucket. The resulting material is ideal to cover holes that explosives create, with amore focused an efficient explosion available. Larger materials can then be used to build roads inside mines.

In coal quarries, MB

Crusher's MB-HDS320 shaft screener buckets have been deployed to produce between 55 and 66 tons per hour of the size needed to be used in power plants.

MB Crusher's attachments are optimal for reducing waste and operational costs, with versatile attachments allowing for diverse applications.



Size grading is a key component of quarry assessment.

Photo Credit : MB Crusher

All-mechanical Cat dozer delivers easy maintenance and faster investment return

THE LATEST ADDITION to Cat's slate of dozers, the D8 GC, is designed to fit a variety of business needs while delivering easy maintenance and faster return on equipment investment.

The fully-mechanical unit can deliver an up to 10% reduction in owning costs compared to the D8T.

The D8 GC is powered by the Cat 3406C DITA engine- with a three-speed powershift transmission and Caterpillar-exclusive torque divider ensuring that more useable power gets to the ground for all-round performance.

Individual radiator cores can be quickly replaced, while new Cat hydraulic and power train oil filters offer extended service intervals to save time and money.

An elevated sprocket helps make maintenance easier with modular components making for easy removal and installation for service.

Opting for solely mechanical components ensure the unit comprises a robust power train, guaranteeing easy of diagnosis and maintenance, even in remote locations during deployment.

For a lower initial purchase price,

customers can opt for a General Duty undercarriage, simplified fixed ripper or more based 4-LED light package.

A Desert/High Abrasion package is available factory-ready to enhance machine performance in sandy or abrasive underfoot conditions, with a cooling machine optimised for high-debris environments and easy access for cleanout. The specially-coated fan and radiator help rest abrasion and a core protection grid helps keep debris out of major systems. An additional high ambient fluids package handles heat, with a sealed bottom guard and added seals keepign fine abrasive particles out of components.

D8 GC can also be optimised for cold weather work, with features like heavy-duty batteries, arctic undercarriages and thinner oil for better lubrication in extreme conditions.

Cabs or canopies can be fitted to the D8 GC, each with integrated Roll Over Protective Structures (ROPS/FOPS). Heavy Duty undercarriages can be implemented for aggressive or high impact applications.

Cat D8 GC's dozing performance and competitive fuel efficiency help contribute to lower owning costs and a quicker return on equipment investment.



The unit comprises all-mechanical components.

Photo Credit : Cat

Disruptive technologies in construction

Companies that employ technological initiatives now to be future-ready are predicted to win more contracts and achieve a higher rate of profitability, according to a GlobalData report.



Cloud computing offers the builder the ability to perform design related actions, remotely from any part of the world.

Photo Credit: Adobe Stock

ACTIVE ENGAGEMENT WITH suppliers, sub-contractors and the local community is an integral part of today's construction company functions. Construction companies that concentrate and stay relevant in areas such as cloud computing, artificial intelligence (AI), digital twins and the internet of things (IoT) tend to show their ability and willingness to adapt these technologies that are made for the future, the GlobalData research states. Companies that employ these initiatives now to be future-ready, are predicted to win more contracts and achieve a higher rate of profitability, says GlobalData in its report.

Cloud computing in construction

Monitoring devices have been vastly used to generate and compute vast amounts of data at any given modern construction site. These sets of data have been used by the companies within the industry to gain insights and real-time numbers from a live building site, to take actions based on facts. Profitability has obviously been the driving force behind the surge, and cloud-based computing has provided a platform for this

to be conducted efficiently.

Cloud computing offers the builder the ability to perform design related actions, remotely from any part of the world. With the advent of mobile devices, access to building models and collaborating with the on-site team has been faster than ever before. Architects and engineers are now able to access data to provide inputs, address project complications and provide solutions faster.

Professionals can mark up drawings and plan while simultaneously being able to access project documents, permits and build status. Cloud-based technologies have adapted software to builder specific details, enabling greater productivity.

Digital twins enabling faster decision making

Digital twins are scaled digital models of a project that gathers real-world information to simulate construction. The technology uses aids like sensors, lasers, aerial photography and other wireless equipment to amass sets of data to create the simulation.

Digital twins enable the usage of real-

time data to predict potential failures related to structure, electronics in buildings and simulate aero-dynamics in skyscraper construction.

Artificial Intelligence in construction

AI is revolutionising the approach made by construction companies towards key areas of projects such as logistics and safety. AI-fuelled telemetrics are used to predict maintenance requirements, fleet management and general work-site enhancements.

AI-based software can monitor sources to apply predictive analytics to raise potential issues at the job site that needs addressing. Potential safety risks are mitigated using advanced technology to track usage of protective measures, which are highly essential for projects to run smoothly, without compromising on worker casualties.

Tagging devices that are based on technologies derived from the Internet of Things (IoT) can accurately measure equipment wear and fuel consumption thus providing all the essential tools for a worksite manager to make calls that define productivity. ■



Photo Credit : DHL Global Forwarding

GoGreen solutions for logistics

An interview with Amadou Diallo, CEO, DHL Global Forwarding Middle East and Africa, on developing a solar project with TotalEnergies.

DHL GLOBAL FORWARDING, the leading provider of air, ocean and road freight services, and TotalEnergies have signed a contract for a solar energy project in Dubai. It is in continuation of their Strategic Cooperation Agreement signed in 2019. The project complements Deutsche Post DHL Group's sustainability roadmap to achieve zero emissions logistics from 2050 onwards.

In addition to supplying the sites with solar power, eight electrical vehicle charging stations will also be installed. Thus, DHL Global Forwarding contributes to the Group's goal of electrifying 60% of its fleet by 2030.

Amadou Diallo, CEO, DHL Global Forwarding Middle East and Africa, sheds light on the partnership and what it entails.

TRME: How is DHL's partnership with TotalEnergies contributing towards sustainability and green energy targets as well as enabling cost reduction for DHL and the country, in general?

Amadou Diallo (AD): DHL Global Forwarding's partnership with TotalEnergies is a major step in its sustainability

journey and complements our group's sustainability roadmap to achieve zero-emissions logistics from 2050 onwards.

This partnership will solarise eight of DHL's sites in Dubai to cover the equivalent of over 46,000sqm of photovoltaic panels, saving more than 6,000 tonnes of CO₂ in the first year. The whole solar system will produce over 14,000 MWh per year, enough energy to power over 16,000 homes yearly in the UAE. Moreover, eight electrical vehicle charging stations will also be installed – which contributes to the

The whole solar system will produce over 14,000 MWh per year, enough energy to power over 16,000 homes yearly in the UAE.

group's goal of electrifying 60% of its fleet by 2030.

