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# ION ACCELERA IN IOT AND SMART CITIES

Top industry executives give their takes on use cases and trends in IoT and smart cities.



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### POWERFUL, COMPLEX, PRODUCTIVE, SUSTAINABLE

In this month's lead feature, we consider the dynamics of smart cities and the underlying layer of Internet of Things or IoT enablement. Ask any veteran industrial engineer and they will say the world of sensors has existed for many decades, way before the term IoT was coined, in their ecosystem of operations.

But when you digitize those industrial sensors and get the incoming digital data to interoperate with other digital systems and applications, through wireless and wired networks, then you get an entirely different set of use cases, powerful, complex, productive, and most important driving ESG.

Points out IDC's Krishna Chinta, IoT has the potential to reduce carbon emissions by over 60 gigatons by the year 2030, that is if all the industries choose to participate. And the last part, is one of the primary inhibitors that is stalling the roll out of smart cities and IoT and also the benefits into zero emissions.

Points out Chinta, IoT represents one of the most complex value chain systems given the multitude of technologies and technology players that are involved in delivering the solutions. IoT is a highly fragmented market and is tightly knitted with involvement of hardware, software, services, connectivity players.

While getting the various solutions partners to talk to each other, is one side of the challenge, the other side is making the wholesome work productively. In case of largescale IoT implementations, it is necessary to bring in a master systems integrator to orchestrate multiple vendors. Data privacy and security is also a key challenge holding back IoT roll outs.

Improving sustainability of cities is an urgent priority, adds Advait Thakur from Orange Business Services. Intelligent cities offer our best hope in meeting the challenge of climate change. According to EY research, digital twins could reduce a building's carbon emissions by 50%.

Also in this edition, we present the second set of consolidated content on the business transformation outlook for 2023.

In this section, Stephen Gill at Heriot–Watt University Dubai says, as an offshoot of the hybrid way of working, there will be an acceleration in the development of virtual workspaces. Developments in virtual technology are expected to transform digital employee experience starting from this year onwards.

However, all may not be well inside organisational life. A survey by Gartner showed that employees are growing resistant to change. With digital transformation, economic uncertainty and rapid changes across multiple fronts, employees have experienced change fatigue. Organisational design and change management will remain a top priority in 2023.

For much more on the 2023 business outlook, we welcome you to turn the pages ahead.

Good luck in your readings and may they add productive moments to your business.

Arun Shankar arun@gecmediagroup.com



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## DATA DRIVING GAP BETWEEN LEADERS AND LAGGARDS

Data maturity is a priority strategic item as companies pursue maturity scores to grow their business models, customer expectations, commercial ambitions.

he private sector in the Middle East has set bold ambitions to achieve top-tier data maturity levels by 2023. Reaching these ambitions requires the vast majority of companies in the region to advance significantly, and those that develop a substantial maturity build-up across all capabilities give themselves a huge advantage. Furthermore, Middle East companies' ambitions would place them as most mature region, indicating the highest data capability increase globally.

Given the accelerating pace of technological development and

the ubiquity of data, that advantage can become selfreinforcing over time, as companies become smarter in their use of data and more efficient in how they tailor future investments. Conversely, laggards may find that the gap in performance becomes too large to overcome.

In BCG's recent, third, Data Capability Maturity Assessment survey, the Middle East ranks close to leading regions for most industries yet drops far behind in the least mature ones. Approximately 1,100 companies participated



worldwide, with around 50 companies from the Middle East.

When it comes to building data capabilities, most companies worldwide are making steady headway. Yet our comprehensive survey shows that while some are gaining a clear advantage from data, many still fall short of their goals, leading to a growing advantage for leaders.

Generally, companies in the Middle East keep pace with more data-mature industries, technology, telecom, healthcare, and consumer, but are behind in less data-mature industries. For example, the energy industry's maturity is almost 30% lower than other regions. Automotive and industrial companies are in weaker positions still. Thus far, many manufacturers do not have the capabilities to capitalise on the emerging data opportunities and companies are becoming more realistic about the difficulty of developing data capabilities.

Given the accelerating pace of new technologies and data, and the rapid global focus on data maturity, companies must ensure a correct





**Rami Mourtada**, Partner and Director at Boston Consulting Group; and **Elias Baltassis**, Partner and Director and BCG GAMMA Lead for the Middle East.



- The survey shows that while some are gaining a clear advantage from data, many still fall short of their goals, leading to a growing advantage for leaders.
- The advantage can become selfreinforcing over time, as companies become smarter in their use of data.
- Conversely, laggards may find that the gap in performance becomes too large to overcome.

approach to data capabilities—one that becomes sustainable over time. It requires companies to become smarter in their use of data and more efficient in focused future investments.

The gains in maturity were relatively broad, companies showed higher maturity index scores across all seven data capabilities. The biggest gains were in foundational capabilities: data governance, data platform, ecosystem and partnerships, and leadership, change, and enablement.

Global experience from most mature companies across regions shows three factors are critical to success:

#### FOCUS ON BUSINESS OUTCOMES

Data capabilities are a means to an end, not a goal. Identify business problems and use-cases to unlock value.

#### APPLY A CAPABILITY-BASED APPROACH

Invest in all the core data capabilities: overarching vision, use cases, analytics setup, data governance, data platform, ecosystem and partnerships and leadership, change and enablement.

#### **BUILD INCREMENTALLY**

Build data capabilities over time in

When it comes to building data capabilities, most companies worldwide are making steady headway

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a deliberate, steady manner. Adopt an agile mindset of test, learn, and improve, and focus on key enablers with the biggest maturity gaps

Data is now akin to oxygen in most industries, and companies know they need to build core capabilities to capitalise on it. Data maturity is a top-priority strategic agenda item as companies worldwide continue to pursue increased maturity scores to grow and meet their business models, customer expectations and commercial ambitions in increasingly competitive environments.

As indicated by our recent survey, data maturity is particularly important in the Middle East where companies can be data competitive in some areas but data lacking in others, and there is a material gap compared to both bold ambitions and global bestpractices.

Success in reaching high ambition in the region requires a comprehensive, bold but balanced approach, to establish data maturity trailblazers and then drive up more companies into better data capabilities.

# HOW AIR TRAVEL CAN LEVERAGE DATA IN MOTION

It is a challenge for the travel sector to transition from traditional methods, where data is stored statically, to data in motion.

t is no secret that the worldwide travel sector had its wings severely clipped by the Covid-19 pandemic. Fortunately, the industry is showing impressive signs of recovery, with flight bookings rocketing and the World Travel and Tourism Council predicting a confident return for the sector.

But as the travel industry takes off once more, there are plenty of challenges ahead for the sector. In the past weeks, some global airports and airlines have struggled to keep pace with the rise in bookings, plagued with major problems such as queues, cancellations, and delays.

Some airport operators and airlines have used the time during the sector's downturn wisely, updating legacy back-office systems and using data and smart technology to get ahead of the pack. Those still using legacy systems can find themselves unable to respond quickly to changing demand and rising customer numbers.

The travel industry holds enormous amounts of data, which can be used to optimise the travel experience and support growth in the sector. But data is often siloed across different areas and systems in the business, rendering it almost useless when it comes to using insights from the data to rapidly make decisions.

Collecting the data is not the problem – harnessing it and bringing it to life requires integrated systems and technology. Only then



**FRED CREHAN** Regional Director Middle East, Confluent.



- Called the Hub Monitor, this system enables
   Emirates to use data insights in real time to focus on the tasks needed to prepare an airplane for departure.
- The proactive alert system is speeding up turnaround times and boosting the customer experience.
- Integrated data and Al-driven analytics tools have enabled Etihad to enhance several areas of the business.
- Insightful forecasting and modelling has made it possible for Etihad to optimise ground staffing levels and better handle passengers.

can businesses use data to react nimbly and responsively in real time.

Like many other industries, it is a challenge for the travel sector to transition from traditional methods, where data is stored statically, to data in motion – where it is integrated, accurate and always up to date. It can then be used in real time to enable brands to respond quickly, flexibly, and smartly.

Major airport hubs such as Dubai, Los Angeles and Heathrow are not simply there to facilitate air travel. The airport is all part of the experience, hosting dining, hospitality and retail venues to service huge numbers of travellers. Operators and the brands within the space all need to glean insights from data to improve the customer experience and assist with growth.

The travel business is immediate. People book and buy things quickly. If data analytics do not work just as - or more - quickly, businesses will lose out. Right across the chain, from online sales to supply chains, and from retail to aircrafts, data needs to be unlocked and insights gained. And not only that, it needs to be done quickly. No business has the luxury of time when it comes to delivering data-driven upgrades. Without it, businesses will find themselves quickly falling behind.

No one who has travelled over the past few weeks could be unaware of the travel chaos besieging the industry, with some of the biggest headaches being delayed flights. Slow turnaround times contribute to all kinds of knock-on problems, from delayed flights to missed landing slots and unhappy customers.

Called the Hub Monitor, this clever system enables Emirates'

Etihad Airways is utilising data science tools to support operational improvements

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team in Dubai to use data insights in real time to focus on the tasks needed to prepare an airplane for departure. The proactive alert system is speeding up turnaround times and boosting the customer experience.

Etihad Airways is also utilising data science tools to support operational improvements. Integrated data and AI-driven analytics tools have enabled Etihad to enhance several areas of the business. Insightful forecasting and modelling has made it possible for Etihad to optimise ground staffing levels and better handle passengers.

They are also able to respond more efficiently and more quickly to customer emails. This digital transformation has improved the customer experience as well as bringing about business benefits such as better productivity and cost savings.

The travel industry has finally got its wings once more, though this is not without its challenges. All airlines and airport operators should follow the lead of airlines such as Emirates and Etihad to help speed the recovery of the sector, improve the customer experience and optimise business growth.

# LUXURY COUPÉ THAT TURNS INTO A PICKUP

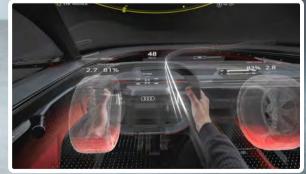
The latest model in Audi's futuristic concepts is the Audi activesphere. This is a four-door crossover coupé with a versatile body design. At 4.98 metres long, the elegant car is more than a mere luxury-class sports car, it has impressive ground clearance, and large 22-inch wheels announcing its off-road capabilities. The rear can turn into an open cargo bed at the touch of a button, perfect for carrying recreational equipment. For those wanting a more relaxed journey, it offers autonomous driving. And in just a few seconds, the car transforms into a pickup, with enough space for two e-bikes in the cargo bed. With an electric drive and quick-charging technology from Audi's Premium Platform Electric modular system, the Audi activesphere, has a range of over 600 km, and extremely fast charging times thanks to 800-volt technology, combining the sustainability, dynamics and long-distance capability of a state-of-the-art electric vehicle with no local emissions.















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Star's apparent path behind Chariklo's rings

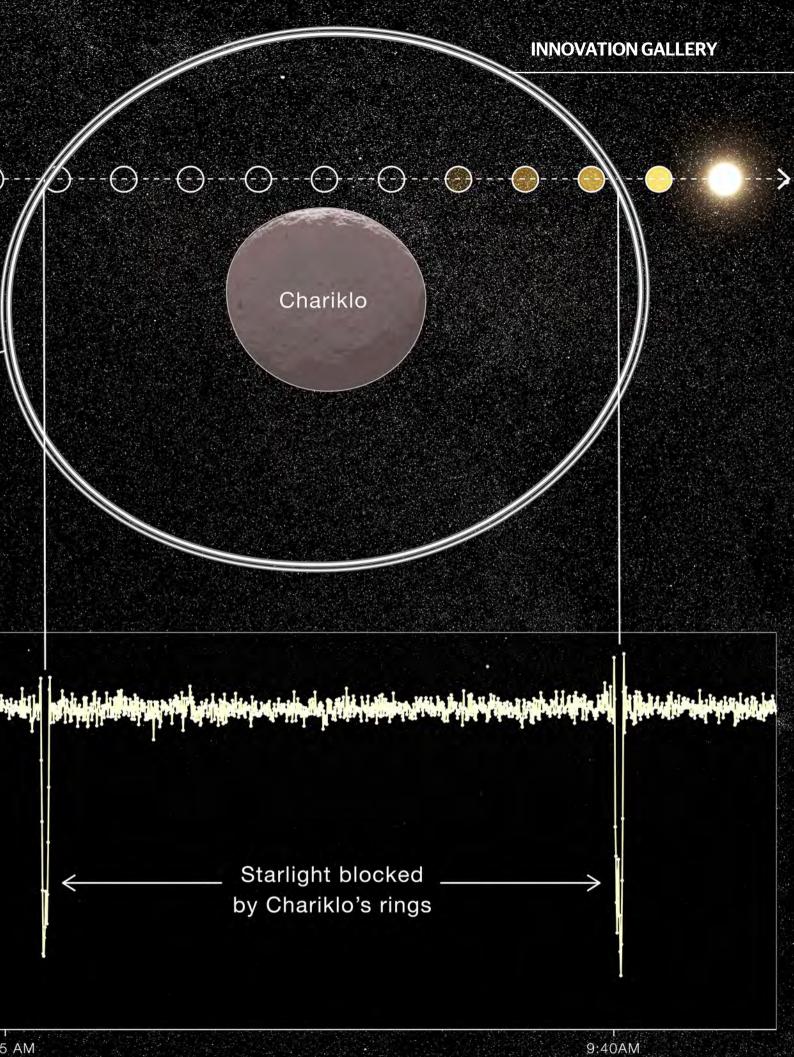
## OUTER PLANET CHARIKLO AND ITS DOUBLE RING SYSTEM

Chariklo's rings

In an observational feat of high precision, scientists used a new technique with NASA's James Webb Space Telescope to capture the shadows of starlight cast by the thin rings of Chariklo. Chariklo is an icy, small body, the largest of the known Centaur population, located more than 2 billion miles away beyond the orbit of Saturn. Chariklo is only 250 kilometres and its rings orbit at a distance of about 400 kilometres from the centre of the body. This was the first stellar occultation attempted with James Webb Space Telescope. A lot of hard work went into identifying and refining the predictions for this unusual event.

In October, the Webb's Near-Infrared Camera instrument closely monitored the star Gaia DR3 6873519665992128512, for the tell-tale dips in brightness indicating an occultation had taken place. The shadows produced by Chariklo's rings were detected, demonstrating a new way of using Webb to explore solar system objects.





Time in Baltimore, Maryland October 18, 2022

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(Left to right) Leila Hoteit, Managing Director and Senior Partner, BCG; Tibor Mérey, Managing Director and Partner, BCG Vienna and Joelle Awwad, Head of Public Policy Programs at Meta in the Middle East North Africa and Turkey.

## **BCG**, Meta identify ten use cases than can drive Metaverse adoption in UAE

According to a new report by Boston Consulting Group, BCG in collaboration with Meta, there is ample ground in the UAE to leverage ten use cases such as telehealth; digital twins; augmented tourism; live augmented events; virtual and augmented shopping, and virtual assets; and more. Recognizing the key role that the UAE's advanced market could play in expanding its metaverse participation, the report looks at relevant use cases and considerations to unlock their potential.

The UAE is rapidly fostering its metaverse ecosystem. Launched in the second half of 2022, Dubai Metaverse Strategy aims to turn Dubai into one the world's top 10 metaverse economies as it strives to act as a global hub for the metaverse community.

Earlier this year, the city hosted the Dubai Metaverse Assembly which brought together more than 300 global experts, policymakers, thought leaders, and decision-makers to identify the best ways to leverage opportunities in the metaverse spanning government, and industries. Overall, the strategy aims to promote Dubai's ambitions to multiply its blockchain presence and support more than 40,000 virtual jobs by 2030.

The applications of early metaverse platforms are already moving beyond the gaming experience, expanding rapidly into other high-impact sectors like healthcare training, education, and tourism. In the long term, several types of enablers must be in place for the metaverse to develop and function further, each one building on the previous and generating momentum that advances the entire system.

### Start-ups in Masdar City Free Zone can receive \$100,000 AWS Activate, Support credits

Masdar City, Abu Dhabi's pioneering sustainable community and innovation hub, is collaborating with Amazon Web Services to empower start-ups to build scalable and secure cloud-based services that accelerate their growth. Announced at Abu Dhabi Sustainability Week 2023, the collaboration offers start-ups access to AWS Activate, a program that provides tools and resources to help start-ups innovate and scale faster.

Masdar City Free Zone start-ups may receive up to \$100,000 worth of AWS Activate credits, in addition to AWS Support credits. They will also have access to technical support



(Left to right) Amier Al Awadhi, Acting Director of Masdar City Free Zone and Wojciech Bajda, Director Public Sector Middle East and Africa, AWS.

and architectural guidance from AWS Cloud support engineers, as well as technical and business trainings delivered by AWS experts.

Through AWS, start-ups will gain an opportunity to experiment frequently and optimize business performance, while reducing technology costs.



# NASA awards Boeing contract for Truss-Braced wing demonstrator airplane

NASA has selected Boeing and its industry team to lead the development and flight testing of a full-scale Transonic Truss-Braced Wing demonstrator airplane. The technologies demonstrated and tested as part of the Sustainable Flight Demonstrator program will inform future designs and could lead to breakthrough aerodynamics and fuel efficiency gains.

When combined with expected advancements in propulsion systems, materials, and systems architecture, a singleaisle airplane with a TTBW configuration could reduce fuel consumption and emissions up to 30% relative to today's most efficient single-aisle airplanes, depending on the mission. The SFD program aims to advance the civil aviation industry's commitment to reaching net zero carbon emissions by 2050, as well as the goals set forth in the White House's US Aviation Climate Action Plan.

Ultrathin wings braced by struts, with larger spans and higheraspect ratios, could eventually accommodate advanced propulsion systems that are limited by a lack of underwing space in today's lowwing airplane configurations. For the demonstrator vehicle, Boeing will use elements from existing vehicles and integrate them with all-new components.