Nearly 85% of the solar modules for the project are recycled and are exclusively produced in landfill free certified factories. All these contribute to making the entire product cycle more sustainable and saves more than 150,000 tonnes of CO₂ over the contract duration. In short, there are significant impact from this partnership towards enabling the cost savings for DHL and furthering the sustainability mandate.

TRME: Were there any significant challenges faced in realising the full carbon efficiency of the transport fleet or barriers in the deployment of solar energy? How did you overcome them?

AD: Sustainability is a core component of our corporate strategy at DHL Global Forwarding because it has become a key differentiator in business today – and one that serves a very positive purpose. Over the years, we have repeatedly redefined logistics, from introducing the industry's first green product to becoming the first logistics company to commit to a zero emissions target.

If we are to tackle the bigger challenges on carbon efficiency of the fleet or deployment of social energy, then global solutions are needed. Joint efforts make for harmonised conditions, and they prevent distortion of competition. Let me use sustainable synthetic fuels as an example. If they were already mature for market, they could help reduce greenhouse gas emissions in aviation.

To this end, DHL Global Forwarding introduced the Sustainable Marine Fuel (SMF) service for ocean freight as part of its sustainability strategy. Initially launched for Less-than-Container Load (LCL) shipments, this was later extended to Full-Container Load (FCL) shipments. Offering the option of using SMF is another step towards cleaner and greener ocean freight by reducing its environmental footprint.

Moreover, DHL Global Forwarding is also funding the purchase of sustainable aviation fuel (SAF) via United Airlines and helping decarbonise the airfreight cargo industry. As part of the Eco-Skies Alliance programme, the company is one of the programme participants that contributes towards SAF purchases of 3.4 million gallons (12.87m litres) this year to reduce emissions. The higher the share of the SAF in total, the lower the carbon emissions. As vessels and airplanes exhaust all in the same atmosphere, we at DHL Global Forwarding are following a mass-balance approach.

DHL Global Forwarding has also played a pivotal role in large-scale solar energy projects in the region, such as the Mohammed Bin Rashid Al Maktoum Solar Park Project in

DHL Global Forwarding has also played a pivotal role in large-scale solar energy projects in the region, such as the Mohammed Bin Rashid Al Maktoum Solar Park Project in Dubai.

Dubai. The DHL Industrial Projects team was instrumental in transporting breakbulk cargo, ensuring world-class safety and compliance standards. This involved transportation of electrical transformers, with the heaviest weighing up to 250 tons, from China and Germany to Dubai's Jebel Ali Port, where they were offloaded onto trailers for a 110-kilometre journey to the project site.

That is why we will be intensifying our involvement in related initiatives, while driving cross-sectoral dialogue with the aim of developing a global strategy and global standards. Only by joining forces can we move forward in a truly sustainable way. This partnership with TotalEnergies represents steps in that direction.

TRME: Can you please shed some light on other DHL projects in the region for green energy?

AD: DHL's sustainability projects in the region are aligned with our worldwide aspirations as part of our global sustainability mandate. As a company, DHL is committed to sustainability, and it is well embedded in our

Strategy 2025. As part of our GoGreen solutions, the teams underwent the certified GoGreen training, where the Middle East team achieved 95% Full Time Equivalent [FTE] certification. This along with the decarbonising the ocean freight shipments and supporting sustainable aviation fuel initiatives are part of the company's commitment to sustainability.

Globally, we will invest €7 billion until 2030 in clean operations to reduce our emissions from 33 MT in 2020 to under 29 MT by 2030 – despite the expected further growth in our global logistics activities. Also, we plan to electrify 60% of the last-mile delivery vehicles and increase share of sustainable fuels in line haul to >30% by 2030, increase sustainable aviation fuel (SAF) blend to >30% by 2030, design 100% of all new buildings to be carbon neutral, and offer green alternatives for 100% of all core products and solutions.

While these are global targets, each of these initiatives will be mirrored in the region as part of our sustainability initiatives. ■



As a company, DHL is committed to sustainability.

Photo Credit : DHL Global Forwarding

Drones are set to totally transform the Middle East's warehousing and logistics sectors.

Transforming logistics

The MENA region is witnessing an increased demand for warehousing automation solutions across industries.



Photo Credit: Hypermotion Dubai

THE COVID-19 OUTBREAK has increased pressure on businesses to improve operational efficiency, reduce costs and to innovate and grow. The pandemic has demonstrated the creativity, resilience and ingenuity of businesses as well as the importance of having a clearly defined automation strategy in place and sticking to it. In the MENA region, the increasing demand and usage of e-commerce and e-retail prompted the logistics sector to work towards higher productivity and cost efficiency.

Smart solutions that optimise time management, increase productivity and facilitate efficient use of space, critical to warehousing across industries are transforming the landscape in several ways.

Swisslog, provider of robotic, data-driven and flexible automated solutions had showcased its innovations at Materials Handling Middle East 2021 - the region's leading trade fair for warehousing, intralogistics and supply chain solutions. David Dronfield, general manager, Swisslog Middle East, commented, "Swisslog Middle East has received many requests from companies on how they can integrate automation technology into their existing infrastructure in a very convenient and efficient way - without disrupting their current business processes. With the pandemic, manual handling processes have become increasingly impractical due to labour shortages, inefficiencies, lack of

scalability and congestion in stores/warehouses. We have been working around the clock to help companies integrate this technology to remain viable and profitable, and to install and commission new automation systems."

"One of our key USP's is the ease with which our solutions can be implemented without impacting existing infrastructure. Our solutions are tailored to our clients' unique business needs and challenges so that they can make this transition as smoothly as possible and reap the benefits of automation. We are working to change the perception of automation in the Middle

In the MENA region, the increasing demand and usage of e-commerce and e-retail prompted the logistics sector to work towards higher productivity and cost efficiency.

East and help organisations effectively. We believe that the time is apt for automation in the Middle East," added Dronfield.

Drones

US-based UVL Robotics is the first company to set up a fully autonomous last-mile delivery drone system in Oman and confirms that it has completed inventory pilot testing with some of the region's biggest players.

"Drones are designed for the most extreme temperatures and can deliver a package several times faster than a normal courier, thereby reducing the cost and delivery time," explained Moosa Karim Albalushi, MENA director of UVL Robotics. He was speaking ahead of the Hypermotion Dubai's Scalex (Supply Chain and Logistics Excellence) conference.

According to the Scalex conference, global disruptors are re-envisioning how we will all travel and move goods and services in the near future and are tearing down boundaries between logistics, mobility, infrastructure, and transport, and looking to replace them with networked, integrated, and inter-modal systems.

These innovative logistics automation solutions and effective, smart warehousing can help businesses across the Middle East.