NASA's funding through the SFD Space Act Agreement totals \$425 million. The SFD program will also leverage up to \$725 million in funding by Boeing and its industry partners to shape the demonstrator program and meet the resource needs required. Separately, Boeing's previous internal investments for recent phases of sustainable aviation research total \$110 million.



# Majid AI Futtaim Entertainment launches seven fully-interactive game boxes in Magic Planet

Majid Al Futtaim Entertainment is excited to announce the launch of seven fully-interactive 'Game boxes' in Magic Planet - City Centre Mirdif, Dubai and Magic Planet City – Centre Al Zahia, Sharjah. In partnership with leading gaming company Immersive Gamebox, the region's first hyper-immersive gaming experience will give guests access

to a completely new genre of group entertainment starting from 20 January.

Touted as the World's Smartest Rooms, 'Gameboxes' are interactive digital smart rooms featuring cutting-edge technologies, including patented touch screens, 3D motion tracking, and surround sound to deliver a shared gaming experience like no other. Each 'Gamebox' can cater to groups of two to six players, making them the perfect new entertainment destination for dates, mates, and the whole family.

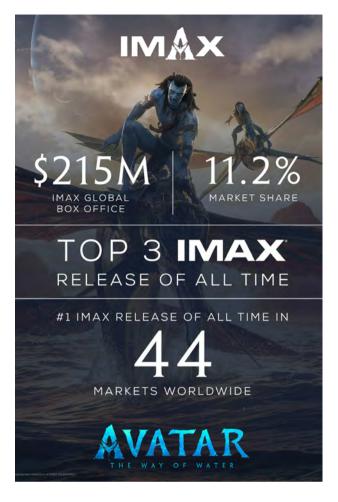
Players can choose from 12 different experiences in IGB's growing library of licensed and original IP games created by its in-house studio. All titles will be available at Magic Planet including Alien Aptitude Test, Ticket to Mars, Psychedelic Mansion, James Bunny: Casino Tropicale, and Squid Game lasting 60 minutes each, as well as Temple of Coins, Angry Birds, Block Smash Mania, Trivia Mash-up, lasting 15-30 minutes each, and kids' games including Temple of Coins Junior, Tip Tap Memory Challenge and Shaun the Sheep: Championsheeps, lasting 15-30 minutes each. IGB will also be providing localised versions of these games in Arabic.

### Avatar: The Way of Water, amongst top three IMAX releases of all time grossing \$215M

IMAX Corporation announced that Disney – Lightstorm's Avatar: The Way of Water is now third highest grossing IMAX release of all time with more than \$215 million in IMAX global box office through Monday in its first full month of release.

With several weeks to go in its IMAX engagement, James Cameron's ground breaking global cinema event stands as the highest grossing IMAX release of all time in 44 countries and territories worldwide — claiming the top spot in more individual markets than any release in IMAX history. IMAX has accounted for 11.2% of the film's global box office on only a fraction of total screens.

Avatar: The Way of Water has earned \$139.3 million in international markets through Monday. The film is the highest grossing IMAX release of all time in 44 markets worldwide including South Korea, France, Germany, Mexico, Italy, India, UAE, Switzerland, Finland, Denmark, Norway, Ukraine, Austria, Belgium, Turkey, Argentina, Malaysia, Indonesia, Chile, Singapore, Thailand, and Colombia.



### **XTEND** awarded \$20M contract to develop and supply multi-drone operating system **XOS**

XTEND, the developer of XOS, a humanguided autonomous operating system that is revolutionizing 'human to machine' interaction, has been awarded a \$20M contract by Israel Ministry of Defence, for the development and supply of a first-of-its-kind multi-drone operating system.

The new joint project with MAFAT and the Israeli Ministry of Directorate of Défense Research and Development, will see XOS enable the remote, safe, and intuitive operation of dozens of human-guided semiautonomous drones simultaneously, utilizing the latest virtual reality, edge processing and AI technology. XOS will allow XTEND's drones to be deployed remotely by military units in various scenarios precisely, intuitively, and immersively.

The unique and ground breaking joint initiative, which embodies the shared vision of enabling drones to become more than just



Aviv Shapira, Co-Founder and CEO of XTEND.

another "eye in the sky", enable operators to control, interact, and run 3rd party applications on the drones remotely, keeping forces out of danger, while fusing an operator's expertise with machine autonomy, VR and AI. The deal is based on performance and deliverable milestones.

XTEND's new contract with Israel's Ministry of Defence is the latest in over 20 major contracts secured by the company in the last three years, including a multi-million-dollar contract with the U.S. Department of Defence, which will see XTEND's technology enabling US military drone operators to interactively operate multiple smart machines from a remote, safe distance, with minimal training.

#### DISRUPTIVE

### Tawazun Council, Aerospace Xelerated announce fourth cohort to solve aerospace challenges

Aerospace Xelerated announced the 11 startups working on Digital Services and Solutions that will join their fourth cohort to solve key challenges for the aerospace sector. Following three successful programmes led by Boeing and supported by industry partners, this year's programme will be run in partnership with Tawazun Council, the defence and security acquisitions authority of the United Arab Emirates.

From 158 applications from around the world, the companies joining the programme come from the following countries: Australia, Canada, Japan, Netherlands, UAE, UK and USA.

Startups accepted into the programme will have the option to benefit from a £100K investment from Boeing, with potential for additional funding from partners. Through Aerospace Xelerated, startups will be introduced to a network of angel investors, venture capitalists and key stakeholders amongst the aerospace industry, throughout the 12-week programme. Successful companies will also get more than £100K in programme perks from partners including start up providers Oracle, Amazon, HubSpot, Digital Ocean and many more.





Abdulla Saif Al Awani, Chief Economic Program Officer at Tawazun Council and Nichola Bates, Managing Partner at Aerospace Xelerated and Head of Global Accelerators and Innovation Programs, at Boeing.

Alongside Boeing and Tawazun Council, programme partners include the Defence and Security Accelerator, DASA, GKN Aerospace and Etihad Airways. The partners will provide the cohort with industry insights and expertise. The selected companies will have access to strategists and technical experts for support in developing proof of concept opportunities and receive mentoring from a global network of experienced entrepreneurs, mentors and investors.

The 11 startups working on Digital Services and Solutions joining cohort four cover the programme's key focuses: Flight and Passenger Journey Optimization; Supply Chain Intelligence; Next Generation Workforce; and Operational Efficiency.

The programme will run for 12 weeks, culminating in a Demo Day in April 2023.

### Hub7l facilitates partnership between start-up Ostaz and Abu Dhabi's Aldar Education

Ostaz, the online private tutoring platform in the Middle East and North Africa region, has partnered with Aldar Education, the leading education group in Abu Dhabi, to bring tutoring services and after-school support to almost 35,000 students in the UAE capital. The partnership between Ostaz and Aldar Education was initiated by Hub71, Abu Dhabi's global tech ecosystem, as part of its efforts to support start-up founders with business development opportunities through its network of leading corporate and government partners in Abu Dhabi.

Ostaz offers premium tutoring services across a comprehensive range of academic subjects, languages, and preparatory tests, delivered by highly qualified tutors who have been prescreened, background-checked, and trained to provide consistent results that cater to students' diverse learning needs and styles. As part of



(Left to right) Audrey Nakad, Chief Executive Officer at Ostaz; and Andrew Turner, Group Head of Education Technology at Aldar Education.

the partnership agreement, students from Aldar Education's 28 operated and managed schools will be able to access tailored, private tutoring services dedicated to addressing specific academic needs and learning objectives.

With the option of both in-person and virtual tutoring sessions, students can access tutoring sessions in any of Aldar Education's physical locations across the UAE. Additionally, Ostaz will host customised preparatory tests, upskilling and language classes and provide college application support to students.



### Astra Tech's PayBy receives Stored Value Facility approval from UAE Central Bank

PayBy, a leading fintech innovator recently acquired by Astra Tech in August 2022, has been licensed by the Central Bank of the UAE to conduct Stored Value Facility and Retail Payment Services operations. The license represents one of the country's highest levels of financial services approvals, enabling Astra Tech's PayBy to continue altering the fintech landscape with its

AstraTech's PayBy disrupts fintech solutions as the first to

receive SVF and RPS licences

from the UAE Central Bank

payment solutions. Customers and merchants will experience ultra-fast and secure services, such as international money transfers, seamless payment solutions, wallet top-ups, and more on Astra Tech's upcoming app to be launched in the coming months.

Astra Tech is acquiring and equipping sector-leading customer-centric businesses with disruptive and progressive technologies that will enrich merchants' and users' lives with effortless usability and efficiency, a gap that currently remains unfulfilled in the UAE digital commerce space today.

Astra Tech is one of the biggest additions to the MEA's evergrowing tech ecosystem aiming to raise 500 million USD, AED 1.8 Billion from various strategic investors and partners, bringing the company one step closer to its vision of launching an app. PayBy is one of the largest fintech companies in the region, with over AED 600 million in transactions as of May 2022, and aims to build an all-in-one mobile payment ecosystem in the UAE and GCC, offering a safe and contactless payment solution. Astra Tech's acquisition of PayBy follows the company's recent acquisition of Rizek, a platform for on-demand personal and home services.

### UAE's Orient Finance to offer Bitcoin, Ethereum, Lite Coin, Ripple, Stellar as OTC, CFD

Orient Finance, a trusted 'Global Investment Partner' institution in the UAE, has extended their crypto services by providing investors with access to a wide variety of crypto assets that are traded through Orient Finance as CFDs. These crypto assets include Bitcoin, Ethereum, Lite Coin, Ripple, Stellar, Cardano and much more. This development is in line with the company's mission to improve cryptocurrency trading amid the expanding market and rise in investors. According to industry reports, the global cryptocurrency market is forecast to grow to \$1,902.5 million by 2028.

As more businesses in the Middle East shift to digital assets for a variety of operational, transactional, and investment needs, Orient Finance aims to support this transition to enable individuals and companies to trade the high volatility of crypto prices without owning the underlying coins, thereby avoiding the hassle of



Seraj Asad Khan, Managing Director of Orient Finance.

securing them on a digital wallet. In line with this objective, the platform also allows investors to trade cryptocurrencies as CFDs, Contract for difference or OTC, Over-the-Counter derivatives.

The cryptocurrency markets, which have been labelled the 'future of currencies,' are rapidly growing and offering investors a multitude of opportunities. Notable crypto exchanges have arrived in UAE, as a result of the country's reforms to its tax laws, free zones, and legal framework governing various asset classes. In accordance with the dynamic vision of the country, Orient Finance is positioned to utilise all available trading tools and strategies to effectively serve its extensive customer base.

#### DISRUPTIVE

### Tech startups graduate from GrowthX programme managed by Microsoft for Startups

Microsoft for Startups Middle East, in partnership with the Abu Dhabi Investment Office, graduated the latest cohort of tech startups from its GrowthX Accelerator program. The conclusion of the cohort was celebrated during a Demo Day event, hosted at Abu Dhabi's financial centre, Abu Dhabi Global Market, with attendees including start-up founders, government officials, investors, business leaders and stakeholders from the regional entrepreneurship ecosystem.

Run as part of a strategic partnership between ADIO and Microsoft for Startups, GrowthX is specifically designed



to empower growth-stage B2B startups ranging primarily from Seed to Series A stages to grow and scale in Abu Dhabi. The program features weekly sessions from Microsoft experts, as well as regional and global leaders in business and technology.

The 12 startups in this cohort hail from across the Middle East, Turkey and Pakistan, and are developing solutions in E-commerce, EdTech, Fintech, HRtech, and Insurtech. The companies in this cohort are Fortyguard, Ilmversity, Klickit, MonSpark, Pisano, Poilabs, Raabtaa, Supercommerce, Vita Virtues, Xina AI, Edraak Systems, and Pay Caps.

Investment in tech startups across the UAE and the Middle East continues to grow exponentially as demand for new, creative, and innovative products and solutions continues to rise. Over the past year, venture capital funding in MENA reached \$2.6 billion, 138% more than in 2020, according to MAGNiTT. Startups in the UAE accounted for 26% of all deals closed across MENA and 45% of all funding raised across the region in 2021.



### Binance first crypto exchange to join Association of Certified Sanctions Specialists

Binance, the global blockchain ecosystem behind the world's largest digital asset exchange, announced that it has joined the Association of Certified Sanctions Specialists, the world's only organization bringing together sanctions compliance professionals. ACSS, established in 2018, provides high-quality education and benefits to its members. Binance is the first crypto exchange to formally join the association.

Binance will be leveraging the training materials, comprehensive databases, and deep networks within ACSS to further enhance the skills and expertise of its team. All compliance professionals on the sanctions team as well as money laundering reporting, compliance operations, and special investigations leads within Binance will be required to undergo training with ACSS as part of the certification process.

The mandated training sessions will be key to equipping Binance's sanctions team with the latest OFAC guidelines on developing sanctions compliance programs. ACSS will also help to ensure the team keeps up with sanctions edicts and understands the risks of violations across multiple jurisdictions.

Over the past two years, regulatory compliance has been a core focus at Binance. In 2022, Binance's compliance team grew from 500 to 750 people. This is part of the organization's ongoing efforts to strengthen its compliance capabilities. To this end, Binance has secured regulatory licenses, registrations, and approvals in a total of 14 jurisdictions to date including in France, Spain, Bahrain, Dubai, and Australia.



### **Everdome announces next Metaverse destination** to be Jezero Spaceport crater on Mars

Following on from their first metaverse rocket launch in November, Everdome's futuristic metaverse project announces a new stage of their hyper-realistic adventure. Everdome's Jezero Spaceport is the next step in the creation of an immersive space travel adventure which includes an exclusive Martian civilization experience.

Dedicated members of the Everdome community and partners including OKX, Pierre Gasly and Alfa Romeo F1 Team ORLEN will venture off to the frontiers of digital exploration.

While Everdome Jezero Spaceport is a metaverse original location, the Jezero crater itself is an authentic part of the Martian landscape. What's more, it's been chosen by NASA and other space agencies for current space exploration missions.

Originally, the site was built on an ice mine that was later moved a few kilometres south to the crater's lowest elevation point. This allows for easier access to the biggest water ice deposits and so the site was chosen specifically on the basis that water ice is one of the most important resources both for inhabitants and for travel in the form of liquid hydrogen, liquid oxygen rockets

Representing the hub for all cargo and passengers transiting to and from Everdome City, the near-future city being created at the delta deposits of the Neretva Valley, Jezero Crater, Mars, the Jezero spaceport is the terminus destination for Everdome's metaverse space experience travellers.

These pioneers, or Evernauts as Everdome terms them, will land at the spaceport after an epic VR journey all the way from their Hatta spaceport on Earth on the interplanetary Everdome Cycler, via the reusable EVR Phoenix rockets which were demonstrated during their maiden metaverse rocket launches in October 2022.

### Astra Tech acquires VoIP solution BOTIM and relaunches as ultra app supported by G42

Astra Tech, a UAE-based technology development group, has successfully acquired BOTIM, the MENA region's leading Voice over Internet Protocol solution, to relaunch into an Ultra app. The support of \$500 million in fundraising, led by G42, is accelerating the relaunch of BOTIM into an ultra-app serving the region's everyday needs.

This milestone addition to Astra's portfolio is the most recent in a string of strategic acquisitions in 2022, including Rizek, home cleaning services, and Payby, a homegrown fintech company, which will seamlessly integrate into BOTIM to offer a range of services through a single integration.

Astra will continue its pursuit of strategic acquisitions for BOTIM while synergistically



Abdallah Abu Sheikh, Founder, Astra Tech.

working with its architecture, research, development, and tech teams to fast-track design and development to go to market. The acquisition of BOTIM is a landmark transaction for the MEA's tech scene, as the app is the region's largest and most popular MENA-built communications platform.

BOTIM boasts 90 million registered users and 25 million active users. The acquisition gives Astra Tech a massive advantage as it plans to expand beyond super apps and build the region's first Ultra app with BOTIM. Additional plans for BOTIM, are expected to be announced in Q1 of 2023.



(Left to right) Ammar Al Malik, Executive Vice President of Commercial at TECOM Group with Prof Dr Khaireddine Al Mouakhar, President of EM Normandie Business School Dubai.

### **Normandie French Business School inaugurates** regional campus at Dubai Knowledge Park

Reinforcing Dubai's growing renown for educational excellence in the region and in line with the recently launched Dubai Economic Agenda 'D33', the EM Normandie French Business School inaugurates its first regional campus at Dubai Knowledge Park, a member of **TECOM Group PJSC. A significant** 

addition to Dubai's higher education community, the university marks strengthening ties between France and UAE on the heels of a state visit between **UAE President His Highness** Sheikh Mohamed Bin Zayed Al Nahyan and President Emmanuel Macron in July 2022.

EM Normandie is the first

specialised Business School in the UAE offering a bachelor's program with Triple Crown accreditation from the Association to Advance Collegiate Schools of Business, AACSB, the Environmental Quality Information System, EQIS, and the Association of MBAs, AMBA.

The event was attended by Major General Dr. Ahmed Naser Al Raisi, President of Interpol; Walid Al Mannai, Director of the General Department for Local Development and Innovation of the Deputy Chief of Police and Public Security in Dubai; Dr. Jamal bin Huwaireb, cultural advisor to the Government of Dubai and the CEO of Mohammed Bin Rashid Al Maktoum Foundation, MBRF; Jean Louis Gregoire, Chairman of EM Normandie; Ammar Al Malik, Executive Vice President of Commercial at TECOM Group, among other dignitaries including government officials and VIPs.



### Masdar City, Mohamed bin Zayed University of Artificial Intelligence, The Catalyst sign MoU

A new partnership between Masdar City, Mohamed bin Zayed University of Artificial Intelligence, and The Catalyst, the region's first clean technology startup accelerator, aims to drive the growth of artificial intelligence, clean tech, and smart city technology, including autonomous transportation, throughout the region.

Mohamed Al Breiki, the executive director of sustainable real estate development of Masdar City; Sultan Al Hajji, the vice president of public affairs and alumni relations at MBZUAI; and Stephen Severance, director of growth of Masdar City for the Catalyst, signed the Memorandum of Understanding.