Despite the many changes and challenges, sustainability, modernisation, and safety remain the main priorities for the industry to continue building resilience. ■

Is your Covid-secure building a fire safety risk?

As you prepare a building to be Covid-secure, you could inadvertently affect its fire safety and be swapping one hazard for another, states Ashraf Yehia, managing director, Eaton Middle East.

WHETHER A BUILDING is changing its use or layout, including temporary constructions, one must consider whether a new fire risk assessment is needed, according to Ashraf Yehia, managing director of power management solutions provider, Eaton Middle East.

Commercial building owners are all having to think about how they are going to use their space to keep both employees and the public safe. For many, this means the need to change both the layout and how people move through the space.

Most local regulatory bodies state that if an alteration is made to the property the current fire risk assessment must be reassessed. As a result of building layout changes, including many temporary internal and external structures such as protective barriers and screens, we need to think about fire detection and alarm, exit signage and emergency lighting layout.

A well-designed fire safety system will have 20% extra capacity and allow some flexibility within its system.

Increased risk

Most changes to a building happening now to minimise the risk from Covid-19 are increasing the risk from another hazard – fire. And it's a serious risk for the people inside the building and also for the owner who does not consider it.

Escape routes

Most retail and hospitality outlets, for example, have organised one way traffic through their



By specifying and installing fire safety systems with flexibility in mind, and considering adaptive evacuation technology, you are safeguarding the future of your building, yourself and most importantly the people inside.

premises either with arrows showing direction of travel or in some cases by blocking off passages with barriers, rope or tape. If there is an emergency where the building needs evacuating this could lead to doubt and confusion and may even prevent people from easily making their way to emergency exits.

This will have implications for emergency lighting and exit signage – some of which may now be in the wrong place for simple and safe evacuation. There should be fire extinguishers on each of these new escape routes.

Warning segregated people

If constructing new rooms, partitioning off areas or changing the layout to segregate people, fire detectors must be installed in each new space and we should ensure that people can hear and /or see fire alarms when they are in them and that they are still compliant.

Risk assessment

Building owners and employers must consider all the risks that employees and the public may face in the spaces that they

are responsible for. It may be needed to adapt or change our fire safety systems to mitigate the risk from these new measures.

It may also lead us to consider some of the choices we make, for example, the materials we use for constructing partitions.

A well-designed fire safety system will have 20% extra capacity and allow some flexibility within its system, but sadly most do not and even those that do will not have considered the extent of change that we need to make to our buildings.

Planning fire safety for change of use

For new build and refurbishment projects it is sensible to plan fire safety systems with flexibility in mind.

By specifying and installing fire safety systems with flexibility in mind, and considering adaptive evacuation technology, you are safeguarding the future of your building, yourself and most importantly the people inside. If we make buildings more adaptable and modular, we need to do the same with all the elements of a fire safety system. ■

Photo Credit : Adobe Stock

Briefly

AVEVA's New Vision AI Assistant transforms image feeds into insights

GLOBAL LEADER IN industrial software, driving digital transformation and sustainability, as launched its latest offering. The Vision AI Assistant 2021 is an image classification-based analytics tool.

The solution is powered by artificial intelligence and can be integrated with the AVEVA System Platform and Operations Management Interface and AVEVA Insight.

Customers can use video and images from existing general-purpose cameras and convert them into user-friendly information and timely alerts.

Designed for low-latency industrial environments, the Vision AI Assistant solution leverages deep learning to train and deploy 24/7 artificial intelligence models to enhance situational awareness to help operators focus on the task at hand without continuously monitoring live camera feeds.

By deploying Vision AI Assistant, organisations will be able to improve operations, quality, and maintenance capabilities across industrial enterprises by using cameras to determine visual anomalies, assess quality, and monitor production. All these improvements contribute to optimising efficiencies and improving sustainability along the way.

Product applications include the integration of standard digital cameras. These can be applied to Vision AI Assistant to ensure quality, by analysing the quality of water treatment fluids and gauging if a hopper is full or empty, or by identifying the defective products on a production line.

Vision AI Assistant can also scan infrared or thermal camera feeds, permitting operations teams to uncover visual inconsistencies. By locating compressed air or fluid leaks, the system can help operators to reduce failure and efficiency loss. By spotting hotspots in a data centre, the system can prevent overheating of critical equipment.

The integrated solution is offered as an exclusive extension for AVEVA System Platform purchases made through the AVEVA Flex subscription initiative.

Alimak Group partners with PERI for Scaffold Transportation System



The new system enhances safety and efficiency.

Photo Credit : Alimak Group

ALIMAK GROUP, in partnership with PERI, has launched the Alimak STS 300 Scaffold Transportation System.

The scaffolding product for the construction industry is making the scaffolding process as efficient and safe as possible. The Alimak STS 300 Scaffold Transportation System, is an innovative system offering a range of features which enhance safety in combination with efficiency. It provides scaffolders more productive erection and dismantling time, as well as better ergonomics, and it also supports horizontal movement on the ground level which makes it more user friendly and efficient.

The Alimak STS 300 is designed to fit perfect PERI UP scaffold. PERI UP scaffold secures scaffolders are always in a guarded position when installing or dismantling scaffold. Lifting tools do not negatively impact this safe position of scaffolders, except when using the Alimak STS 300.

“We are very pleased to have this partnership with Alimak Group. The Alimak STS 300 will enable scaffolders to improve their entire logistic process, starting from the warehouse towards the jobsite and backwards. Due to the innovative approach, waiting times decrease and it is easy to assemble and dismantle scaffolding with a team of two scaffolders,” said Thomas Imbacher, responsible board member for innovation and marketing of PERI AG.

Alimak STS 300 Scaffold Transportation System aims to provide easy handling and transport, increased productivity, improved safety, improved ergonomics and better working conditions for scaffolders. It also provides a digital channel – My Alimak covering online manuals, e-learning and parts Webshop.

Initially, the Alimak STS 300 will only be available in Germany but will be gradually rolled out to more markets, globally.

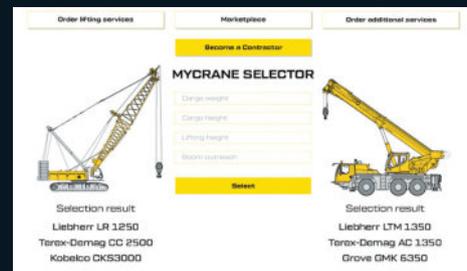
MYCRANE platform adds universal crane selection tool

THE DIGITAL PLATFORM for the search and selection of cranes, MYCRANE, has commenced the testing of a new, universally-accessible crane selection tool which will be offered to the lifting industry at no cost.

‘MYCRANE Selector’ is the latest innovation from the Dubai-based MYCRANE, which was the first company to launch a convenient and time-saving online solution for crane rental services.

The new tool will accommodate the quick and easy identification of what crane should be used for what application, displaying the crane’s capacity and optimum configuration to allow for an informed decision during crane selection.

Director and MYCRANE founder, Andrei Geikalo, explained, “Our MYCRANE Selector tool will simplify the life of all those involved in



The tool will enable optimal crane selection.

Photo Credit : MYCRANE

the lifting industry. Our MYCRANE Selector tool will simplify the life of all those involved in the lifting industry. Our users simply need to insert the radius, the height of the lift, the dimensions and weight of the cargo, and they will get the right crane for their lift.”

Polypipe launches drainage system with noise reduction

POLYPIPE MIDDLE EAST, a sustainable water and climate management solutions manufacturer has launched Terrain Q, a polypropylene, easy-to-install high-performing drainage system incorporating multi-layer technology for the Middle East.

Terrain Q can be used for a variety of commercial and residential high and low-rise buildings, designed to offer a single-source solution for acoustic drainage. This is alongside the region's market-leading terrain drainage systems from Polypipe Middle East, including Terrain PVC and Terrain FUZE. Terrain Q adds to the company's commercial drainage portfolio and offers specifiers and installers an engineered

solution that offers both noise reduction and fire retardancy benefits. The system includes a blue external layer made from PP+UV+RF, which provides resistance to attack from UV radiation, fire and impact damage. The black intermediate layer comprises a mineral-reinforced plastic, which enables high stability, noise insulation and fire resistance, and the final white internal layer is made of PP+AF, providing high chemical and abrasion resistance and resistance to high-temperature waste up to 97 degrees celsius. Due to an anti-fouling additive, the bore is kept clear and resistant to deposit build-up which helps to reduce noise levels within the system.

According to Polypipe, Terrain Q has been engineered to meet the industry's acoustic and fire requirements. The system has been tested and certified to EN 14366 'Laboratory measurement of noise from wastewater installations', EN 13501 'Fire classification of construction products and design types' and EN 1451 'Plastic pipes and fittings for soil and waste'. The range is available in a variety of sizes to suit project requirements and when matched with Terrain's other drainage systems, a bespoke engineered solution can be found for each building type.



Due to an anti-fouling additive, the bore is kept clear and resistant to deposit build-up which helps to reduce noise levels within the system.

Photo Credit : Polypipe Middle East

NSK unveils Super-TF spherical roller offer long service life

NSK, A TOKYO- based bearing manufacturer unveils its new bearing product with improved durability. The bearings are said to have increased service life, especially in contaminated environments such as steel production facilities. The bearings are manufactured from a specially developed, proprietary material and are able to increase service life and uptime significantly. Super-Tough (Super-TF) bearing steel is a proprietary material that is not only ideal for very high load applications but has a proven ability to reduce surface-originated flaking from the contaminated lubricant, according to NSK. The Super-TF material is DNV GL certified and improves the basic dynamic load rating in roller bearings by 23%, equating to an effective doubling of fatigue life in comparison with bearings made from standard steel.

Metso Outotec introduces Reactorwell feed system

METSO OUTOTEC, IS one of the global frontrunners in sustainable technologies, end-to-end solutions and services for the aggregates, mineral processing and metal refining industries globally.

The company has announced the launch of 'Reactorwell', a new generation feedwell, that is set to maximise thickener and clarifier performance while minimising flocculant consumption and bringing significant operational cost efficiencies.

Metso Outotec saus that the first-class feed system features high solids retention and mixing efficiency. It eliminates feed short-circuiting and offers low shear for ideal floccule growth and even discharge symmetry. The feed system provides optimum feed conditioning for thickeners and clarifiers. Thanks to its many benefits in addition to low flocculant usage, the Reactorwell is a part of Metso Outotec's sustainable Planet Positive portfolio.

Brian Berger, vice-president, thickeners and clarifiers at Metso Outotec said, "It provides improved overflow clarity as well as higher underflow density. Additionally, the Reactorwell allows better thickener underflow with an improved response to process changes."

The Reactorwell consistently achieves high unit area throughput and the improved Autodil performance minimises the need for pumped dilution, leading to a lower total cost of ownership.



The Reactorwell achieves significant improvements in thickener and clarifier performance as it utilises maximum settling area due to its high exit symmetry.

Photo Credit : Metso Outotec

Briefly

Fieldwire joins Hilti to establish jobsite management platform

HILTI GROUP, ONE of the global leaders in innovative tool and fastening solutions, technology, software and services for the commercial construction industry, has entered into an agreement to acquire Fieldwire, a San Francisco-based construction technology company for an approximate US\$300mn.

The strategic acquisition will bring together Fieldwire's best-in-class product and Hilti's global brand and market reach to help drive productivity at contractors and on construction sites. Fieldwire provides a leading platform for jobsite management that powers more than a million jobsites worldwide.

With Hilti's support, Fieldwire will expedite the work on building the preferred digital solution for construction professionals in the market. Not only will all current Fieldwire team members be invited to stay with Hilti Fieldwire under the continued leadership of the two founders, but additional efforts will also be made to significantly grow the team.

"The acquisition of Fieldwire will accelerate Hilti's capability to deliver productivity to our customers through software solutions. Hilti has been investing in digital solutions for construction professionals. We intend to continue investing in the platform to create the next market leader in construction project management software." said Christoph Loos, CEO of the Hilti Group.

In 2017, Hilti was part of Fieldwire's Series B financing round. As an early investor, Hilti already has a sound working relationship with Fieldwire, and together the companies can now strive towards making construction jobsites around the world simpler and more productive. The acquisition is expected to close in Q4 2021 and is subject to standard closing conditions, including regulatory approvals.

"With Hilti, we have found a partner that truly shares our values and at the same time allows us to speed up our product development for our customers in new and existing markets. We are thrilled to be joining the Hilti Group." said Yves Frinault, Fieldwire's co-founder and CEO.

Project Databank

Compiled by Data Media Systems

Project Focus

Compiled by Data Media Systems

Cairo Governorate - Cities of Al-Salam - New Capital Monorail

Name of Client	Cairo Governorate NAT - The National Authority for Tunnels
Estimated Budget (US\$)	1,300,000,000
Contract Value (\$ US)	739,000,000
Award Date	2014-Q4
Main Contractor	AVIC International China Railway Eryuan Engineering Group (CREEC)
Facility Type	Mass Transit Systems
Status	Construction
Location	Various, Egypt
Project Start	2012-Q1
End Date	2022-Q1

Background

Cairo Governorate is planning to build an electric train line between Cairo and Egypt's new administrative capital, Al-Salam. The railway line will extend over a length of 67 km, with 11 stations. The future rolling engine will be able to accommodate 340,000 passengers per day. The project is expected to generate savings of 2.3 billion Egyptian pounds (around US\$130mn) in fuel subsidies related to car traffic per year for the state. It will also reduce traffic on a motorway linking the capital to the Suez Canal in the port city of Ismailia, northeast of Cairo, by 30%.