The partnership will support exploration of several new initiatives, including an artificial intelligence and clean energy center, learning and business opportunities for students and graduates of MBZUAI, enhanced support for AI and clean energy startups, and using advanced data analytics and AI to improve the performance of buildings throughout Masdar City.

As part of the agreement, MBZUAI graduates may be eligible for special packages to fasttrack their startup enterprises within Masdar City, while current MBZUAI students may be able to participate in paid internships with various companies in the Masdar City Free Zone. The three entities will also explore the development of a new accelerator program focused on AI to encourage more MBZUAI graduates to start successful businesses.



# **MENA** streaming platform **TOD** partners with **TPAY** for subscription via mobile numbers

TOD, the fastest growing streaming platform for the Middle East and North Africa has struck a strategic partnership with TPAY, the payments leader for the Middle East, Turkey, and Africa, allowing users to subscribe to its rich sports and entertainment content via their mobile numbers. The partnership will cover up to 105 million consumers in Egypt as a start and will expand to more countries across MENA.

In the initial partnership phase, TPAY will enable TOD to accept subscription payments from consumers via DCB, bringing its content within reach of consumers who don't have access to traditional payment methods, such as credit and debit cards.



# Cloud K-12 education provider, Powerschool opens Middle East and Africa office in Dubai

PowerSchool, a provider of cloud-based software for K-12 education in North America, has outlined plans to accelerate its international expansion by opening a Middle East and Africa office in Dubai. PowerSchool's

first office in the Middle East will serve the education technology provider's extensive network of existing MEA region customers, including Al Ittihad National Private Schools, Liwa Education, Aldar Education, ESOL and the American School Abu Dhabi, lead customer efforts in target territories, and support the company's expanding customer relationships in surrounding markets.

The regional headquarters will also provide a focal point to help broaden PowerSchool's channel partnerships across dozens of strategic countries across the MEA footprint.

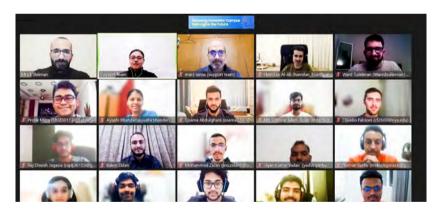
Amid the increased adoption of advanced ed-tech solutions in the UAE and wider region. PowerSchool's innovative solutions empower educators, students and parents to fulfill their potential utilising cutting-edge technologies. With over 25 years' experience in the ed-tech domain, PowerSchool solutions provide real-time insight and visibility to both educators and parents, and enable seamless communication and collaboration proven to boost productivity, reduce operational costs, and ultimately improve student outcomes.



### E-marketplace Tradeling partners with Mastercard to boost credit, discounts for UAE SMEs

Tradeling, the Middle East and North Africa's dominant e-marketplace that focuses on business-to-business transactions, has announced a collaboration with Mastercard, a global pioneer in payment innovation and technology that connects billions of consumers, issuers, merchants, governments, and businesses. The new collaboration will offer several benefits to Small and Medium Enterprises, SMEs in the United Arab Emirates, UAE and deepen access to the digital economy. E-commerce in the UAE is projected to reach \$27 billion this year, partially fueled by the exponential growth of SMEs. The collaboration between Tradeling and Mastercard reinforces both organisations' commitment to the UAE as it empowers SMEs to further fuel the market's economic progress and ambitions.

Customers will be able to buy on Tradeling's platform and receive a 5% discount on all products. This offer can be availed via payment with eligible Mastercard SME or Business debit, credit, or prepaid cards in the UAE for the first time. Additionally, SMEs will be able to access trade finance by leveraging both companies' advanced platform designs to overcome hurdles that are commonly faced by B2B buyers and sellers.



### Samsung to train 100 UAE students in AI through virtual course at Samsung Campus

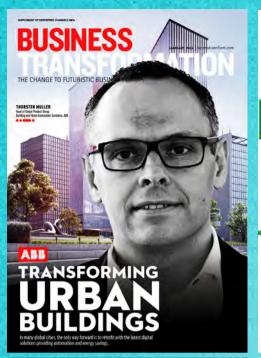
Samsung Gulf Electronics announced the final list of 108 candidates for the second edition of the Samsung Innovation Campus, shortlisted from an initial pool of 780 youth applicants representing 20 nationalities from across the UAE.

Held under the theme of 'Together for Tomorrow! Enabling People', the Innovation Campus brings Samsung's signature AI course in partnership with the UAE's Office of AI and the National Programme for Coders. This initiative aligns with UAE's National Strategy for Artificial Intelligence 2031, which seeks to transform the UAE into a world leader in AI by investing in people and industries that are key to mission success.

The 3-month virtual course kicked off on January 12. It will

provide the perfect platform for determined learners with a STEAM background, science, technology, engineering, arts, and mathematics to build on their knowledge of machine learning, ML and establish a strong understanding of AI fundamentals and its related applications. Renowned AI experts Christophe Zoghbi and Mrad Sleiman will teach and mentor the students.

The course's specialised curriculum defines the key tools and applications in AI and machine learning-related workplaces. Following an introduction to AI and machine learning, successful applicants will benefit from interactions with an expert instructor through live online sessions delivered to achieve a clear understanding of technical processes of AI, which will be followed by short exercises designed to assess the learner's progress.





INTELLIGENT ECTRIC MOTORCYCLES is building electric motorcycles with cloud connectivity. Al and a loops, electric power train, vehicle control unit.





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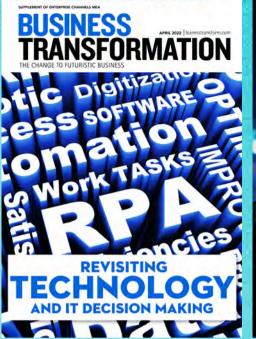
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# and look forward to your support in 2023.







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# ADOPTION ACCELLERATES IN IOT AND SMART CITIES

Top industry executives give their takes on use cases and trends in IoT and smart cities.

ATTIM



# ACTING AS A PRIME SYSTEM INTEGRATOR

du's solutions enable operational efficiency, improved customer experience in sectors such as smart parking, heat maps, footfall analysis, behavioural analysis.

u acts as a prime system integrator backed by a diverse ecosystem of technology and software providers to identify and implement the right ecosystem to meet their needs. These include sensors and actuators for data collection, gateways for data processing and communication, and cloud-based platforms for data storage, analysis, and visualisation.

Additionally, its solutions also integrate with other enterprise systems such as ERP, CRM, and SCADA. The hardware and software necessary to support its solutions may vary depending on the specific use case, for example, du require specialised hardware such as VR headsets and software such as simulation and modelling tools.

When implementing and deploying these solutions, one of the biggest concerns is data security and privacy, ensuring that sensitive information is protected and governed according to local regulations. Another challenge is making sure its solutions can integrate with existing systems and handle large amounts of data, this is known as Scalability and Interoperability.

Additionally, ensuring reliable and highspeed connectivity through 5G networks can be challenging in some areas. Lastly, some solutions, such as assembly automation, might require specialised technical expertise to design, deploy and maintain the system

#### **COVER STORY**



JASIM AL AWADI Chief ICT Officer, du.



- du is proud to support UAE's vision to enhance the adoption of advanced technologies into daily operations of industrial companies.
- As part of the Champions 4.0 Network of The Ministry of Industry and Advanced Technology, du supports small and medium enterprises.
- One of the biggest concerns is data security and privacy, ensuring that sensitive information is protected and governed according to local regulations.
- Another challenge is making sure solutions can integrate with existing systems and handle large amounts of data.
- du's portfolio IoT, Industrial IoT and smart cities are powered by the latest 5G technologies.
- Industrial IoT offerings include solutions for realtime monitoring, predictive maintenance, automation in manufacturing environments.

du is working with global vendors to bring together solutions that are scalable and support new smart devices. The solutions are easy to integrate, working with future architecture based in the cloud or on-premise. du's innovative solutions enable operational efficiency, improved customer experience and revenue generation in sectors such as Real Estate, community portal, visitor management, Campus, identity tracking, smart parking, Airports, GSE tracking, heat maps and Retail, footfall analysis, behavioural analysis.

du offers solutions that help hospitals and clinics to commercialise, scale and implement solutions that involve patient-centric eHealth apps over robust infrastructure.

In Industrial IoT, for example, its solutions can help companies improve efficiency, increase productivity and reduce downtime in industrial manufacturing operations, leading to high-quality outputs that are produced faster and at a lower cost.

Delivering the benefits of ICT to everyone is a key pillar of du's sustainability strategy. du is committed to delivering cutting-edge developments in the ICT space as well as showcasing its efforts towards providing best-in-class IoT offerings to drive the smart city vision of the UAE. The solutions can help companies reduce energy consumption and carbon emissions by acting on insights generated from machine data.

Digital twin technology can help to reduce carbon emissions by simulating and optimising the performance of physical assets, systems and processes before they are implemented. In smart cities, its solutions can help reduce carbon emissions by improving buildings' energy efficiency and monitoring and optimising waste and water management. Moreover, its solutions can help organisations to better manage and meet their sustainability goals and comply with regulations.

du's portfolio of products in the areas of IoT, Industrial IoT and smart cities are powered by the latest 5G technologies. The Industrial IoT offerings include solutions for real-time monitoring, predictive maintenance, and automation in manufacturing environments. In the smart cities space, du offers solutions for smart lighting, waste and water management, traffic and parking management, among others.

du also offers mixed reality solutions to help its clients with remote assistance, training, and visualisation along with digital twin technology which allows its clients to create a virtual replica of their physical assets, systems with simulation capabilities to improve operations, maintenance and design activities. All of these products are aimed at helping its clients increase efficiency, reduce costs, and improve their bottom line.

du is proud to support UAE's vision to enhance the adoption of advanced technologies and their integration into the daily operations of industrial companies in the country. As part of the Champions 4.0 Network of The Ministry of Industry and Advanced Technology, du supports small and medium enterprises, SMEs in their technology transformation journeys by providing optimal network and digital solutions to manufacturers across the UAE.

# IOT IS A KEY ENABLER OF ESG

A global study claims that the use of IoT has the potential to reduce carbon emissions by over 60 gigatons by the year 2030, if all the industries choose to participate.

oT is one of the fastest growing emerging technology domains. It enables hundreds of vertical and horizontal uses cases, starting from as basic as asset tracking to Smart City or Industry 4.0 solutions. However, IoT represents one of the most complex value chain systems given the multitude of technologies and technology players that are involved in delivering the solutions.

IoT is one of the highly fragmented markets and the value chain is tightly knitted with the involvement of several hardware, software, services, and connectivity players. Each of these four technology areas are further broken down into finer sub-categories to understand the evolving technology landscape and to effectively track the opportunity.

It greatly reflects the interdependencies and complex nature of partnerships between the IoT value chain players in bringing together compelling IoT solutions. Consequently, close collaboration among



KRISHNA CHINTA Senior Programme Manager, Telecom and IoT, META, IDC.



- IoT is a key enabler and will help various sectors including industrial sectors and smart cities in reducing their greenhouse gas emissions.
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- IoT enables hundreds of vertical and horizontal uses cases, starting from as basic as asset tracking to Smart City or Industry 4.0 solutions.
- IoT represents one of the most complex value chain systems given the multitude of technologies and technology players that are involved in delivering the solutions.
- IoT is a highly fragmented market and is tightly knitted with involvement of hardware, software, services, connectivity players.
- This reflects interdependencies and complex nature of partnerships between IoT value chain players in bringing together IoT solutions.
- Close collaboration among ecosystem partners is key to development of the IoT value chain.
- In case of largescale IoT implementation, it is necessary to bring in a master systems integrator to orchestrate multiple vendors.
- Data privacy and security is a key challenge holding back several IoT projects.

ecosystem partners is key to the development of the IoT value chain.

In case of largescale IoT implementation, it is necessary to bring in a master systems integrator with the required skills to orchestrate multiple vendors with the sole objective of successfully delivering the project.

Data privacy and security is a key challenge holding back several IoT projects. Technology providers that are serious about venturing into the IoT market should incorporate fool proof data privacy and security in their solutions. Some businesses are facing lack of technological, operational, or analytics skills to support the IoT implementations and facing intense talent management challenges.

On the other hand, capital intensive industries including manufacturing companies often find it difficult to integrate IT and OT technologies which is another key challenge for IoT implementation plans. IoT vendors including hardware, software, connectivity, and IT service providers should be cognizant of these challenges and aim for proactively addressing these concerns.

There are several industrial and smart city solutions that are enabled by IoT technologies these days. Regardless of the use case, IoT brings about distinctive advantages in terms of its ability detect, measure, and automate processes. IoT use cases are known to deliver process efficiencies, productivity enhancements, and bring about safety and security with the help of related technologies such as advanced connectivity, AI, cloud, and edge computing.

Given these capabilities, businesses in transportation, logistics and shipping, oil and gas, and smart city verticals have already started realising returns on their IoT investments.

Businesses from different industries are increasingly considering IoT solutions as a means to lower their impact on the environment. Some of these companies with Environmental, Social, and Governance, ESG obligations have put carbon footprint reduction targets at the heart of their operations and business processes.

A global study claims that the use of IoT has the potential to reduce carbon emissions by over 60 gigatons by the year 2030, if all the industries choose to participate. Therefore, IoT is a key enabler and will help various sectors including industrial sectors and smart cities in reducing their greenhouse gas emissions and in increasing their energy efficiencies.

IDC has long years of experience in approaching the technology market research in a structured fashion. Given the complexity of the IoT value chain, IDC globally approached the market research with welldefined taxonomy, datasets, and subscription services. IDC's IoT taxonomy has identified several named use cases across multiple industries.

Given the fragmented nature of the value chain comprising connectivity, hardware, and software vendors and IT services providers, IDC's IoT taxonomy has further split the four technology categories into finer sub-technology categories. This approach enables IDC to refine its research in to diversified IoT ecosystem.



# CHALLENGES IN INFRASTRUCTURE FOR SMART BUILDINGS

Efficiencies and emission savings are only achieved when all operational systems are integrated and operate together to make a truly smart building.

exans claims there are four main challenges when planning infrastructure deployment in smart buildings.

First is the large increase in the number of devices that need to be connected.

Planning for large bandwidth variations will be another. The need to be able to support very low to very high bandwidth needs, without under or over specifying, needs careful consideration. Nexans also cite new generations of wireless transmission. As Wi-Fi bandwidth increases, the range of each access point decreases, so more access points are required to cover the same area. This requires more and higher bandwidth backbone connection. A similar issue applies to 5G connections.

Finally, IoT devices need to be powered. This can be supported via Power over Ethernet, PoE, Single Pair Power over Ethernet, SPoE, separate





**ARAFAT YOUSEF** MEA, Managing Director, Nexans Data Network Solutions. mains supply, or batteries – each of which present their own challenges.

Within the scope of enterprise smart buildings, Nexans view is that IoT brings multiple advantages to different stakeholders. Whilst improved efficiency of utilities, power and fuel for heating and lighting is frequently mentioned as a key benefit, Nexans believes that the biggest financial gains actually come from improved productivity.

IoT and smart technologies can be used to create not only a better, safer, and healthier working environment but also to optimise working processes. This has combined benefits for the working staff and the business, leading to improved productivity returns.

At a building level, Nexans suggests that maximum efficiencies and emission savings are only achieved when all operational technology systems can be integrated and operate together to make a truly smart building. IoT is an essential component to achieve this.

Once the systems managing power, security, lighting, HVAC, access control, are all working together, then holistic savings can be optimised.

The same is true when expanded to smart cities. Use of IoT to monitor and connect disparate systems managing traffic flow, street lighting, emergency services, and CCTV is necessary to truly optimise services and operations for maximum efficiency.

Solutions from Nexans' includes:

SMARTCONVERGE using Nexans GG45 is proposed as a flexible LAN enabling enterprise customers to use a single infrastructure for standard RJ45



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- Nexans believes that the biggest financial gains actually come from improved productivity.
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based IT equipment, but can also quadruple the port capacity to support additional IoT devices using Single Pair Ethernet, SPE.

LANsense is Nexans Automated Infrastructure Management, AIM platform. It ensures records are 100% accurate, allowing users to detect, log, map, share, and optimise networks, reducing downtime and costs.

INFRABIRD is an access control and monitoring platform to secure street cabinets and fibre connections.

LANactive switches support Fibre To The Office, FTTO, Digital Ceiling, DICE, and industrial applications.

33



# **BIGGEST CHALLENGE IS DATA INSIGHTS ACROSS VALUE CHAIN**

The biggest roadblocks are complexity - aligning business goals with digital strategy, managing network, cloud interdependencies and multiple vendors.

range Business Services is a network native digital operator with five strategic propositions supported by consultants, data and cloud experts, and a cyberdefense team. The company combines modular, end-to-end IoT business services with underlying infrastructure covering every aspect of IoT - data generating objects, networks, data storage, data visualisation and analytics.

The solutions address five major intersecting challenges: establishing digital workspaces, improving customer experience, facilitating Industry 4.0, collecting, processing data, and transforming and safeguarding network infrastructure.

In smart cities, the company provides complex systems integration for operating efficiency, and

solutions including Urban Services, Safe City, Interactive Office, and Smart Eco Energy.

No single company – no matter how large and capable – can build and sustain an enterprise-scale model for continuous, perpetual transformation.

Orange Business Services has a large ecosystem of partners, including world leaders like AWS, Quppa, OneMind, Microsoft and Cisco, as well as innovative start-ups, which enables the company to deliver simplicity and better TCO, total cost of ownership through digital integration and orchestrations.

Partnerships are one of the cornerstones of Orange Business Services, working alongside the world's best technology companies, to deliver tailored solutions within a digital transformation



**ADVAIT THAKUR** Data IoT AI Expert, Orange Business Services, Middle East and Africa.



- Improving sustainability of cities is an urgent priority.
- Digital tools organised into systems of systems and run by progressive ecosystems of partners, can help.
- Intelligent cities offer our best hope in meeting the challenge of climate change.
- Digital twin technology means more accurate data on emissions and could also simulate impact on coastal cities and buildings.
- No single company, can build and sustain an enterprise-scale model for continuous, perpetual transformation.
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programme for an enterprise or developing smart city.

The biggest challenge to successful enterprise digital adoption is centred around the right data insights across the entire technological value chain and the life cycle of products and services. The biggest roadblocks are complexity – aligning business goals with digital strategy, managing network, cloud interdependencies and multiple vendors.

In the intelligent city, digital technology is embedded across all city operations deployments should be based on core values, liveability, workability, sustainability aligned with the economic, social, and environmental needs of current, future generations. The deployment challenge is siloed data – an intelligent city needs a continuous flow of data within the ecosystem and a core platform to generate learning and value. In addition, the absence of standardised regulatory and data sharing platforms may hinder smart city projects.

Cities, municipalities, governments and businesses need help to define, drive and implement digital strategy in sectors, such as transport and logistics, retail, banking, energy, petrochemicals, plus public sector to drive e-government transition. The primary motivation for digital transformation is to better serve customers, citizens, create more personalised products and services, improve ESG.

Digitally transformed businesses deliver competitive gains from cost reduction and revenue growth that contribute to higher profits, through the efficiencies of optimised and automated functions. In MEA, greenfield city developments are According to EY research, digital twins could reduce a building's carbon emissions by

**50%** 

intelligent by design and deliver higher ROI through innovative services, and the intersection of data and AI drives economic acceleration.

Improving sustainability of cities is an urgent priority and digital tools and solutions, organised into systems of systems and run by progressive ecosystems of partners, can help.

Intelligent cities offer our best hope in meeting the challenge of climate change, with a vital role as incubators of human, digital innovation harnessing and building on their experience.

According to EY research, digital twins could reduce a building's carbon emissions by 50%, improve operational, maintenance efficiency by 35%, space utilisation by 15%, and increase human productivity by 20%. Digital twin technology means more accurate data on emissions and could also simulate , predict weather patterns and impact on coastal cities and buildings.

### DELIVERING REAL-TIME SERVICE INSIGHTS FOR ELEVATORS

A connected solution in the era of smart cities requires not only sensors and data to provide analysis, but also an ecosystem that is able to interoperate with external systems.

tis will be launching this year in Gulf countries, the Otis ONE IoT-enabled solution, a new set of digital and connected services. Otis ONE solution combines the latest cloud, machine learning and IoT technologies to deliver real-time actionable maintenance insights for elevators.

Paired with remote intervention and apps for mechanics, Otis is turning data into actions to minimise disruption in users' daily lives and to bring real time transparent information to customers through a dedicated platform, the Otis ONE Real Time Service platform.

Additionally, building managers can import the data collected by Otis ONE to their existing building management systems via APIs available to customers on the Otis Developer Portal. In addition to real-time information about their equipment, building managers also receive monthly reports about their elevator equipment health.

Otis ONE also powers the eView display, an in-car screen that can share information such as news and building updates with passengers. In the event of an emergency, it can turn into an innovative, two-way video connection between the elevator car and OTISLINE customer centre.

Otis ONE architecture consists of three tiers, edge, platform, and enterprise. The edge tier is made up of controllers, gateways and sensors that send data packages to the cloud. Otis hosts a cloud native application platform, meaning all components are built in the cloud. So, it can



- Otis ONE solution combines cloud, machine learning, IoT technologies to deliver real-time actionable insights for elevators.
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#### **COVER STORY**

dynamically scale up and scale down the technologies we use through cloud services like IoT Hub, event hub, and stream analytics services.

With the enterprise tier, Otis serves disparate web and mobile applications that use the information and insights from the edge and platform tiers to present integrated elevator service data in a 360-degree realtime view.

This can be accessed by customers via a customer portal and app, by service technicians and remote technical experts, and OTISLINE customer service experts.

An impactful deployment of any connected solution in the era of smart cities requires not only sensors and a significant volume of data to provide accurate analysis, but a complete ecosystem that is able to interoperate with external systems.

With over 30 years of experience in remote monitoring, Otis has developed a set of service applications for technicians, equipped with smartphones. Otis uses APIs to connect elevator data to any building management system. Otis has more than 2.1 million units in its global service portfolio and Otis ONE leverages data from approximately one-third of those that are already connected to create predictive insights and scenarios.

Smart cities need smart mobility. Wherever they are installed, elevators and escalators generate millions of data points whose value can goes far beyond the physical hoistway. Today, as in many other sectors of the economy, transparent, responsive and immediate service is expected in all circumstances. This is the challenge to address with Otis ONE solution.

In addition to innovating smarter, Otis is focused on improving sustainability across its operations. The solutions offer faster and more targeted interventions, and remotely, thanks to pre-diagnosis, live alerts, and assistance tools available to technicians and experts. By avoiding interventions by technicians, CO2 emissions linked to their travel is reduced.

Otis ONE solution can be retrofitted on existing elevators, bringing the same benefits to better manage carbon emissions. It can be installed on any existing Otis or non-Otis units. Indeed, modernising an elevator that is more than 25 years old can reduce its energy consumption by up to 65%.







## PARTNERING TO BUILD AN OPEN Source smart city platform

FIWARE, HOPU, Red Hat Open Innovation Labs have built a scalable, cloud-native, open-source smart city platform to improve liveability and sustainability.

he ability to implement an IoTenabled digital twin smart city platform grants any city the power to gather relevant big data from multiple sources and extract valuable insights, driving smart decisions for the benefit of all citizens. The biggest challenge is to effectively gather and process data at a very large scale while building an easy-to-deploy solution that is scalable and secure.

To solve this issue, FIWARE and HOPU worked

with the Red Hat Open Innovation Labs team on a purpose-driven engagement to build a highlyscalable, cloud-native, open-source smart city platform designed to improve liveability and environmental sustainability.

The Smart Cities platform deploys efficiently using Red Hat OpenShift Container Platform, with an architecture that suits a hybrid cloud approach. The combination of Red Hat OpenShift, FIWARE technology, and the HOPU air quality solution allow the Smart Cities platform to produce





ADRIAN PICKERING Regional General Manager, MENA and Enterprise Segment Lead for CEMEA, Red Hat. tangible benefits right from the beginning.

It is expandable through additional future applications covering other critical areas such as traffic, water sampling, and noise for any city in the world.

While technology was the core component of the project, the collaboration and workflows between the three companies also needed to move seamlessly to succeed. The Open Innovation Labs team introduced open practices like impact mapping, event storming, and pair programming to align the team towards shared goals, prioritise outcomes, and integrate and improve this smart city technical solution.

The collaboration between Red Hat, FIWARE, and HOPU resulted in accelerated innovation by way of opensource technology.

FIWARE Smart Cities solution is now an attainable, scalable solution that streamlines the developer experience. This will allow other cities, individual contributors, integrators, or other tech companies to make future contributions to the Smart Cities platform by adding other use cases over time, such as artificial intelligence and machine learning components, that will evolve this solution even further.

With Red Hat open-source technologies and partner ecosystem, it is possible to build a hybrid cloud to power the smart city. The hybrid cloud can span one or more public clouds, datacentres, and edge devices near roadways, city buildings and transportation hubs.

Cities currently assume the responsibility for most of the world's energy consumption and greenhouse gas emissions, but they also bear the brunt of many of climate change's effects.



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- Cities currently assume responsibility for most of the world's energy consumption and greenhouse gas emissions.
- The Smart Cities platform deploys efficiently with an architecture that suits a hybrid cloud approach.

Cities must provide convenient, easy-to-use services for their citizens to meet their needs.

To achieve this costeffectively and at the required scale, they'll need to leverage technology to streamline operations and use data purposefully to deliver a better quality of life to residents. Smart city technologies make it easier for local governments to do that, enable cities to reach environmental and sustainability goals, improve service delivery and use funds more effectively.



## USING IOT TO MAKE URBAN MOBILITY A REALITY

KPMG reports 50% of car owners will no longer want to own a vehicle by 2025 and Research & Markets claims four out of ten car journeys will be via car share.

he concept of urban mobility is constantly evolving. As millennials and Gen Z become the dominant force in the consumer market, sharing models are firmly integrating into their everyday lives. Udrive, as a dedicated pay-per-minute car rental platform, operates next-generation hardware devices that interface with the vehicle CAN-Control and On-Board Diagnostics systems allowing for 2-way communication and control.

This live stream communication to its middleware allows the Udrive team to digitise the vehicle and customer experience.

Udrive works with regional cloud providers to communicate to its fleet, which includes IoT SIM cards from leading telecommunications companies, virtual machines and containers for our custom



NICHOLAS WATSON Co-founder and CEO, Udrive.

#### KEY TAKEAWAYS

- The concept of urban mobility is constantly evolving.
- As millennials and Gen Z become the dominant force in the consumer market, sharing models are firmly integrating into their everyday lives.
- Udrive operates nextgeneration hardware devices that interface with the vehicle CAN-Control and On-Board Diagnostics systems.
- Live stream communication to middleware allows the Udrive team to digitise the vehicle and customer experience.
- Udrive works with regional cloud providers to communicate to its fleet, which includes IoT SIM cards, virtual machines and containers.
- Udrive operates its infrastructure on scalable computing systems so that it can handle peak demand during the week and holiday periods.
- The infrastructure also allows Udrive to scale across cities and countries.
- The challenge of deployment around IoT is physical installation of the IoT devices, which is the most timeconsuming process.
- The IoT installation team needs to interface with several different brands and their interpretation of CAN-Control.
- Udrive has nearly 1,000 cars in its fleet in UAE and recently expanded into Saudi Arabia.

application services and mobile app experiences. Udrive operates its infrastructure on scalable computing systems so that it can handle peak demand during the week and holiday periods. This infrastructure also allows Udrive to scale across cities and countries.

The challenge of deployment around IoT is that physical installation of the IoT devices is the most time-consuming process as the team needs to interface with several different brands and their interpretation of CAN-Control.

Other than this, the rest is relatively simple and with Udrive's in-house experience, it can control and operate all interfaces and systems.

Anywhere that it is possible to digitise human activity and automate communication and decision-making that boosts customer experience efficiently can gain from IoT smart city solutions.

For example, unlocking the door of a rented car with the click of a mobile app. Traditionally, a member of the rental company goes to a house and gives them the key, which is eventually used to open the car and drive it. As human interaction is involved, it can hours for them to show up. With Udrive, users can find a car, book it and open it within 10 seconds.

The first piece of advice would be to invest in more asset sharing. Ideally, utilising a single asset amongst many users will lead to fewer of those assets needing to exist to serve the same audience.

This results in multiple benefits for the user, as they are more economical and sustainable. There are fewer vehicles manufactured, and the number of traffic jams reduces

## There are 380,000 registered users and a total of

2 **m** 

trips since its

launch in 2016.

as there are fewer cars on the street, free parking, and less wastage both financially and in carbon footprint.

KPMG reports almost 50% of car owners today will no longer want to own a vehicle by 2025 and Research&Markets claim four out of every 10 car journeys will be via car share. Udrive car-sharing is also in line with Dubai's 2040 Urban Plan's bid to build a 20-minute city by reducing the strain of moving across the city and improving connectivity for passengers across the Emirates while promoting a circular economy, a cornerstone of sustainability.

Udrive has nearly 1,000 cars in its fleet in the UAE and has recently expanded into Saudi Arabia as well. There are 380,000 registered users and a total of 2 million trips since its launch in 2016. Udrive serves on average over 100 customers per car per month. And if that is around 50 unique customers, there are potentially 50 fewer cars on the road or required to be on the road.





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## 2023 ANNUAL BX OUTLOOK BX OUTLOOK Top industry executives share their thoughts on the business transformation road map ahead.





# **ENTERING A NEW ERA OF HACKTIVISM**

Hacktivism, deepfakes, attacks on business collaboration tools, new regulatory mandates, pressure to cut complexity will top organisations' security agendas.

e are entering a new era of hacktivism, with increasing attacks motivated by political and social causes. According to Check Point Software's cyber security predictions for 2023, Hacktivism, deepfakes, attacks on business collaboration tools, new regulatory mandates, and pressure to cut complexity will top organisations' security agendas over coming year.

Business and technology executives need to have cyber security as the top priority in the view of the fact that cyber-attacks are becoming more sophisticated and their numbers have only increased during the last year. Further, as

businesses look to reduce cost and complexity from the entire digital and security stack, consolidation will become a real priority.

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In 2023, some of the technologies which are anticipated to go mainstream are Internet of Things, IoT and Internet of Medical Things. We also continue to see breakneck adoption of AI, ML tech in the military, finance and in medicine. As this technology continues to grow, major players look to consolidate these technologies along with rapid expanding use of AR, VR.

Additionally, smart cities are on the horizon as many governments want to leverage technology for modern living and public services. Security is



**RAM NARAYANAN** Country Manager, Check Point Software Technologies, Middle East.



- As businesses look to reduce cost and complexity from the entire digital and security stack, consolidation will become a priority.
- Some of the technologies which are anticipated to go mainstream are Internet of Things and Internet of Medical Things.
- Smart cities are on the horizon as many governments want to leverage technology for modern living and public services.
- Security teams need to consolidate IT and security infrastructures to improve their defences and reduce their workload.

rarely even an afterthought for these platforms, and therefore businesses will be looking for technologies and solutions around these areas as well in the coming year.

In the fast-paced, high-stakes world of risk management, keeping informed about recent developments and cuttingedge trends is beyond essential. Organisations also need to consolidate and automate their security infrastructure to enable them to better monitor and manage their attack surfaces and prevent all types of threat with less complexity and less demand on staff resources.

Security teams need to consolidate their IT and security infrastructures to improve their defences and reduce their workload, to help them stay ahead of threats. Over two-thirds of CISOs stated that working with fewer vendors' solutions would increase their company's security.

It is clear that most businesses are committed to moving forward with progress a Net Zero Future. Technology not only ensures that we use the assets at our disposal judiciously, but they can also automate extra menial basic tasks as a result releasing up the human workforce to address more interesting and profitable endeavours.

Technologies like Artificial intelligence, AI, machine learning, and the Internet of Things, IoT are potential technologies for improving cutting-edge working techniques to attain most beneficial energy efficiency. Fundamentally, they present great opportunities to improve the environmental performance Over two-thirds CISOs stated that working with fewer vendors' solutions would increase their company's security

of current and future business practices.

Check Point Software focuses on providing organisations with the ability to conduct their business with the highest level of security. Check Point Infinity portfolio of products focuses on those technologies and capabilities that will provide uncompromised security.

Check Point Software has taken over 80 products and technologies all managed by Check Point Infinity–Vision, the industry's leading unified security management solution and organised them into the following core pillars:

- Check Point Harmony - for secure users and access,

- Check Point CloudGuard to automatically secure clouds environments,

- Check Point Quantum to protect network perimeters and datacentres, and

- Check Point Horizon - that provides XDR, XPR, MDR, MPR, and events management solutions. ■



## DIGITAL ADOPTION KEY TO REDUCE CARBON EMISSIONS

Organisations can reduce their carbon footprint and deliver net zero target if they adopt digital use cases and share data to enhance sustainability efforts.

here will be continuity in the evolvement of transformation as it takes time to filter through organisations. CIOs and CTOs will continue the restructuring process by providing deep technical vision for organisations. The focus will be on solidifying and consolidating the strategies set for digital transformation plans. It will also be important for CIOs and CTOs

to take the lead to enlighten the innovation managers and decision makers in the organisation on the changes that need to transpire while also ensuring a seamless technology shift which is key for a successful digital transformation.

The solutions and platform that will see a marked uptake in 2023 include, AI, security, metaverse, Web 3.0, IoT, cloud security as well as Automation and Robotics.

We have seen unprecedented events that have shaken the world over the past few years. Adapting to market conditions is key. Companies should focus on digital transformation and technology upgrades as quickly as possible as change is constant. This includes changes in people and





**RANJITH KAIPPADA** Managing Director, Cloud Box Technologies.



skills, technology and processes, etc which are all key elements that organisations should focus on.

Channel partners have redefined their go-to-market strategies and end customers have re-defined their buying systems and are moving into subscription models which are working out more cost effective for their business rather than investing in costly hardware.

Some customers are adapting to technologies in a rush to meet their business needs. As a result, cyber threat landscape has increased and is a sweet spot for cyber criminals. Hence, strategies need to be regularly monitored and adopted to keep pace with the evolving security threats.

AI technologies have been evolving over the past few years and will continue to do so in 2023 and will begin to be used by more mid-sized companies and will have a broader consumption base.

Digital adoption is the key to reduce the carbon emissions. Organisations can reduce the carbon footprint and deliver net zero target if they adopt digital use cases. What is important is that they are able to share data and are transparent in their approach to enhance the sustainability efforts.

This data must be shared across the value chain as well as partners for it to be of some consequence. It is also important that organisations invest in the right skills to identify the right technologies that will help this transformation.

Cloud Box Technologies has grown into a trusted systems integrator with a unique set of solution offerings. It has been acknowledged for its outstanding consultation strength and inhouse implementation skills which helps it stand apart from



- Adapting to market conditions is key.
- Solutions that will see a marked uptake include, AI, security, metaverse, Web 3.0, IoT, cloud security, automation, robotics.
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- Companies should focus on digital transformation and technology upgrades as quickly as possible as change is constant.
- This includes changes in people and skills, technology and processes, which are key elements that organisations should focus on.

competition. It is also known for its holistic approach in tackling customer needs.

The company has its own cloud offerings apart from their capability to offer other end to end IT solutions such as IT infrastructure, Data Management, Data Backup, File, Email Archiving, Data Availability and Data Insight Information Security and Virtualisation – Software and Hardware Solutions deployment and Support. As well as Data Centre, storage, server, backup, disaster recovery, network security, server managed and desktop virtualisation.