Project Status

Date	Status
Nov 2021	The construction work in the Heliopolis station is ongoing
Sep 2021	50% of the electromechanical works have been completed. 92% of the civil work has been completed
Aug 2021	90% of the railway lines works have been completed.
Jul 2021	88% of the construction work at the station has been completed.

Project Scope

The scope of the project involves:

- Line will consist of 11 stations located in the cities of Salam, Obour, Shorouk, Mostaqbal, Robeiky, and the New Administrative Capital, stretching over 67.8 kilometers. Some 7.5 kilometers will be in the form of a bridge, while 0.3 kilometers will be in the form of a tunnel. The speed of the train will be 120 km/h.
- The line will start from Adly Mansour Station that is reached by the third metro line, and at Robeiky will be divided into two branches. One will head north in parallel to the Regional Ring Road to the 10th of Ramadan City and the other will head South to the New Administrative Capital.

The scope of project includes

- Signalling
- Control
- Supply 22 trains
- Bridging works
- Railway bridging work
- Communication
- Electricity systems
- Civil works
- Tunnel works
- Train maintenance workshop

Project Finance

Cairo Governorate is the client of the project.
EXIM Bank will finance the project.

Project Databank

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CONSTRUCTION AND INFRASTRUCTURE PROJECTS, NORTH AFRICA

Project Name	Country	City	Facility	Budget (US\$'000)	Status
AAVB - Grand Theater of Rabat	Morocco	Rabat	Theatre/Entertainment/Leisure Facilities	141,000	Construction
Aksal Group - Wessal Capital - Rabat Morocco Mall	Morocco	Afourer	Malls/Retail Outlets	110,000	Construction
Alexandria Port Authority - Dekheila port - Container Terminal	Egypt	Alexandria	Port	400,000	Feasibility Study
Algeria Ministry of Public Works - ANA - Djen Djen Port to El Eulma - Connection to East-West Highway	Algeria	Jijel Province	Roads	2,000,000	Construction
Algeria Ministry of Public Works - Bejaia Port to Ahnif - Connection to East-West Highway	Algeria	Bejaia	Roads	1,185,000	Construction
Algeria Ministry of Public Works and Transport - AGA - Toll Stations On The East-West Highway	Algeria	East-West	Roads	77,000	Construction
Algeria Ministry of Youth and Sports - Baraki Stadium	Algeria	Baraki	Sports Stadium/ Facilities	380,000	Construction
Algeria Ministry of Youth and Sports - Douera Sportpark Stadium	Algeria	Douera	Sports Stadium/ Facilities	250,000	Construction
Algeria Ministry of Youth and Sports - Oran Olympic Stadium	Algeria	Oran	Sports Stadium/ Facilities	142,000	Construction
Algeria Ministry of Youth and Sports - Tizi Ouzou Abdelkader Khalef Stadium	Algeria	Tizi Ouzou	Sports Stadium/ Facilities	357,000	Construction
AQS - Bellara Steel Plant	Algeria	Jijel Province	Steel Plant	2,000,000	Commissioning
BANK OF AFRICA - Mohammed 6 Tower	Morocco	Rabat Sale Haute Mer	Hotels	380,000	Construction
Cairo Governorate - Cities of Al-Salam - New Capital Monorail	Egypt	Various	Mass Transit Systems	1,300,000	Construction
Casa Transports - Casablanca Tramway - Overview	Morocco	Casablanca	Railway	8,700,000	Construction
Casa Transports - Casablanca Tramway - Tram Line 3	Morocco	Casablanca	Railway	219,000	Construction
Casa Transports - Casablanca Tramway - Tram Line 4	Morocco	Casablanca	Railway	219,000	Construction
CMMM - Boumadine Polymetallic Mine	Morocco	Draa Tafilalet	Exploration	120,350	Construction
EGSA Oran - Ben Bella Airport Extension - Terminal 2	Algeria	Oran	Airport	156,000	Construction
EMA - Algeria Metro Extension C1 Ain Naadja - Baraki	Algeria	Baraki	Railway	120,000	Construction
Emarat Dzayer Group - Groupe Sider - Steel Plant	Algeria	Annaba	Steel Plant	1,600,000	Pre-FEED
Emmerson - Khemisset Potash Mine Development	Morocco	Khemisset	Potash	250,000	Feasibility Study
EPO - Oran Port Extension - Overview	Algeria	Oran	Port	104,000	Construction
FERAAL - Gara Djebilet Iron Deposit Project	Algeria	Gara Djebilet	Iron Ore	15,000,000	Feasibility Study
GVG Real Estate Development - Emirates Touristic Resort	Morocco	Marrakech	Residential Development	136,130	Construction
Jamjoom Pharma - Ophthalmology Drug Factory	Algeria	Adrar	Pharmaceutical Factory	130,000	EPC ITB
LafargeHolcim Maroc - Souss Massa Cement Plant	Morocco	Taroudant	Cement	350,000	Commissioning
Managem - Tizert Copper Project	Morocco	Tizert	Copper	135,000	Feasibility Study
MEHAT - Taparura Project	Tunisia	Sfax	Mixed-Use Development	457,077	EPC ITB
METLW - Dakhla Atlantique Port	Morocco	Dakhla	Port	996,000	Engineering & Procurement
METLW - M'dez Dam	Morocco	Sebou	Dam	165,000	Construction
METLW - Tiznit-Dakhla Expressway	Morocco	Various	Roads	1,000,000	Construction
Ministry of Housing, Utilities & Urban Communities - Central Business District (CBD)	Egypt	New Capital	Mixed-Use Development, Commercial Buildings	3,000,000	Construction
Ministry of Industry - Mohammed 6 Tanger Tech City	Morocco	Tangier	Industrial Park	10,000,000	Engineering & Procurement
Ministry of Public Works and Transports - Hamdania Sea Port Development	Algeria	El Hamdania	Port	3,300,000	Engineering & El Procurement
Ministry of Public Works And Transports - Port Master Plan - Overview	Algeria	Various	Port	8,190,000	Engineering & Procurement
Ministry of Transport - (Saudi Arabia - Egypt) King Salman Causeway	Egypt	Sharm El Sheikh Causeway		4,500,000	Feasibility Study
MINISTRY OF TRANSPORT - Enfidha Deep-Water Port - Overview	Tunisia	Enfidha	Port	1,480,000	Engineering & Procurement