## EDGE CLOUD COMPUTING EXPECTED TO PROLIFERATE

This will drive adoption of market places, connectivity to multi-cloud platforms, and enable new consumption models to evolve, including Network-as-a-Service.

n 2023 many IT groups will start to put more effort into cloud-based contact centres and tech support. Ciena recently implemented a ticketless help desk experience for their employees. This has improved efficiencies by eliminating more than 50% of their tickets and cutting wait times from 10-15 minutes down to 2 minutes or less.

It is also expected that enterprise customers will start to explore the possibility of using gaming technology via VR and AR to transform remote work, training, technical support, customer engagements and more.

Energy-efficient and sustainable networks are critical. Ciena will continue working on decreasing carbon emissions while also meeting surging bandwidth demands.

Edge cloud computing will proliferate rapidly, and this will demand the real-time correlation of network, services, and application resources. It is also expected to see increased



**CRAIG WILLIAMS** CIO Ciena.



**JÜRGEN HATHEIER** CTO EMEA and APAC, Ciena.

adoption of market places, driving key elements of connectivity to Multi-Cloud platforms. This will enable new business and consumption models to evolve, including Networkas-a-Service.

The industry will see massive growth in the number of 5G users, humans and machines. Operators will become increasingly active in rolling out managed Private 5G services.



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- Ciena will continue working on decreasing carbon emissions while also meeting surging bandwidth demands.
- Energy-efficient and sustainable networks are critical.
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- Operators will become active in rolling out managed private 5G services.

# LEAD TIME FOR IT DELIVERY INCREASES

**INUAL BX** 

OUTLOOK

Clients need to understand that lead time of a network switch, has increased 200+% in the last six months as critical components must be procured.



MICHAEL ANDERSEN Founder and CEO, EuroTech ME.

he world is in a historically unprecedented time globally; however, the Middle East is showcasing itself as one of the most stable places to live, raise a family, start a business, and, or open an office. Businesses should run lean, but also invest strategically in regional expansion as whatever happens in the next two to three years; the Middle East will come out on top.

The primary objective for the technology industry will be to effectively communicate the critical situation of supply shortages with clients. To better align on expectations, clients need to understand that the average lead time of a network switch, for example, has increased by over 200% in the last six months as critical components must be procured well in advance of project delivery. The market conditions have, unfortunately, opened the door for grey market imports and products that are not procured and distributed via appropriate channels. This represents a major risk to the business's operational integrity. Keeping this in mind, purchasing managers in the technology space must be scrupulous in evaluating products and services for their business needs.

Blockchain and IoT are two hot topics that, when used together, could be a very exciting means of monitoring and validating Building Management Systems, industrial energy consumption, exhaust materials and more. Integrated devices in one ecosystem, communicating with one another whilst being validated by blockchain technology could be a game changer for the marker as data can be built up over time and used in critical decision-making.

EuroTech ME stands behind one simple mantra: Technology for functionality's sake as opposed to technology for the sake of technology. The best solutions are the simple ones that staff can use with ease and confidence on a daily basis.

EuroTech ME has designed and delivered incredibly complex network, security and AV solutions for a variety of clientele. As EuroTech ME expands into Saudi Arabia, the team is eager to assist both big corporate entities as well as smaller businesses with the right equipment for ease of



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- Integrated devices in one ecosystem, communicating with one another whilst being validated by blockchain technology could be a game changer.
- The primary objective for the technology industry will be to effectively communicate the critical situation of supply shortages with clients.

#### installation that can run as quickly and cost-effectively as possible.

EuroTech ME offers network design and pre-contract consultancy services well before the project is awarded to a general contractor. This ensures IT procurement can take place before the tendering phase of a fit-out project. Consequently, critical infrastructure can be procured in line with the lead time, which in some cases can be up to 12 months.

For Audio Visual systems as well, EuroTech ME can help clients procure the right products through the correct channels and support with the appropriate warranty, thus, mitigating risks to project delay. Once procured, EuroTech ME's team of in-house draughtsmen can ensure the production and distribution of schematic drawing packs and containment requirements to the client's interior design and project management teams.



## DATA PROTECTION, ENCRYPTION KEY FOCUS IN BUSINESS DEVELOPMENT

Protecting digital identities through decentralised verification procedures is especially true for the banking and digital payments industries.

n the Middle East, hybrid working is still thriving, and for good reason; consequently, there is an increasing reliance on cloud solutions. Businesses may take advantage of a variety of appealing features from greater scalability to remote access from any location at any time with cloud storage. But even though cloud storage is a growingly common choice for companies today, it's not always the most secure. Data protection and encryption will need to be the focal point of all business development

strategies going into 2023. Protecting digital identities through decentralised verification procedures, this is especially true for the banking and digital payments industries.

As the threat landscape grows and continues to evolve, boards are increasingly concerned and want to hold leadership accountable for the security of sensitive data. Business leaders now understand that it's not IF, but WHEN an attack takes place, so they want to be as prepared as possible.

CIOs will be involved in strategic decision making



**ANUDEEP PARHAR** Chief Operating Officer of Digital, Entrust.



- CIOs they have an overt opportunity to enable business growth and create a competitive advantage.
- Organisations need to take extra heed of risks, which digital transformation poses on their data.
- Decentralised identity will enable digital identities for individuals and corporations without handing over control of their data to third parties.
- Users will have control of their identities and can enter different worlds in the metaverse.
- Cloud storage is a growing choice for companies but it is not always the most secure.
- Data protection and encryption will need to be the focal point of all business development strategies.

for the safety of the business' data, and in doing so, they have an overt opportunity to enable business growth and create a competitive advantage. In line with the widespread adoption of multi-cloud environments, and remote working continuing to fuel this, organisations need to take extra heed of the risks this level of digital transformation poses on their data, if unprotected.

With more companies hopping on the Metaverse and Web3 in 2023, decentralised identity will enable digital identities for individuals and corporations without handing over control of their data to third parties. Users will have control of their identities and can enter different worlds in the metaverse and interact with various companies or entities by establishing trust using verifiable credentials to prove their identity without handing over personal data.

Another key space to watch this coming year is that of digital payments and online banking, which will become more mainstream than ever before. However, security remains a key priority for consumers. Released in 2022, The Great Payment's Campaign, global study by Entrust, revealed that 94% of respondents in UAE and 91% of respondents in Saudi Arabia said they were concerned about the potential of banking or credit fraud as banking and credit become more digital.

The banking sector will need to keep up the pace of their digital transformation as more consumers will require flexible, convenient, and secure payment methods, and the demands for security will only grow from here.

Entrust is focused on the impact of AI infrastructures

# "

Protecting digital identities through decentralised verification procedures, is especially true for the banking and digital payments industries



on customer enterprises of all sizes, and how to help customers with not just the security aspect, but productivity and cultural impact as well. AI infrastructure will continue to evolve at a rapid pace in 2023, and platforms like Open AI will reshape the way some industries operate.

Entrust, offers breadth of solutions that are critical to enabling trust for multi-cloud deployments, mobile identities, hybrid work, machine identity, electronic signatures, encryption and more.

Entrust is currently watching the space of Web3 and the metaverse. These environments are inseparably linked to each other, and both are still in their early stages of development.





## GEO-DATA, EARTH INSIGHTS NEEDED TO SOLVE MODERN CHALLENGES

A remotely operated robotic solution can undertake the work faster and safer, reduce CO2 emissions by 95+%, whilst increasing quantity of digital information.

he world has some big and pressing problems to solve, for example, environmental challenges, climate change and the need for more flexible and cleaner energy systems. Governments alone cannot resolve all of these issues and private enterprise has a critical role to play Thus there is an immense need for new solutions, new technologies and new ways of working.

Businesses and technology enterprises hold in their hand's resources and technologies to deliver effective and scalable solutions that can address these problems. The primary objectives for top business and enterprise executives will therefore be all about advancing sustainability. Innovation and technology will be key, and this will be high on the agenda as well.

Fugro's solutions are more relevant than ever. The problems mentioned above, all result in an increasing need for geo-data, for profound insights into the earth and its environment. This is what Fugro does. With our teams of experts and cuttingedge technologies we support clients in their journey towards sustainable infrastructure and climate change adaptation.

An example is a digitised solution for the investigation of marine sites with robotic vessels. Previously, this work was done with large, diesel-



**TIM LYLE** Group Director Middle East and India, Fugro.



- Today's problems result in an increasing need for geo-data and insights into the earth and its environment.
- The primary objectives for top business and enterprise executives will be about advancing sustainability.
- Innovation and technology will be key, this will be high on the agenda as well.
- Sustainability is not a random side effect of business.
- Sustainability goals have to be connected to an organisation's purpose and strategy.
- As different businesses have different value chains, there is not one roadmap that works for all.
- A geo-data specialist as Fugro is very different from a supermarket chain.

guzzling vessels with 30– 40 people onboard in often hazardous environments. A remotely operated robotic solution can undertake the work faster and safer, reduces CO2 emissions by over 95%, whilst exponentially increasing both the quality and quantity of digital information that can be obtained. This is just one of the ways we contribute to a safe and liveable world.

The year 2023 and ahead will be all about digital and advanced technologies that reduce environmental impact, improve safety and increase efficiency. The type of technologies are diverse, from artificial intelligence, to robotics, blockchain or for example Internet of Things. Every function in business will benefit from these advanced technologies, whether it is communication, business development, business delivery, management, or for example accounts.

Most businesses will standardise on marketstandard cloud infrastructure, with bespoke robotics, analytics and intelligence technology, allowing them to create scalable and differentiating products or services.

New technologies and solutions are developed and delivered by people, so for an organisation that differentiates and leads with advanced technology, people are the key resources. A successful organisation requires diverse teams of people that provide the right culture, strategy and core competencies.

Organisations that are successful at developing advanced technology are not necessarily good at developing valuable solutions, and vice versa. As the world today needs A remotely operated robotic solution can undertake the work faster and reduces CO2 emissions by over

**95%** 

advanced and differentiating solutions that are based on advanced technology, there will be more strategic partnerships, mergers and acquisitions that evolve and advance businesses.

Sustainability is not a random side effect of business. To have a relevant and long-term impact, sustainability goals have to be connected to an organisation's purpose and strategy. As different businesses have different value chains, there is not one roadmap that works for all.

A geo-data specialist as Fugro is very different than for example a supermarket chain. A good roadmap starts with a clear goal, and clear, realistic and measurable steps that help achieve these goals. As businesses are selfsustaining, there have to be both sustainability and financial KPIs. These combined KPIs are also relevant for attracting investors, as climate change these days is central to most investment considerations.



## SUPER LUXURY HOMES, GIGA PROJECTS RIPPLING THE REGION

UAE has a viable competitor in Saudi Arabia for record-breaking developments and this continues to be the impetus behind innovative thinking and sustainability.

P ost pandemic, throughout 2022, the GCC saw many new developments come to fruition and new projects being announced. 2023 is already showing a focus on tourism mega-projects as well as super luxury residential and mixed-use developments. Fast-growing interest in the Middle East hospitality sector has now extended to residential markets. Dubai continues its trend of being a hotbed of luxury residential development, with the sector seeing a big push towards branded residential and resort-living concepts as market differentiators. Engaging hospitality design experts

in these projects has now become a practical mandate.

As the profiles of the UAE and Saudi Arabia continue to grow with world-first giga projects in progress and an impressive contingent of top industry talent moving into the country, the entire region is feeling the ripple effect. The UAE now has a viable competitor in Saudi Arabia for recordbreaking developments, and this continues to be at least some of the impetus behind more innovative thinking, design and development, moving forward.

Gensler Middle East has designed a multitude



**THOMAS WILLIAMS** Studio Director, Gensler Middle East.



- Gensler is seeing a particular movement toward resortstyle branded residences with a focus on wellness and restoration.
- This connects a community with the environment and creates spaces that are designed to support a healthy live-work-play lifestyle.
- Gensler is focused on creating an offering in the market with emotive storytelling as a means of selling a product visually.
- Gensler is influencing the role that sustainability plays in selling a product to the end customer and this is the direction ultra-luxury space is moving to.
- Increasing pressure from Saudi developments will force Dubai to develop even more distinctive offerings.
- Dubai is recognised as the world leader in branded residential offerings with all eyes on the city's upcoming openings.

of ultra-luxury developments and is seeing a particular movement toward resort-style branded residences with a focus on wellness and restoration. Connecting a community with the environment and creating spaces that are designed to support a healthy live-workplay lifestyle.

Gensler is focused on creating an offering in the market with emotive storytelling as a means of selling a product visually. We are also actively influencing the thinking around the role that sustainability plays in selling a product to the end customer, and this is the direction we see the ultra-luxury space moving into. The rest will follow.

The luxury segment in Dubai continues to flourish. Increasing pressure from Saudi developments will, over the coming years, force Dubai to develop even more distinctive offerings. This race may benefit both the development pipeline and the consumer. At the moment, the market is behind Dubai, which is recognised as the world leader in branded residential offerings with all eyes on the city's upcoming openings. The slower approach of Abu Dhabi will be something to watch as it makes large-scale investments into the luxury sector.

Global property consultancy, Knight Frank's 2023 Prime Prediction report showed that Dubai topped the list in a ranking of the world's top luxury real estate markets and Dubai's prime residential prices are set to see the strongest growth globally in 2023.

Analysts, developers, and market specialists believe the market for luxury homes in Dubai has led the charge and is expected to continue to do so during 2023. The luxury

### The slower approach of Abu Dhabi will be something to watch as it makes large-scale investments into the luxury sector

property segment in Dubai will continue to climb this year as prices are expected to sustain an upward trend due to rising demand from high networth individuals, tight supply and fewer launches of new developments, albeit at a slower pace than the latter half of 2022, experts say.

Based on the latest statistics, the price of luxury properties witnessed a year-on-year growth of nearly 89% during the third quarter of 2022 and is expected to continue in 2023. A recent report from Knight Frank also predicts that the luxury property market will grow further in 2023 by 13.5%. This is a record in itself, as no other global property market is expected to touch the doubledigit mark this year.

With strong demand drivers, visa reforms and Dubai's positioning as a global destination and tax haven along with internationally comparable ultra-prime supply catering to this niche audience, we expect demand for the prime and ultra-prime market to continue.



## ACCELERATION IN DEVELOPMENT OF VIRTUAL WORKSPACES

Developments in virtual technology are expected to transform digital employee experience starting from this year onwards.

ccording to Gartner, global spending on information technology is forecast to increase by about 5 % to \$4.6 trillion next year as businesses accelerate the pace of digital transformation. One of the major technology trends in 2023 and beyond include increased reliance on digital identities. Most users will manage their own credentials for digital payments, health applications and more in encrypted digital wallets. This will gain prominence for blockchain users to guarantee more secure transactions between buyers and sellers.

Virtual workspaces will become more common as the work of employees from multiple geographic locations increasingly overlaps. Developments in virtual technology are expected to transform digital employee experience starting this year onwards. Industry experts are also expecting a surge in automation spending as companies look to prioritise cost efficiency and driving growth by automating mundane tasks.

As companies increasingly rely on AI technology, developments in ethical and responsible AI are expecting to become more critical than ever before. This includes devising an international framework for governing AI to mitigate potential risks and misuse.

Organisational design and change management will remain a top priority. A survey by Gartner showed that employees are growing resistant to change. With digital transformation, economic uncertainty and rapid changes across multiple fronts, employees have experienced change fatigue. Therefore, leaders must prioritise change management by helping employees navigate and mitigate the impact of change on their work and



**STEPHEN GILL** Academic Head of the School of Mathematical and Computer Sciences, Heriot-Watt University Dubai.



- A major technology trend in 2023 and beyond is increased reliance on digital identities.
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- With digital transformation, economic uncertainty and rapid changes across multiple fronts, employees have experienced change fatigue.

well-being.

Additionally, leader and manager effectiveness will become critical as leadership becomes more challenging in today's hybrid workforce. Today's managers are expected to be more empathetic, adaptive, and authentic.

Companies will need to prioritise workforce planning and anticipate future talent. In the past two years, the talent gap has been an increasing concern for businesses and current strategies to combat the disruptive landscape did not yield the desired results. Therefore, a new approach that can prioritise predicting future skills needs and filing future gaps will be critical to the future of work.

Creating a position primarily dedicated to driving sustainability efforts and training employees on climate change actions is of pivotal importance. One of the anticipated trends in 2023 is ESG becoming core to business strategy, especially in light of conscious consumerism. Therefore, creating a leadership position that can cater to this is crucial.

In addition, using technology to track and mitigate the effect of climate change is essential to the climate strategy. For example, some technology companies have created tools to help consumers track emissions from their cloud and software use. Companies need to leverage technology to make products more climate friendly by optimising design, using more recyclable materials, and promoting circulate economy for electronics.

2023 will see continued developments across transformative technologies including Artificial Intelligence, A new approach that can prioritise predicting future skills needs and filing future gaps will be critical to the future of work

AI, the Internet of Things, IoT, blockchain and 5G. As such, optimising IT systems by combining multiple software engineering strategies, design and testing will become a top priority for businesses. This will allow for greater reliability, better decision-making, and protection against risk.

Companies will prioritise technologies such as industry cloud platforms and platform engineering to increase the pace of product delivery and boost connectivity. Cloud platforms combined with software including SaaS, laaS and PaaS will allow organisations to adapt to disruptions in their industry more efficiently.

The development of extended reality technologies including the metaverse, AR and VR will be a critical objective for businesses, as they are expected to reinvent how companies engage with their employees and consumers.



## **RECOMMENDATIONS FOR MANUFACTURES AND RETAILERS**

Identify opportunities by region, mitigate risks in supply chain, optimise product mix, availability of data, are some of the recommendations.



NACHO SAN MARTIN Managing Director Middle East, GfK.



- Brands need to unlock new opportunities from emerging markets and optimise the supply chain to ensure availability in the right segments.
- They would also need to boost sales performance through sustainability and retail innovation.
- Brands and marketers need to craft powerful brand positioning that sets them apart and enables long-term growth.

espite removal of pandemic-related restrictions and social distancing, Internet sales continues to grow. Here are five recommendations for manufacturers and retailers in 2023.