Project Databank

Compiled by Data Media Systems

CONSTRUCTION AND INFRASTRUCTURE PROJECTS, NORTH AFRICA

Project Name	Country	City	Facility	Budget (US\$'000)	Status
MINISTRY OF TRANSPORT - Enfidha Deep-Water Port - Phase 1 - Container Terminals	Tunisia	Enfidha	Port	1,400,000	EPC ITB
Ministry of Transport - SMLS - Light Rail Transit (LRT)	Tunisia	Sfax	Railway	283,000	Design
Mountain View - Sisban - NUCA - Mountain View I-City Residential Units	Egypt	New Cairo	Residential Development	3,600,000	Construction
Nador West Med Company - Nador West Med Port Complex	Morocco	Nador	Port	1,025,000	Construction
NAT - Cairo Metro - Line 3 - Phase 3	Egypt	Cairo	Mass Transit Systems	1,800,000	Construction
NAT - Cairo Metro - Line 3 - Phase 4	Egypt	Cairo	Mass Transit Systems	1,200,000	Construction
NAT - Cairo Metro - Line 4 - Phase 1	Egypt	Cairo	Mass Transit Systems	4,780,000	Construction
NAT - Cairo Metro - Line 6	Egypt	Cairo	Railway	5,300,000	Feasibility Study
Onda - Expansion Of Mohammed 5 Airport - Overview	Morocco	Casablanca	Airport	286,200	Construction
SCZone - El-Tor Port - Multi Purpose Terminal	Egypt	El-Tor	Port	100,000	Feasibility Study
Sonatrach - Integrated Phosphate Project	Algeria	Various	Phosphate	6,000,000	Feasibility Study
Sonatrach - Skikda Export Terminal Expansion	Algeria	Skikda	Port	454,000	Construction
Spimaco - Pharmaceutical Factory	Morocco	Bricheid	Pharmaceutical Factory	41,000	Construction
Tekcim - El Jadida Cement Plant	Morocco	El Jadida	Cement	272,240	Engineering & Procurement
Wessal Capital - Wessal Bouregreg	Morocco	Rabat	Mixed-Use Development	900,000	PMC
WOTECH - Medium Density Fibreboard (MDF) Plant	Egypt	Bahira	MDF Plant	228,000	Engineering & Procurement

Mugharraq Port recognised as international port facility

AD PORTS GROUP has announced that Mugharraq Port, a strategic port located in the Al Dhafra Region, has been recognised as an international port facility.

Issued under the provisions of the International Code for the Security of Ships and of Port Facilities (ISPS Code) by the UAE's Ministry of Energy and Infrastructure, the port has long served as a leading maritime facility that provides a host of offshore, project/oil and gas, general cargo, logistics support, bulk and break-bulk handling services.

With the new certification, Mugharraq Port can now receive international and local vessels including container feeders, bulk and break-bulk carriers, mobile offshore drilling units, tugboats, chemical tankers, offshore support vessels, passenger ships and high-speed cargo crafts.

Saif Al Mazrouei, head of Ports Cluster, AD Ports Group, said, "It is our great pleasure to announce that Mugharraq Port, one of the high-performing ports located within the Al Dhafra Region, has been officially recognised as an international port facility.

"This achievement will greatly accelerate the port's potential in securing interest from the world leaders of industry, particularly those involved in the global energy market, while simultaneously



opening up new opportunities in other industries and segments for us to target.

"We look forward to reinforcing Mugharraq Port's logistical capabilities even further, as well as cultivating the port's reputation not only as a vital maritime facility in the Middle East but also its footprint within global trade."

Mubarak Al Mazrouei, port director, Al Dhafra Region, "This is a reflection of AD Ports Group's efforts in recent years to devise and advance a master plan for the modernisation of Al Dhafra region's ports, which has witnessed

several infrastructure enhancements catering to both commercial and recreational maritime activities."

AD Ports Group is close to completing an extensive expansion project aimed at enhancing Mugharraq Port's infrastructure and service capabilities to ensure it is better positioned to support offshore and mega projects related to the oil and gas field.

The infrastructure improvements introduced include the extension of the quay wall up to 480 metres with additional berths, deepening of the facility's depth to eight metres, as well as the development of additional Ro-Ro ramps to a total of six and extra berths designed to support heavy lift operations.

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التكنولوجيا المتقدمة والاستدامة يسيران معا جنباً إلى جنب

يسيران جنباً إلى جنب، وبالتالي فإننا نتحرك نحو تضمين وتطبيق التقنيات الرقمية المتقدمة في كل خطوة من خطوات عملية الإنتاج لتقليل كثافة الكربون، بالإضافة إلى تكاليف الإنتاج».

فمنذ الاستكشاف الناجح لآبار النفط قبل 50 عاماً، لم تنظر قيادتنا إلى النفط على أنه مجرد مخزن للثروة، ولكنه محفز للتنمية، ودافع للابتكار، ونبغ جيداً للفرص. هذا هو السبب في أننا - في عامنا الخمسين - قادرون على تصور مستقبل اقتصادي لا يعتمد فقط على الهيدروكربونات، ولكن أيضاً على التقنيات الواسعة، والصناعات المستقبلية، بالإضافة إلى قطاعات جديدة متنوعة؛ مثل علوم الحياة والذكاء الاصطناعي واستكشاف الفضاء وحلول إنتاج الطاقة والغذاء الجديدة». وقد تم تكليف وزارة الصناعة والتكنولوجيا المتقدمة بدولة الإمارات العربية المتحدة، التي تأسست في يوليو/تموز 2020، بتعزيز القطاع الصناعي في دولة الإمارات العربية المتحدة، وتحديدًا من خلال تسريع تبني التقنيات المتقدمة، وحلول الثورة الصناعية الرابعة عبر سلسلة القيمة. ولدى وزارة الصناعة والتكنولوجيا المتقدمة ثلاثة أهداف شاملة تشمل تعزيز القاعدة الصناعية لدولة الإمارات العربية المتحدة، وضمان القيمة في الدولة، ورفع القدرة التنافسية للصناعات المحلية. فمن خلال تعزيز مساهمة التكنولوجيا المتقدمة، تهدف الوزارة إلى دعم النمو الاقتصادي المستدام للدولة، وضمان مساهمة قطاع الصناعة في الناتج المحلي الإجمالي.

ميز الإمارات العربية المتحدة بحق هو إدراكها الفوري لما يمثله احتياطي النفط لديها».

«ودعماً للانتقال إلى معرض الصناعة 4.0، أطلقت وزارة الصناعة والتكنولوجيا المتقدمة مؤخرًا مبادرة مؤشر الثورة الصناعية الرابعة، والتي تستفيد من معيار عالمي لدعم رواد الصناعات، بما في ذلك قطاع النفط والغاز. كما أعلنت الوزارة عن صندوق تكنولوجي بقيمة 5 مليارات دولار بالشراكة مع بنك الإمارات للتنمية لدعم هذا التحول، بالإضافة إلى حوافز مالية وغير مالية أخرى».