Different regions are facing varying levels of inflation, supply chain problems, and declining consumer confidence. In particular, many emerging markets are currently less affected by certain macro trends, with much lower penetration of consumer and durable goods. As a result, focus on developing these markets may create new growth opportunities.

#### MITIGATE RISKS IN SUPPLY CHAIN

By reassessing dependence on volatile manufacturing markets, brands and retailers can offset supply chain disruptions. This could be the development of alternative supply partnerships to spread risk, or use of tools to streamline inventory management.

### PRODUCT PIPELINES TOWARDS OPPORTUNITY

While the cost-of-living crisis may dampen consumer confidence, there are still areas of growing consumer technology and durables value that brands and retailers can focus on in their portfolios. This includes products that help save money as well as superior performing products with innovative features that add value to consumers in terms of comfort, performance or energy savings.

#### **OPTIMISE PRODUCT MIX**

Products that offer added features and functionalities have seen value growth, despite overall deceleration. Brands and retailers should prioritise these growth segments and seek out alternative creative ways to add value for price-conscious shoppers, such as utilising product bundles or offering repair kits.

#### MAKE DATA AVAILABLE

In the face of continued volatility, business leaders must arm themselves and their teams with the right data and insights to align product mix, improve buyer segmentation, and shape brand positioning in the current market.

Brands need to unlock new opportunities from emerging markets and optimise the supply chain to ensure availability in the right segments. They would also need to boost sales performance through sustainability and retail innovation. And most importantly, brands and marketers need to craft powerful brand positioning that sets them apart and enables long-term growth.



## **C-SUITE PARTNERSHIPS MUST ADAPT TO CHANGES**

As business-technology relationships change, so must C-suite partnerships and IT professionals must adapt to become orchestrators of digital projects across business.



**JYOTI LALCHANDANI** Group Vice President and Regional Managing Director META, IDC.



- C-level executives believe digital business is a crucial component of their overall corporate strategy.
- Majority of C-level executives believe digital business efforts play a substantial role in accomplishing top business objectives.
- Few companies have CEOs who personally lead digital efforts.
- Firms with CEOs that embrace digital projects have a better project success rate and receive larger commercial benefits from them.

-level executives are increasingly interested in how technology may be utilised to develop and broaden strategic alternatives, rather than just as a facilitator of already made decisions. Similarly, business leaders look to technology leaders to understand how digital can help them achieve better results. IDC sees this unique interaction between business and technology as digital-first.

According to IDC's C-Suite Sentiment Survey 2022, C-level executives believe digital business is a crucial component of their overall corporate strategy, and the majority believe digital business efforts play a substantial role in accomplishing their top business objectives.

Technology has become crucial to strategic goals in the digital business era. With pandemic-driven digital acceleration, technology opens up new opportunities in business, operating, and organisational model design, fundamentally altering how firms produce and innovate value.

As the business-technology relationship changes, so must the C-suite partnerships to reflect this symbiotic relationship. Beyond technology integration, IT professionals must adapt to become orchestrators of digital projects across the business.

Few companies have CEOs who personally lead digital efforts. While CIOs serve as technological orchestrators, leading to digital project failures caused by low ROI, lack of technology know-how in the C-suite, and inability to grow owing to organisational silos.

According to IDC research, firms with CEOs that embrace digital projects have a better project success rate and receive larger commercial benefits from them.

Customers also appreciate the convenience and real-time aspect of digital products and services. This offers up a plethora of opportunities for businesses to use data to improve customer experience. Leading firms aspire to develop empathetic experiences by redefining CX provided through web and mobile channels in order to extend reach and appeal while enhancing consumer advocacy.

Environmental, social, and governance activities by large corporations are on the rise, and can be directly linked to clean and sustainable energy, which can have beneficial environmental effects for many generations to come.

Electric vehicles, demand side management, grid flexibility, and power generation optimisation are all examples of rapidly growing areas where technology investments for both energy producers and consumers are critical in supporting the energy transition to a clean and sustainable future in the fight against climate change and environmental preservation.

Digital channels for consumer engagement, sales, and service have enabled firms to reach more people at lower costs and faster turnaround times. Digital content, social networking, e-commerce, and self-service digital assistants are all important in gaining access to underserved groups and new markets for enterprises.



# MARITIME 4.0, SPACE, AUTONOMOUS VESSELS, DRIVING INNOVATION

Aerospace and defence manufacturers are at the forefront of incorporating advanced technologies into their operations to stay ahead of hostile threats.

echnology will be at the forefront of the defence sector from 2023 onwards. New technologies such as 3D printing and Maritime 4.0 are increasing manufacturing efficiency and asset readiness, the use of autonomous military vehicles will extend to sea and new frameworks are allowing data to be gathered for the next frontier, that is space. Despite some macrolevel economic and geopolitical headwinds, the outlook for the defence industry is buoyant in 2023.

Defence forces, aerospace and defence manufacturers, defence contractors are at the forefront of incorporating advanced technologies into their operations to stay ahead of hostile threats, while ensuring military logistics exploit new technologies to the fullest.

88% senior industry executives report that the general business outlook for the aerospace and defence industry for the next year is somewhat to very positive. The driving forces behind this outlook include growth in new technologies and segments, evolving business models in areas such as space, and the use of digital thread and smart factories. All these factors should help the industry grow and create new markets in the coming year.

#### **3D PRINTING**

Additive m anufacturing is coming of age to become a base protocol for over 50% of aerospace and defence manufacturers in 2023 and will help minimise logistics footprint and reduce carbon emissions. 3D printing is being increasingly used in theatre by military forces to help with quick repairs of vehicles, ships, and aircraft. Even new safety equipment and medical supplies are being designed and prototyped for use by military forces.

Growth in the use of 3D printing in the defence industry is not expected to slow down any time soon—75% of industry leaders expect 3D printing to become a base protocol within the global defence industry in the next ten years. The ability to 3D print replacement parts and components when and often, where required, allows for military forces to be more selfsufficient and reduces maintenance wait time. Research shows that having to rely on external suppliers can normally add up to 25 days, critical in times of battle and when hostile forces may try to cut off supply lines. This will minimise the logistics footprint of forward operating bases.

#### **MARITIME 4.0**

Maritime 4.0 is beginning to show benefits in terms of improved efficiency when designing, manufacturing, and constructing ships with better coordination, clearer operations, and maintenance. Despite only being in the adoption stage of its journey, the digital shipyard market is expected to experience rapid growth.

Global professional services firm Lloyd's Register sees the shipbuilding value chain may be empowered to make better decisions and deliver smarter assets by sharing and integrating data from the influx of new artificial intelligence and machine learning.

#### AUTONOMOUS VESSELS

Autonomous ships will reduce the number of war fighters sailing into danger when out on missions as they allow for ships to enter areas that were previously seen as either dangerous or inaccessible for manned ships, to gain vital intelligence. No longer having the requirement to house personnel means bigger payload capacity,



**MATT MEDLEY** Industry Director, aerospace and defence Manufacturing, IFS.



- The driving forces include growth in new technologies, evolving business models in areas such as space, and the use of digital thread and smart factories.
- These factors should help the industry grow and create new markets in the coming year.
- Autonomous ships will reduce the number of war fighters sailing into danger.
- Space is becoming increasingly de-militarised, and the market is expected to take off over the next couple of years.

including more fuel, allowing for longer deployments or more sensors for advanced surveillance.

There is increased criticality of proper ship autonomous self-monitoring across systems, and failure projections will need to be embedded within the design to predict and plan for downtime. Without manned inspections, on-board self-diagnostics and monitoring systems must connect to the broader digital twin ecosystem, a level of automation that cannot be met by yesterday's systems and processes.

#### SPACE

Space is becoming increasingly de-militarised, and the market is expected to take off over the next couple of years. It is currently being used to navigate and track forces to avoid detection when delivering supplies or allow for precise strikes on hostile bases, and to improve communication and detect potential threats.

The race is on to get ahead in a more militarised space domain—and intergovernmental organisations such as NATO are getting priorities in order as military forces gear up for increasing reliance on spacedriven operations.

#### DATA BREACHES

Over 50% of companies will be involved in a data breach reinforcing the importance of cybersecurity as we look to enable these advancements. Increasing reliance on digital technologies to manufacture, operate and support military equipment opens up more potential vulnerabilities to cyberattacks. New autonomous vessels, new digital **88%** 

executives report that the general business outlook for the aerospace and defence industry is somewhat to very positive

manufacturing principles, and new operating environments also come with greater cyber risk.

An important requirement is for underlying software to ensure all assets and manufacturing process have the highest levels of cyber security. The software must be able to detect, report, and solve security problems and ensure, in the case of an attack, all systems are still functioning and secure.

The outlook for the defence industry in 2023 is very positive with the development of four emerging areas of new technologies and operations set to impact defence forces, aerospace and defence manufacturers, and defence contractors. However, all these developments will require a strong and secure digital backbone, with cyber security assured to make certain that this increased digitisation does not mean critical data is breached by hostile forces.



## FATIGUED WORKFORCE, TALENT COMPETITION, SPIRALLING COSTS

Strategic flexibility, systems efficiency will be crucial as organisations seek to bridge the gap between what they are and what they want to become.

loud-based systems will become even more crucial in 2023 and beyond and will facilitate secure data solutions with greater access. Data security will be amongst the most critical considerations for executives and will provide the transformational platforms needed to thrive.

With virtual reality becoming less costly and more accessible, businesses will be able to drive immersive consumer experiences across the retail spectrum as well as be an invaluable ally to healthcare providers in training and skills development. AI and robotics will continue to offer increased productivity and extend their reach to previously untouched industries, with blockchain also making huge strides in its ability to innovate and streamline processes.

The gauntlet has been laid down to organisations in 2023 and the coming years, with big challenges on the horizon coming in the form of a fatigued workforce, increased competition for talent, and spiralling costs. Making the most of existing talent and encouraging skills acquisition means employees can offer more in high-priority areas, which will ensure more flexibility.



**OMER SALEEM** CEO Proven.



**ZAID AL MASHARI** CEO Proven Arabia.



 Entities must ensure their data solutions are transparent, sharable, connected with investment in relevant architectures.

**FAKEAWAYS** 

ΚΕΥ

- The synergy between private and public companies must be inclusive and promote sharing of knowledge that trickles down to start-ups.
- Employee well-being should be right at the top of the list.
- Fostering a sense of belonging and creating a culture of inclusivity will be vital in prioritising employee experiences.
- Organisations will need to use technologies that scale across businesses, workforces, systems and partnerships.
- A grassroots approach that prioritises digital inclusion and skills development is needed to create current and future workforces.

Those in management positions will need all the help they can get. Providing added support and extra training will address the skills shortage that exists within many entities as they come to terms with an evolving role. Ethical data use in HR will also be a big talking point.

To stay onside concerning carbon emissions, organisations will need to use technologies that scale across businesses, their workforces, as well as systems and partnerships. A grassroots approach that prioritises digital inclusion and skills development is needed to create current and future workforces that are able to revolutionise business protocols in industries where emissions are paramount.

Furthermore, entities must ensure that their data solutions are transparent, sharable, and connected and invest heavily in relevant architectures. This will need to be supplemented with collaboration between various teams, including digital, sustainability, and operations. The synergy between private and public companies must be inclusive and promote the sharing of knowledge that trickles down to start-ups.

Though every executive will likely have their own objectives unique to their organisation and people, some goals should be universally accepted as being important in the broader business landscape. Employee well-being should be right at the top of that list. Fostering a sense of belonging and creating a culture of inclusivity will be vital in prioritising employee experiences.

Strategic flexibility and systems efficiency will also be crucial as organisations seek to bridge the gap between what they currently are and their aspirations of what they want to become. Establishing and strengthening roles in leadership will ensure better retention and improved culture, which will require training programs and a willingness to try new strategies.

PROVEN is well-placed to aid organisations and their leaders in achieving their goals across multiple industries. And when it comes to HR solutions and strategies that allow them to build their culture and take advantage of fluid market conditions, PROVEN's reputation as a partner for growth is there for all to see.

Its AI and ML tools are a great boon for any business; removing stressful, time-consuming daily tasks will allow employees to focus on what they do best. Less stress, more productivity, better retention, and job satisfaction are the name of the game.

## 2023 WILL NOT Be the year of chaos



Robust scenario analysis, near real-time monitoring, and general organisational agility will rule the day as essential requirements of business this year.

023 will not be the year of chaos. In fact, 2023 will mark the return of some degree of predictability. The economic impacts of this once-in-alifetime pandemic were to be expected: pentup demand, tight labour markets and supply chain struggles. These factors in combination were bound to stoke inflation, prompting rate increases as an obvious policy response.

Anticipate increased delinquencies in retail and commercial portfolios and high market volatility as the world continues to navigate the fallout. Robust scenario analysis, near real-time monitoring, and general organisational agility will rule the day.

#### **AI AND MONEY LAUNDERING**

Criminals and tax evaders have emerged as among the cryptocurrency boom's greatest innovators, leaving a big gap in the effectiveness of suspicious activity reports. As global conflicts continue to fuel substantially increased sanctions against bad actors, financial intelligence units will rethink how they operate, from legal authority to IT systems that support their missions.

Singapore, Germany, Canada are likely forerunners to spark the first wave of modernisations that spurs broader anti-money laundering innovation focused on AI and realtime capabilities.

#### **RISE OF CLOUD**

As changing relationships across risk factors expose the limits and weaknesses of legacy risk management systems, financial institutions will turn to APIs and other tools to patch or replace weak links as they are found. Cloud computing and speed-to-market of targeted solutions will grow significantly more important as institutions first seek to plug the leaks in the dam before tackling large-scale replacement of legacy systems.

#### **CRIME DRIVES CRYPTO**

While recent events will certainly drive increased regulatory scrutiny, cryptocurrency is not dead. Crooks will continue to use crypto to mask their nefarious activities and launder their ill-gotten gains. In turn, law enforcement and regulators will better hone their ability to understand the movement and exchange of illicit funds, improving the industry's ability to triangulate human trafficking, drug dealing, money laundering and other criminal activities with speed and precision.

#### SCENARIO CREATION

Swirling uncertainty around climate change, geopolitical instability, energy crises and other factors will inspire a scenario management and analysis renaissance. Far from being a static output, scenario will become a dynamic output of dedicated risk models. Topics like scenario creation, scenario perturbation, risk analysis associated with a given scenario and reverse-engineering of a scenario will be able to answer questions left unanswered by traditional approaches.

#### **CUSTOMER ACQUISITION**

The ability to make decisions across the entire customer lifecycle will become a significant differentiator in the race to gain and retain customers. Think holistic decisions across risk, fraud, and marketing, all on a single architecture, creating an exclusive customer experience that can set one apart from the competition. Increasing fraud losses and a drive towards automation will motivate centralised governance over disparate solutions and consolidation of decisioning capabilities at onboarding and throughout the customer journey.

#### PREMIUM ON CLIMATE CHANGE

As financial risks from climate change are better



**ANTHONY MANCUSO** Director, Risk Solutions Consulting, SAS.



- Criminals and tax evaders have emerged as among the cryptocurrency boom's greatest innovator.
- Cloud computing and speed-to-market of targeted solutions will grow significantly more important.
- Swirling uncertainty around climate change, geopolitical instability, energy crises will inspire a scenario management renaissance.
- Ability to make decisions across the entire customer lifecycle will become a significant differentiator in the race to gain and retain customers.
- As financial risks from climate change are understood, banks will begin pricing it into mortgages and commercial loans.

understood, banks will begin pricing it into mortgages and commercial loans. Prepare to pay higher prices if you live in active hurricane, flood and fire zones.

#### MARKET SHAKE OUT

Rising interest rates and the strengthening of the US dollar signal trouble in the face of historically high sovereign debt and ongoing geopolitical instability. 2023 could see a string of sovereign defaults, while liquidity challenges in treasury markets have the potential to spark flash crashes, exacerbating market fragility.

These factors combined will force an economic reckoning, particularly among so-called zombie firms - companies that do not turn enough profit to cover their debts, as borrowing becomes more expensive and less abundant. Companies that lack strong balance sheets and ability to generate cashflows will be at high risk of default, while those that survive are apt to prioritise the quality of earnings and cashflow sustainability over their growth rates.

#### **ESG AND BANKS**

Amid ongoing economic turbulence, one might expect financial institutions to pull back on environmental, social and governance, ESG initiatives – but signs point to most banks staying the course or doubling down. Financial services leaders recognise the opportunity to shore up longterm resilience, even as they weather the coming storm.

With ESG as a north star, banks could emerge from this recession more fiscally resolute, and those that lead in the ESG revolution will no doubt reap the added reward of having furthered customer trust and loyalty in the process.

A recent survey of 500 banking executives revealed that three-quarters, 76% believe financial services has an obligation to address societal issues, and yet 64% of executives think banking lags behind other sectors in advancing ESG goals.

#### **GLOBALISATION RETREAT**

Amid ongoing supply chain contraction and mounting political and social pressures, we will see a massive retreat from the globalisation that has driven the world for the last 30 years. As business ecosystems shift to operating more regionally, global financial services firms will adjust their strategies and operations rapidly and pragmatically.

This could present new opportunities for geographically aligned fintechs and insurtechs to integrate with traditional industry players, boosting agility and innovation for all. As the business climate grows less hospitable, such partnerships would represent a valuable lifeline for tech upstarts. Those who go it alone will struggle to survive.

Additional inputs from Stu Bradley, Senior Vice President Fraud and Security Intelligence; Stas Melnikov, Head of Risk Portfolio; Alex Kwiatkowski, Director of Global Financial Services: Martin Zorn, Managing Director, Risk Research and Quantitative Solutions: Dan Barta, Principal Enterprise Fraud and Financial Crimes Consultant; Naeem Siddiqi, Senior Advisor for Risk Research and Quantitative Solutions; Shaun Barry, Global Director, Fraud and Security Intelligence; Norman Black, Director, EMEA Insurance Solutions; Christian Macaro, Principal Risk Solutions Advisor; all at SAS.



As first-party data becomes more significant and consumers become more conscious of their data, third-party cookies will soon become obsolete.

conomies and businesses are becoming proactively prudent about managing data, but your personal information is still vulnerable. Despite the increased awareness and collective intent to safeguard data, inadequate, ambiguous or poor data security management systems have led to a rise in data breaches recently.

According to a report by IBM and Ponemon Institute, the average cost of a data breach touched a record high of \$4.35 million in 2022. The researchers arrived at the staggering number based on several cost factors such as legal, regulatory, and technical activities, loss of brand equity, customer turnover, and drain on employee productivity.

More than financial losses, data privacy breach or non-compliance could have an irreparable toll on an organisation's reputation and erode stakeholder trust.

Given the rise in cybercrimes, organisations need

a two-pronged strategy. First, however robust your security systems may be, it is imperative to keep updating them. More essentially, the leadership should focus on strengthening their defences by looking ahead, predicting the emergence of future cyberthreats, and comprehending the wealth of new defensive capabilities that businesses can use both now and in the future.

Here are five industry trends on data privacy this year:

#### **GREATER EMPHASIS ON PRIVACY BY DESIGN**

In the past, privacy was often an afterthought when it came to the development of new products and services. However, this is beginning to change. More and more companies are realising that building privacy into their products and services from genesis is not just the right thing to do, but it can be immensely rewarding for business.

As a result, in 2023 we will see a shift towards a privacy by design approach, where companies



ASTRID GOBARDHAN Data Privacy Officer, VFS Global.



- We will see a shift towards a privacy by design approach, where companies prioritise user privacy at every stage.
- Companies must implement stricter data privacy policies to ensure compliance with regulations and to protect personal information.
- Customers will have the ability to access, correct, delete their personal information, and ability to opt-out of certain types of data collection
- This win-win builds trust and fosters a sense of transparency and accountability.

prioritise user privacy at every stage of the development process.

#### RISE OF PRIVACY-FOCUSED TECHNOLOGY

As consumers become more concerned about their online privacy, there will be a surge in demand for technologies that prioritise privacy. This includes everything from secure messaging apps and browsers to virtual private networks, VPNs and encrypted email services.

It is important to note that while these tools can certainly help to protect your data, they are not a magic bullet. Organisations still need to be vigilant and take steps to secure their information.

#### **INCREASE IN REGULATIONS**

Governments around the world are taking notice of the growing concern over data privacy and are starting to act. Since the General Data Protection Regulation of the European Union went into force in 2018, there has been a steady rise in these restrictions. This trend, of increased restrictions, is likely to continue, as more and more countries look to implement their data protection regulations.

The United States is currently considering passing a federal data privacy law like the GDPR. Other countries such as Canada, Australia, Japan and India have also introduced or are in the process of introducing new data privacy laws.

Companies must implement stricter data privacy policies and procedures to ensure compliance with these regulations and to protect the personal information of their customers.

#### **GREATER TRANSPARENCY**

The trend towards greater transparency in data privacy is driven by the increasing awareness of the importance of protecting personal information and the need for organisations to be more accountable for their data collection and use practices. In 2023, organisations will begin to be more transparent about their data practices by providing individuals with more control over their data.

This includes giving individuals the ability to access, correct, or delete their personal information, and the ability to opt-out of certain types of data collection. This is a winwin for both consumers and businesses, as it helps to build trust and fosters a sense of transparency and accountability.

#### **GOODBYE COOKIES**

As first-party data becomes more significant and consumers become more conscious of their data, third-party cookies will soon become obsolete. Many companies and organisations are now looking to move towards a cookie less future by implementing new technologies and methods for tracking and targeting users.

For example, some companies are exploring the use of browser fingerprints, which are unique identifiers that can be used to track a user without the use of cookies. Other companies are experimenting with the use of privacy-enhancing technologies to provide a more secure and private way of tracking users.

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# GCC STREAMING VIDEO, AMONGST HIGHEST GLOBALLY

GCC's high rate of video-on-demand subscriptions does not come as a surprise considering the region has one of the highest Internet penetrations in the world.



**ROGERIO DIENES** Partner and Lead, Oliver Wyman's Communications, Media and Technology, India, Middle East and Africa.

eople in the GCC have access to an average of three video-ondemand, streaming services, according to a new survey by global management consultancy Oliver Wyman that analysed household media consumption habits around the world.

The survey canvassed people in three countries across the GCC including UAE, Kuwait and Saudi Arabia.

The GCC having a globally high rate of video-on-demand subscriptions does not come as a surprise considering the region has one of the highest penetrations of Internet users in the world. Additionally, the finding that GCC consumers are more likely to increase the number of video-on-demand subscriptions compared to other regions is in part connected to the fact that consumers here are facing less inflationary pressures on their wallets compared to those in other parts of the world.



**NADER KOBROSLI** Partner, Oliver Wyman's Communications, Media and Technology Practice.

The survey also shows that the under 25 age group is the group most likely to increase their access to subscriptions. Despite having the lowest income bracket, under 25s are generally the first movers in the shift to digital, so we expect them to continue to be the major driver of growth for video-ondemand subscriptions in the GCC.

The Oliver Wyman Global Household Media survey canvassed more than 13,500 people in 10 countries including Australia, Canada, France, Germany, Kuwait, Saudi Arabia, Spain, the United Arab Emirates, the UK, and the USA.

#### SUMMARY OF FINDINGS

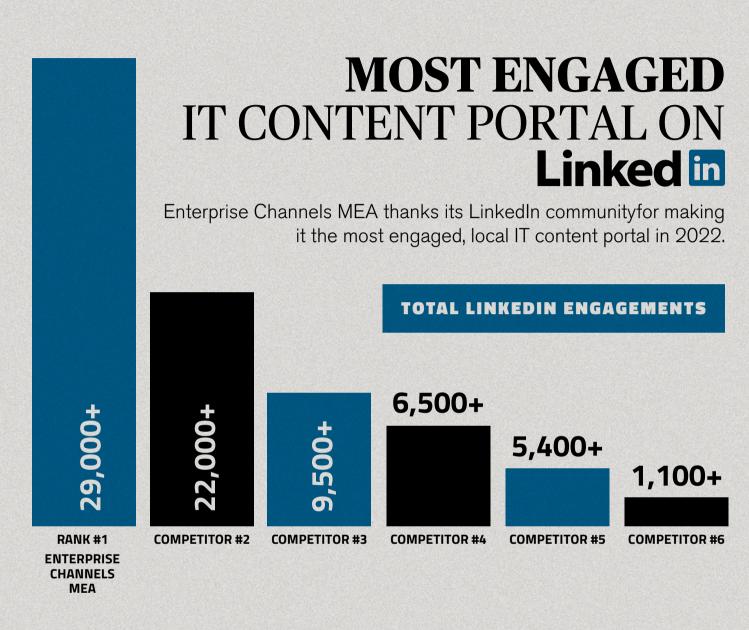
- The UAE consumer has access to the highest number of VOD services on average, with 3.1, followed by Saudi Arabia, 3.0 and then Kuwait, 2.5. VOD services include those such as Netflix, Shahid, Amazon Prime, YouTube Premium, others.
- 60% of UAE respondents have

access to 2 or more VOD streaming services.

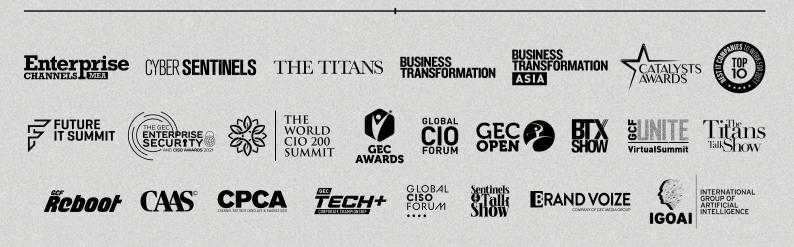
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- In the UAE, only 12% of respondents do not access any VOD services, while 22% of those in Kuwait and 20% of those in Saudi Arabia do not access any VOD services.
- GCC consumers access the second highest number of VOD services per person, with an average of 2.9; second only to the United States of America, where each person has on average 4.7 VOD subscriptions. The GCC has higher penetration than Canada, 2.8 on average and Europe and Australia, both 2.6 on average.
- Importantly, GCC has the highest potential for growth in subscriptions when compared to the other regions surveyed: 75% of respondents in the GCC said they expect to increase the number of VOD streaming services they access. This suggests much more appetite for growth in the GCC than in the other regions: in Europe, only 37% expected to increase subscriptions, with 34% in Australia and 29% in the USA.
- Within the GCC, respondents in Saudi Arabia showed the highest appetite for growth in subscriptions, with 80% stating that they are likely to increase the number of video streaming services that they access.





PERIOD: 31 DEC 2021 TO 30 DEC 2022 SOURCE: LOCAL LINKEDIN ANALYTICS



# ADDRESSING THE BLAME GAME TO BECOME PERSONALLY PRODUCTIVE

When we have less blame in our life, we experience less mental and emotional pain with a sense of confidence that replaces feelings of inadequacy and things just seem to fall into place.

o you think you blame too much? Maybe you, like many others, haven't even given it a second thought. You might be thinking what's wrong with blame? Isn't blame a normal part of life? It is harmless, right?

I definitely didn't pay it any attention for the first three decades of my life. I lived on autopilot; unaware I was blaming in just about every conversation I had. I didn't understand the role I played on how my life turned out. I was always quick to find the perpetrator for why I thought I was being held back and unhappy. Often I didn't have to look much further than myself.

Sometimes the perpetrator wasn't even human. I would wake up in the morning with a stiff neck or tight back and immediately blame the pillow or bed. I was convinced my perfectly good pillow and bed, that had served me well all year, went bad overnight. I am not saying we don't need new ones now and then, but it isn't them that change overnight, it is us.

Back then I didn't realise being in the blame mindset limits my solutions – either cope for as long as you can or get a new one.

The question is, how many pillows did it take me before I realised the pillow wasn't the issue? Quite a few. I didn't realise it was the argument I had with my girlfriend, or my fear around money that meant I went to bed tense. It is the same with our partners and bosses. How many do we need before we realise it isn't them that needs to self-reflect and heal, it is us. It might seem obvious when it is pointed out, but that is one of the issues with blame, we don't see what is hiding in plain sight. We don't see our contribution to what happens in our life, so we get used to taking less and less responsibility for it.

#### **BLAME IS NOT A GAME**

Playing the blame game is well known all over the world. Like any game they are fun. But even the most fun games get exhausting when they are played a lot. Imagine playing your favourite game all the time all day. To some people that might sound fun, but again, what about if you played it for 10, 20 or 30 years constantly, every day. The point is, when it turns into an addiction, and it is all you can think about, the fun stops. You might be able to occasionally distract yourself, but that nagging need to get your dopamine high is constantly in the background.

The issue is, blame has become so ingrained into the very fabric of our being we are unaware we have this addiction. Meaning we are doing nothing about recovering from it. In fact, we are doing the opposite, we are feeding it without knowing it, and then wondering why we are experiencing so much suffering, hardship and pain.

#### **RECOVERY PLAN**

The reality is, when we have less blame in our life, we experience less mental, emotional and physical The first stage is awareness that we have an addiction to blame

#### **DENIS LIAM MURPHY**

Author, Co-Founder of RoundTable Global and high performance coach.

We don't want to make blame the next thing we look to avoid

# **INSIDE OUR** WORK MINDS

To help my clients realise they are blaming more than they realise, I explain that anger, frustration, disappointment and resentment all originate from blame. I then ask them to think about how much they are in these emotional states. Some are very aware they need help in these areas, while others tell me they don't experience them. That is until I point out how angry they said they were towards their boss, partner, parents or siblings.

It can be so normal to feel these blame-based emotions we don't know we are consciously or unconsciously in them. We get so used to pushing these feelings down, we become desensitised, not realising how much it influences our thoughts and decisions.

Because this addiction has unknowingly been playing out for thousands of years, we really don't appreciate the profound impact it has on all aspects of our individual and collective lives.

One of the reasons I get results that are often described as impossible, is because I don't use any coping or controlbased tools or techniques as part of my philosophy. Many other approaches to mindset change and healing have foundation steeped in blame and rely on control-based methods to reprogram, refrain or rewire our brain. Not realising they have accepted the greatest myths we have ever been sold. And that is that our mind and brain is malfunctioning. They are trying to fix something that isn't broken.

It is our blame addiction that encourages us to think something needs fixing when we don't understand it. But this is like going into an ecosystem like a rainforest and blaming the trees for growing in the wrong place, or doing something they shouldn't be doing. However, when we have more information, awareness and wisdom, we become aware why that part of the ecosystem is doing what it is doing for the benefit of the whole.

When I suggest this to my clients, at first it can seem like such a strange concept to think we have an unknown daily habit that impacts everything we do.

I do let my clients know before they sign up with me that the recovery process isn't always for the faint of heart. We have had thousands of years of doing all we can to be stoic and fake positive, and giving our power over to others to heal us. This approach to life has helped us to keep going through tough times, but it is like the beauty filter on Instagram - it might help us in the short term, but we know it isn't honest and it is hiding some deeper insecurities. We are not skilled in being honest with ourselves. pain. This becomes very obvious when you start the blame recovery process. And what's more, as you become less reliant on blame your life becomes more harmonious and effortless. You gain a deep sense of confidence that replaces any feelings of inadequacy or imposter syndrome. Things just seem to fall into place.

So, the first stage of the recovery process is awareness that we have an addiction to blame. And to understand that blame closes our mind so we only see in absolutes. We start to see in black and white only. An experience is either positive or negative with no other possibilities. This is a very stressful way to live.

So, the next stage is to open our mind so we can start taking in more information. Exploring alternative viewpoints on a regular basis is paramount to opening our mind. We have to train our perception muscle through creative endeavours.

Opening your mind will help with one of the most important stages in the recovery process.

#### LIFTING THE RUG

I get it, if a stranger had said to the much younger me that blame had a profound impact on my mental, emotional and physical health, I would have given them a strained smile and changed the subject. If they told me I was addicted to blame I would have made my excuses and got out of there as quickly as possible.

However, it often takes one or more extreme experiences for us to stop and take stock of our life. I had a few of these. The last one I had, at the age of 36, saw me selling everything I owned and buying a backpack to take on my global travels in search of myself. It was during that time that I started to unpack blame.

I came across a few people talking about it, but still, something didn't feel quite right with me. They all had the same solution, "STOP blaming' and 'Take extreme responsibility for your life!"

But, if this forced, control-based approach worked, then we wouldn't have any addictions. Or issues for that matter. We would just tell ourselves to stop them or let them go and we would be done. Using willpower is a shortterm solution that comes with long-term consequences.

The longer we keep pushing our 'stuff' under the rug and holding it down with control, the more exhausted we become. And when we run out of energy, we come face to face with everything we have been hiding from all at once. To say this can be uncomfortable is a gross understatement. It is downright overwhelming.

What this means is, rather than wait for the next explosive and painful experience, it is time to gradually lift the rug and have a peek inside. It is time to see what our self-honesty looks like.

#### FACE TO FACE WITH YOU

This is an important point. The blame recovery process is a skill. It needs to be treated in this way. If you want to get so good at something that it becomes effortless, then you have to put the effort in before you reach that point. Remember your first driving lesson? If you were like me it was a nightmare. Now, I don't even think about it. My unconscious does most of the work.

Self-healing from our mental, emotional and physical issues is the same. We are expert blamers, now we need to become experts and self-reflecting and becoming aware of our contribution to the experiences we have. We have to become aware that all that self-honesty that is always pushing up against the rug, is influencing every thought and decision we make.

This unconscious influence is helping us cocreate experiences that will give us opportunities to see what we are hiding from. If we are complaining about the angry and negative people in our lives, then maybe we are not as calm and positive as we think we are.

The better we get at seeing ourselves in others, the less we blame them. This alone can start the self-healing process. There is more that can be done but getting to this point and practicing can reap tremendous benefits in all areas of your life.

The goal isn't to blame blame. We don't want to make blame the next thing we look to avoid. It is our relationship with it that needs to change. The same is true with anything we are addicted to. The thing or the behaviour is only problematic when we can't imagine living without it.

In his book, The Blame Game: How to Recover from the World's Oldest Addiction, Denis Liam Murphy, who coaches clients with fifteen years of entrepreneurial experience, presents the New Murphy's Law and the secrets to recovering from the blame addiction we all suffer from.

### Pine Labs established with large banks in India, Southeast Asia enters UAE with POS solution

Leading merchant commerce omnichannel platform, Pine Labs announced that it has entered the United Arab Emirates market. Pine Labs will partner with local banks and financial institutions in the region to help them serve their merchant partners better.

Banks in the UAE will benefit from a simple and easy-to-use technology stack that Pine Labs offers to build innovative products into consumer journeys. Pine Labs has existing partnerships with large banks in India and Southeast Asia and has enabled world-class point-of-sale payments infrastructure for the customers of these banks.

Local incumbent banks in the UAE will get seamless tech integrations that Pine Labs is known to deliver at speed and scale. Such partnerships are expected to fasten product delivery for these banks



(Left to right) Sumit Mittal, SVP and Head of Business, Pine Labs and Kush Mehra, Chief Business Officer, Pine Labs.

and help them introduce quality fintech products to meet the growing needs of their customers.

A new Pine Labs office at Emaar Business Park, Sheikh Zayed Road, Dubai, was also inaugurated by Pine Labs' Senior Leadership. Pine Labs has also announced its partnership with Kalyan Jewellers which has a significant presence across the UAE and is a well-known brand among India's expat community in the region.



### Food-tech supply chain platform NOMU launches MENA operations after pilot testing

NOMU, a food-tech supply chain platform in the MENA region that soft-launched in 2022 and went through a pilot phase of testing for a year, has officially launched operations across the region, set to reinvent groceries for families and homegrown F&B professionals.

NOMU is a holding group created from the merger of two companies, Jumlaty and Appetito. Saudi Arabia-based Jumlaty is an end-to-end supply chain as a service solution for small and medium restaurants, a one stop shop aggregator of all major food suppliers. The Jumlaty brand is now expanding into North Africa and taking over all existing B2B offerings.