«تستغل دولة الإمارات العربية المتحدة مكناتها في الصناعات والتقنيات المتقدمة والطاقة منخفضة الكربون والحيادية للكربون لتعزيز النمو الاقتصادي المستدام في أعقاب الوباء. ونعتقد أن دمج حلول الثورة الصناعية الرابعة في القطاع الصناعي أمرٌ محوريٌّ في تعزيز الاقتصاد القائم على المعرفة والابتكار بما يتماشى مع رؤية الدولة للسنوات الخمسين القادمة».

وأشارت الوزيرة، سارة الأميري، إلى أن قطاع النفط والغاز سيستمر في لعب دور فعال في سوق الطاقة العالمي. وسيكون منتجو النفط الأكثر قدرة على المنافسة والاستدامة هم الذين يسيطرون على سوق الطاقة، ولهذا فإن التكنولوجيا المتقدمة أمرٌ حيوي.

وقالت: «في الإمارات العربية المتحدة، ندرك أن تغير المناخ سوف يستلزم إعادة التفكير في كيفية إنتاج كل برميل نفط. فنحن نؤمن بأن التكنولوجيا المتقدمة والاستدامة

تمكين أساسية، بما في ذلك الأفراد المهرة والعمليات الرشيدة تنظيمياً. هذا هو السبب في أننا أطلقنا «العملية 300 مليار دولار»، حيث سنركز على الصناعات القائمة بطريقة سلمية بالإضافة إلى دعم صناعات جديدة مثل الفضاء، والإنتاج المائي، والتكنولوجيا الغذائية، والتكنولوجيا الطبية، لجعلها توابك الثورة الصناعية الرابعة من الألف إلى الياء».

العملية 300 مليار دولار: تم تنفيذ الاستراتيجية الوطنية للصناعة والتكنولوجيا المتقدمة من جانب الوزارة بالتعاون مع الجهات الحكومية الاتحادية والمحلية والقطاع الخاص. حيث تعتبر صناعة البتروكيماويات من الصناعات ذات الأولوية ضمن الاستراتيجية. هذا فضلاً عن الطاقة النظيفة؛ مثل الهيدروجين، والتي تسعى الإمارات إلى أن تكون دولة رائدة عالمياً في إنتاجها وتصديرها. علاوة على ذلك، كانت مشاركة الوزارة في «أديك» تحت عنوان «اصنعها في الإمارات - Make it in the Emirates»، وهي إحدى المبادرات الاستراتيجية للوزارة ودعوة مفتوحة للمستثمرين والمبتكرين والمطورين ليكونوا جزءاً من «العملية 300 مليار دولار».

«العملية 300 مليار دولار هي دعوة مفتوحة للمستثمرين والمبتكرين الذين يشاركوننا رؤيتنا. إذ أن تطبيق مبادئ الثورة الصناعية الرابعة داخل شركة واحدة أمرٌ جيد، وتطبيقها بين المرافق أمرٌ رائع. أما تطبيقها في جميع أنحاء البلاد فهو أمرٌ عظيم. ويجب أن يكون هناك تركيز على مبادئ الثورة الصناعية الرابعة بين سلسلة القيمة وداخلها. فالمنصات القائمة على السحابة والحوسبة المتطورة وشبكات الجيل الخامس وسلسلة الكتل ومهارات مثل التفكير التصميمي، تساعد على سد هذه الفجوات».

«إن مهمتنا في الوزارة واضحة ومباشرة؛ ألا وهي تحويل القطاع الصناعي، في دولة الإمارات العربية المتحدة، إلى محرك للنمو المستدام. ولتحقيق ذلك، وضعتنا التبنّي المتسارع لتقنياتها الواسعة، وتطبيق الثورة الصناعية الرابعة في قلب العملية 300 مليار دولار».

بالإضافة إلى ذلك، تم إطلاق معرض الصناعة في دولة الإمارات العربية المتحدة 4.0 في سبتمبر/أيلول هذا العام لتعزيز هذا الطموح. حيث يمثل البرنامج رؤية جديدة لقطاعنا الصناعي، رؤية لا تعمل فقط على تمكين ودعم المصنّعين لدمج التقنيات الجديدة في العمليات الحالية، ولكن أيضاً تلهم صناعات جديدة وعمليات جديدة وطرقاً جديدة للإنشاء والإنتاج. وقالت الوزيرة: «نجتمع عشية اليوم البيئي الذهبي لدولة الإمارات العربية المتحدة، وبينما ننظر إلى الوراء إلى إنجازاتنا الرائعة على مدار الخمسين عاماً الماضية، من المستحيل المبالغة في أهمية قطاع النفط والغاز في دولة الإمارات العربية المتحدة. القوود الذي ساعد في تطوير دولتنا النابضة بالحياة والديناميكية والعالمية، وما

← مفكرة الفعاليات 2022

يناير/كانون الثاني

أبو ظبي

القمة الدولية لطاقة المستقبل

19_17



العلم والتكنولوجيا لهما دور متكامل في حاضرنا ومستقبلنا

الدفع نحو مستقبل مستدام معزز رقمياً

بقلم شيلبا تشاندران

اجتمع صانعو القرار الرئيسيون في صناعة الطاقة، في النسخة السابعة والثلاثين من معرض ومؤتمر أبو ظبي الدولي للبترول (أديبك) في أبو ظبي، وذلك لدفع تطوير أنظمة التصنيع الذكية التي يمكن أن تعزز الكفاءة وعملية إزالة الكربون.

التطورات في الذكاء الاصطناعي (AI)، والروبوتات، وإنترنت الأشياء (IoT)، والهندسة الوراثية، والحوسبة الكمية، وغيرها المزيد.

وأضافت الوزيرة قائلة: «ولتسخير الثورة الصناعية الرابعة بنجاح، نحتاج إلى التركيز على ثلاثة أشياء. أولاً، نحن بحاجة إلى المرونة في مجال الحوكمة، كما نحتاج إلى التكيف والاستجابة لمواجهة التغيير. لذلك نحن بحاجة إلى عقليات مستقبلية متعلمة وذكية في مجال التكنولوجيا؛ ليس فقط في مجتمع الأعمال ولكن أيضاً على جميع مستويات الحكومة والشركات. ثانياً، لا يوجد حل واحد يناسب الجميع. كل صناعة مختلفة ولها احتياجاتها الخاصة. لم يعد نموذج الإنتاج الضخم للثورة الصناعية الثانية قابلاً للتطبيق».

علاوة على ذلك، فإن تقنياتنا الموجودة لم تعد قابلة للتوصيل والتشغيل. ولا يمكن أن تبض بالحياة بدون البيئة والمواد الغذائية المناسبة، إنها بحاجة إلى عوامل

والإبداع والتقدم العلمي والنشر التكنولوجي في نسيج القطاع. فنحن بحاجة إلى الابتعاد عن استخدام التقنيات والأدوات المستهلكة، والتوجه بشكل أكبر نحو استخدام التقنيات كنقطة انطلاق وآلية لتحويل التحديات إلى فرص». «نحن نواصل الاستفادة من تقدمنا التكنولوجي للتصنيع، وخلق وظائف تتطلب مهارات عالية، وجذب استثمارات عالية التقنية كأمة تسعى نحو التميز. وفي طليعة تركيزنا، سنقود حلولاً جديدة نحو الاستدامة، ونضع أولويات مثل التنوع الاقتصادي والمياه والأمن والرعاية الصحية».

وشددت الوزيرة سارة على الحاجة إلى تقارب التقنيات المختلفة، ودمجها في القطاعات الأساسية بدلاً من الاعتماد على تقنية واحدة لإطلاق الإمكانيات الكاملة للصناعات، وزيادة الإنتاج وتحسين الجودة ودعم الانتعاش الاقتصادي العالمي القائم على الابتكار والاستدامة. كما سلط الضوء هنا على تكامل الثورة الصناعية الرابعة (4IR)، ودمج

أقيم مؤتمر التصنيع الذكي، الذي استضافته وزارة الصناعة والتكنولوجيا المتقدمة، على هامش معرض ومؤتمر أبو ظبي الدولي للبترول (أديبك)، والذي سلط الضوء على المزايا التنافسية للقطاع الصناعي في دولة الإمارات العربية المتحدة، وأتاح للوفود الدولية التعرف على فرص الاستثمار الواعدة في الدولة.

وقد أوضحت وزيرة الدولة للتكنولوجيا المتقدمة، سارة بنت يوسف الأميري، في المؤتمر، الحلول التي تقدمها «وزارة الصناعة والتكنولوجيا المتقدمة» للتكنولوجيا لمعالجة القضايا البارزة التي تواجه الحكومات اليوم. هذا فضلاً عن خطط الوزارة لدعم الصناعة.

وقالت: «منذ العام الماضي، أدركنا - بشكل أفضل - الدور المتكامل للعلم والتكنولوجيا والإمكانيات التي يتيحها لكل من حاضرنا ومستقبلنا. إذ تؤكد الدروس المستفادة من الأشهر الثمانية عشر الماضية أننا بحاجة إلى نسج الابتكار

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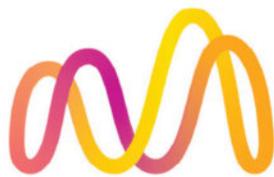
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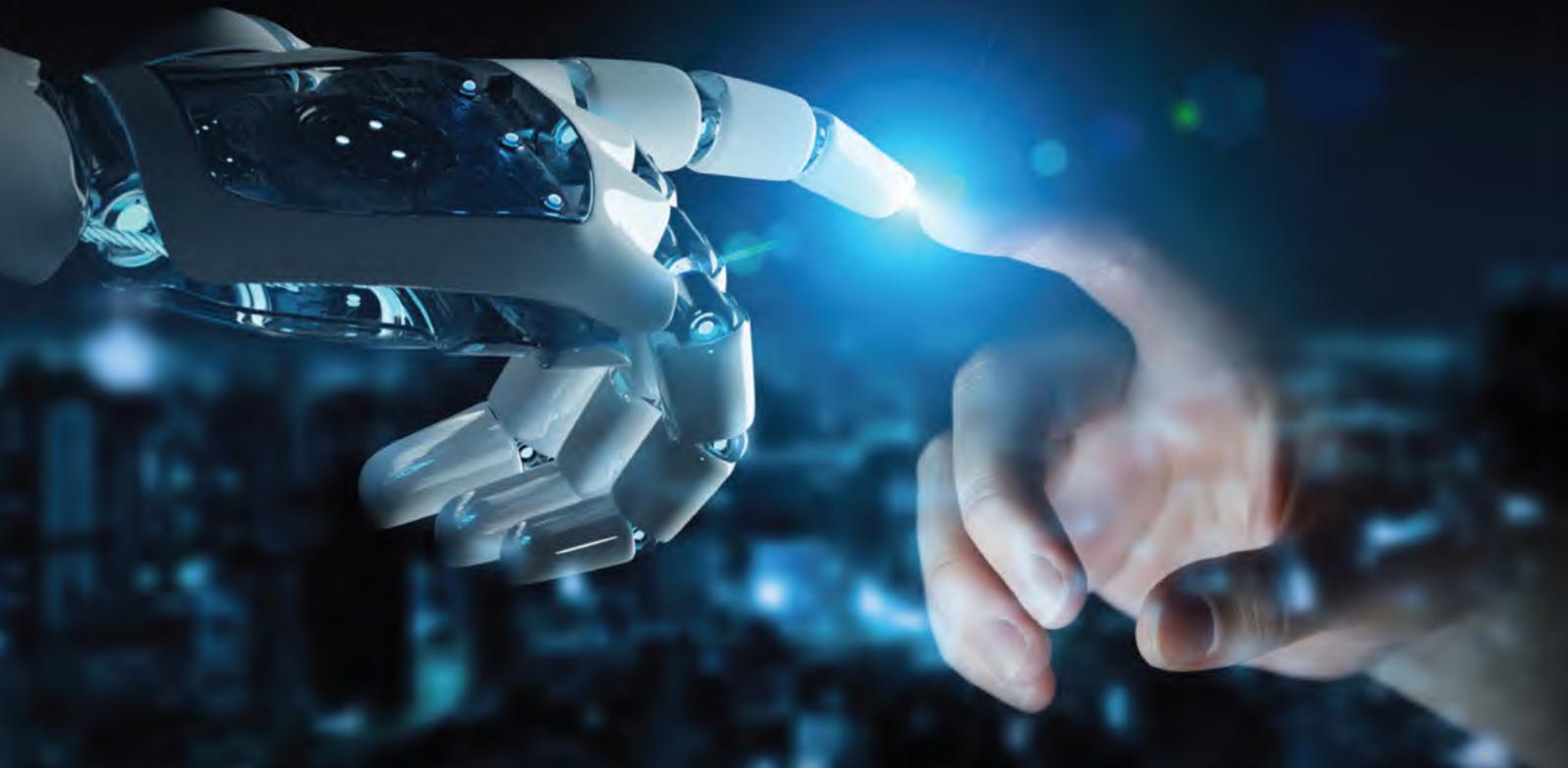
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