Egypt-based Appetito, is an on-demand online supermarket tailored for families and focused on reliability rather than speed. Leveraging AI Dynamic pricing, Group Buying and Chat Ordering to enhance the shopping experience. The Appetito brand is now expanding into the Kingdom and taking over all existing B2C operations.

The food tech supply chain industry in the region has long been fragmented with various problems that both the B2B and B2C sectors face when sourcing food; lack of data sharing which is generating a bullwhip effect, increased costs, product shortages, and unreliable delivery promises. NOMU solves this problem by offering a comprehensive solution that streamlines the supply chain and allows for seamless communication and data sharing.

The platform focuses on providing both hospitality brands and consumers with affordability and smart pricing of F&B products by directly sourcing from FMCG companies on behalf of customers, storing the goods in its warehouse and delivering directly to the customers, ultimately providing wholesale bundles at the best price guaranteed.



# Virtual traffic light system eliminates waiting at traffic light when no other cars present

Stakeholders in the traffic signals market are focusing on the development of virtual traffic lights. Virtual traffic lights receive data about oncoming vehicles and combine it with readouts from digital mapping services. The vehicle data on the location, direction, and speed is received by other vehicles as well as the virtual traffic light system, to give commands based on the flow of traffic.

For example, researchers at US based Carnegie Mellon University

are working towards developing a virtual traffic light system, which eliminates waiting at a traffic light when no other cars are present. The system uses vehicleto-vehicle technology, which can be implemented in road signals and other areas of infrastructure as well.

The global traffic signals market size will grow from \$26.21 billion in 2022 to \$28.41 billion in 2023 at a compound annual growth rate, CAGR of 8.4%. The Russia–Ukraine war disrupted the chances of global economic recovery from the COVID-19 pandemic, at least in the short term.

The war between these two countries has led to economic sanctions on multiple countries, a surge in commodity prices, and supply chain disruptions, causing inflation across goods and services and affecting many markets across the globe. The global traffic signals market size is expected to grow to \$38.1 billion in 2027 at a CAGR of 7.6%.

The increasing road traffic accidents are expected to be a major driver for the traffic signals market. With the growing population, and its need for more cars, two wheelers and buses, road and train accidents have increased and are expected to grow in the future. Hence, governments across the world are expected to pay more attention towards road safety, which will help the traffic signals market grow.

### Mandarin Oriental, Valtech, Sitecore transform digital presence of Mandarin Oriental

Valtech has partnered with Mandarin Oriental Hotel Group to launch a new digital experience. Mandarin Oriental had the foresight to invest early and put themselves at the forefront of the industry in preparing more personalised digital experiences to greet increased post-COVID traveller demand, which is forecasted to continue to increase sharply through 2026.

Partnering with Valtech to transform its online presence in the heart of the pandemic resulted in an initial relaunch in time for the first travel surge in December 2021. This rapidly showed results; the average revenue per booking increased by more than 40% and engagement behaviours rose more than 10%.

Mandarin Oriental and Valtech have now completed the grand relaunch of Mandarin Oriental's sites for all its global locations, including the UAE where it owns and operates iconic properties in Abu Dhabi and Dubai, to meet the continued increase in travel demand ahead of competitors in the industry; the new online presence enhances the visual



Kareem Monem, Regional Managing Director at Valtech MENA.

experience and flow for travellers, all supported by the replatforming of the website to Sitecore.

This further investment has extended the success of the new digital experience, with numbers from the full relaunch showing year-over-year increases in organic traffic, 90.8%, unique visitors, 17%, and revenue, 42%.

The UAE's hospitality industry saw strong recovery through 2022 as the total number of hotel guests in the first half of the year increased by 42% to reach 12 million. In Dubai occupancy rates through 2022 averaged an impressive 76%. To accommodate this robust recovery, Mandarin Oriental had the foresight to lead the hospitality industry in providing guests with a unified, unique experience across both physical and digital properties.



Egypt schools Rajac International, OWN Heliopolis expand use of McGraw Hill's digital content

McGraw Hill announced that two prestigious institutions in Egypt, Rajac International School and OWN Heliopolis School, intend to expand their use of McGraw Hill's state-of-the-art digital content for students in grades kindergarten through 12. The new agreements expand existing engagements with the institutions, which already use McGraw Hill's Inspire Science, Reveal Math, and Wonders reading programs with their students.

These multi-year agreements bring personalised learning experiences to the schools' students through McGraw Hill's digital learning platforms, including ConnectEd and Online Learning Platform.

Rajac International School strives to provide the best quality educational experience in order to upbring a generation of youth that is mentally, physically, and socially capable of meeting the challenges of a rapidly changing and highly demanding world.

The signing ceremony for the agreement with Rajac International School included the presence of Shereen Kassem, School Principal, senior representatives from McGraw Hill and Modern English Bookshop, a key delivery partner for McGraw Hill in Egypt, who was instrumental in putting this deal together.

OWN Heliopolis School is dedicated to a student-centred program that promotes academic excellence through enriched, inter-disciplinary curriculum, ensuring that students become critical thinkers, active problemsolvers, interested readers, thorough researchers and creative writers.

The agreement with OWN Heliopolis School was signed at a ceremony in the presence of Hany Sedrak, Chairman of OWN Heliopolis School, along with senior representatives from McGraw Hill and Modern English Bookshop.



# Airbus estimates 640,000 new commercial aircraft technicians required by 2041

Airbus expects the services market to recover to pre pandemic levels in 2023 and to double in value over the next 20 years – from \$95bn today to over \$230bn in 2041, according to its latest Global Services Forecast. As a result, the number of people working in aviation services, keeping the world's fleets flying on a daily basis, is set to increase by a further two million.

A compounded annual growth rate of 3.7%, will lead to a doubling in the value of the services market in the next two decades with a bigger than ever demand for highly skilled labour: 585,000 new pilots, 640,000 new technicians and 875,000 new cabin crews.

As operators focus more on their core business, services to improve aircraft availability and efficiency will increasingly be outsourced, boosting the market for those providers. These services will be driven by sustainability and enabled by digitalisation, connectivity and innovation, to maximise efficiency in support of CO2 net zero ambitions.



Search for power outage according to address

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# Israel Electric using Prisma Photonics to monitor I,000+ km of national grid

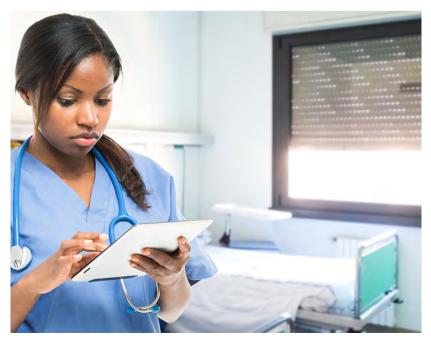
Israel Electric Corporation has announced that the agreement will extend its cooperation with Prisma Photonics which has been using optical fibres to monitor the national transmission grid since 2020. The extension will expand Prisma Photonics' coverage to 1,000 km over 620 miles, which is 20% of the transmission grid. The solution will monitor events threatening the regular operation of the power network and alert on faults with exact geographical locations. Monitoring will allow better grid management, fast fault response, and increase the grid's reliability. In addition, collected weather and grid data will optimise the existing network, paving the way to better integrate renewable energy sources on the path to net zero emissions and IEC's long-term sustainable vision.

PrismaPower will alert on events occurring on the network and enhance the ability to incorporate renewable energy into the existing grid. PrismaPower uses the existing optical fibre network to monitor hundreds and even thousands of kilometres on the grid. It measures weather conditions around the electrical lines, locating faults and vandalism.

The information and alerts pinpoint the location of the closest power tower, enabling quick response to restore service to normal. PrismaPower also uncovers slow processes such as partial discharges, which can harm the network, thus allowing preventive maintenance and increasing the power network's resiliency.

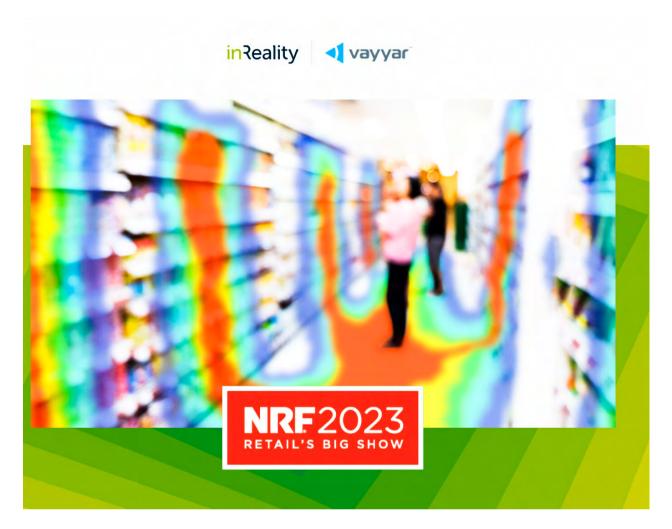
The Prisma Photonics system is based on a ground-breaking technology anchored in several patents. Having won several technological contests worldwide, infrastructure operators have already used its technology globally. PrismaPower is the world's first fibre optics based electrical overhead powerline monitoring solution capable of monitoring thousands of kilometres.

# Datos Health platform to provide remote patient care for Israel's 24 healthcare centres



Datos Health, a global leader in remote care automation, announced that the company will provide virtual visits, specialty care, chronic care, and transition of care services throughout Israel's 24 public hospitals, mental health centres, and geriatric facilities.

The Directorate of Government Medical Centres sought a flexible field-proven medical technology platform to build and deploy remote care programs to improve the quality of care. The Open Care platform enables them to customise protocols to fit their unique approach to healthcare quickly and easily.



# inReality partners with Vayyar to reinvent shopper analytics using 4D imaging radar

inReality, the pioneering provider of retail analytics for physical stores, has partnered with Vayyar, the global leader in 4D imaging radar, to shed new light on shopper behaviour. Brick-andmortar retailers of all sizes, as well as consumer brands, can now use inReality's comprehensive, cloud-based turnkey solution and Vayyar's bestin-class radio frequency sensors to understand and influence shopper engagement at key areas of interest throughout any store.

The integrated solution accurately counts traffic, flow, engagement and the average dwell time of engaged shoppers at in-store locations including island displays, end caps, and inaisle fixtures, with complete configurability for proximity and dwell time.

Store designers, merchandisers and store media planners can leverage these actionable

insights – the real-world equivalent of website user experience analytics – to evaluate the performance of promotions on premium in-store real estate, while optimising store layout, driving contextual selling, and adding new levels of personalisation to the in-store journey.

Because no optics are involved, Vayyar's 4D imaging radar sensors require no line of sight and maintain privacy at all times, a critical advantage over cameras.

The inReality platform also compares entrance traffic to sales, staff hours, and marketing spend, revealing conversion ratio, staffing efficiency, and marketing impact respectively. In addition, retail networks can compare data across stores, time periods and individual campaigns, allowing them to learn from experience and rapidly replicate success.

### NYU Abu Dhabi studies representation of women amongst 18,000 scientific journal editors

To determine the representation of women among scientific journal editors — key players in the scientific community who have the final say about what papers get published — a team led by NYU Abu Dhabi researchers has completed the largest study to date of systemic gender inequality in editorial boards over the past five decades.

Since scientific editors shape the content of academic journals and set standards for their fields, gender disparity can influence opportunities for women to publish in these journals, receive recognition for their research, and advance their careers.

The NYUAD researchers and their colleagues studied both the gender composition of editorial boards across fifteen disciplines and the rate at which editors publish their own research in the journals they oversee.

They found that women have been consistently underrepresented on editorial boards across disciplines, and editors could publish up to 70% of their papers in the journals they edit while continuing to serve as editors. However, women were found to be less likely to publish their own



(Left to right) Bedoor AlShebli, Assistant Professor, Computational Social Science; Fengyuan, Michael Liu and Talal Rahwan Associate Professor, Computer Science.

work in their own journals.

In the paper titled Gender inequality and selfpublication are common among academic editors published in the journal Nature Human Behaviour, the NYUAD researchers used algorithmic tools to infer the gender of 81,000 editors serving more than 1,000 journals and 15 disciplines over five decades and found that only 26% of authors in the data set were women, and even fewer women were editors, 14% or editorsin-chief, 8%.

While being the gatekeepers of science, editors also actively seek opportunities to publish. The vast majority of editors are research-active academics who perform editorial duties in addition to their research activities. By analysing the publication records of 20,000 editors, the researchers found that 12% publish at least one fifth, and 6% publish at least one third, of their own papers in the journal they edit.



### National Bank of Fujairah introduces dynamic changing CVVkey to tackle online card fraud

In a nationwide first, National Bank of Fujairah has announced introduction of CVVkey, a proven solution to online card fraud that can be used across all credit and debit cards issued by the bank. CVVkey will be a key element in NBF's efforts to improve cybersecurity across its operations and protect its customers from fraud and other online threats. According to fraud analysis, while the fraudulent capture of card details can occur at point-of-sale machines and at ATMs, over 90% of payment card fraud takes place online. Furthermore, in over 90% of cases, stolen credit and debit cards are used to commit fraud online, where the card PIN number is not required.

Even cardholders who never use their cards online can be victims. CVVkey solves this vulnerability by replacing the 3-digit CVV code on the back of the card with a dynamic CVV code that changes throughout the day that is easily accessed through the CVVkey app on the cardholder's phone.

Every few hours, the CVVkey app provides a unique 3-digit dynamic security code for each card enrolled in the service. Whenever the three-digit security code on the back of the card is requested, the cardholder simply enters the fresh code from the app on their phone. Thanks to the dynamic nature of the security code, if the card is ever compromised or stolen, unauthorised online purchases will be denied.



# Bahrain based International Payment Services to use e-payment platform SmartVista

Leading payment solutions provider BPC has extended its collaboration with Bahrain-based International Payment Services, a leading third-party payment processing and payments firm. As part of the agreement, BPC will allow IPS to extend the use of its open system e-payment platform 'SmartVista'.

Headquartered in Bahrain and licensed by the Central Bank of Bahrain, IPS supports banks and financial institutions to manage their end-to-end payment processing functions Since the launch of IPS in 2017, BPC has been engaged with IPS to help develop, certify products to support banks, fintech, government entities and merchants with its state-of-theart digital payment platform.

Through the use of BPC's SmartVista platform, IPS is able to perform core payment activities that involve third party processing services, electronic payment gateway solutions, prepaid cards, wallets and switching services. The platform ensures the highest infrastructure standards and the most advanced security setups.

The complete range of products and services forms a part of the unified SmartVista platform which results in delivering a costeffective solution. Over the course of this four-year engagement, SmartVista's integrated capabilities have helped leverage IPS' business prospects in gaining significant market share while also serving as a hub for banks looking to optimise their operations in the Middle East and Africa.

IPS is now ready to take the next step in its scaling journey and through its renewed collaboration with BPC has extended its use of SmartVista. This will support the expansion of services as IPS welcomes more banks into its processing centre for instant card issuing channel management including ATM, POS, internet and mobile banking, end-to-end merchant management and fraud prevention.

### WebEngage to offer retention stack to Titan, Mr Baker, Etmana to drive unique customer experience

WebEngage, the leading full-stack Retention Operating System, announced partnerships with Titan UAE, Mr Baker UAE, and Etmana Egypt, key retail brands that stand for excellence in their respective domains. WebEngage will leverage its retention stack to help these brands drive unique customer experience across multiple channels by organising data, developing analytical-driven customer insights and driving one-on-one personalised engagement.

The uptake of AI-powered, data-driven customer engagement solutions comes on the back of brands' growing need for differentiation in competitive retail and e-commerce space, especially in the MEA market. The emphasis on retention marketing is underpinned by the fact that retention is more financially feasible and profitable than the acquisition of new



Hetarth Patel, VP MENA and Managing Director UAE, WebEngage.

customers. WebEngage, due to the efficacy of its fullstack solutions, has emerged as a go-to partner for regional brands.

Part of the Tata Group, a publicly traded conglomerate, Titan Company Limited was once dubbed the world's fifth-largest watchmaker. Mr Baker, with origins dating back to 1996, is a household name across the region. Etmana is a fast-growing fashion retailer with a sizeable market share in Egypt. The reputation of these brands is a validation of WebEngage's proficiency in customer engagement and retention.



# Bentley's Beyond100 strategic path to electrification by 2030 drives sales in 2022

Bentley Motors announced total sales of 15,174 globally in 2022, an increase of 4 per cent over the previous record year, 14,659 in 2021. This significant achievement was driven by new model introductions and increasing demand for Mulliner personalisation and Bentley's new hybridised models, introduced under Bentley's Beyond100 strategic path to full electrification by 2030.

With the high level of customer appreciation for bespoke cars in the Middle East region, the number of cars delivered increased by 6% as 968 were delivered in 2022 compared with 915 in 2021.

The continued demand for SUVs ensured Bentayga remained Bentley's number one model, selling more in its sixth year of sales than ever before, accounting for 42 per cent and establishing itself as the most successful luxury SUV in the world.

Furthermore, consistent appeal continued for the Continental GT and GT Convertible, accounting for nearly a third of sales, 30 per cent, with the new, performance-orientated GT Speed the most dynamic road car Bentley has ever built, taking a 31 per cent high of the model mix.

Finally, the Flying Spur, the world's finest luxury four-door grand tourer reached 28 per cent of total sales, thanks in part to the introduction of the new Hybrid model, the most advanced and environmentally friendly Flying Spur ever. Since market entry, the Flying Spur Hybrid is 30 per cent of the model mix, however in the UK, two thirds of all Flying Spurs sold are hybrid, the highest figure globally.

## Saudi based ACWA to develop 1.5 GW Kungrad wind farm in Uzbekistan

ACWA Power, a Saudi developer, investor, and operator of power generation, water desalination and green hydrogen plants worldwide, signed on December 23, 2022, the power purchase agreements and investment agreements with the government of the Republic of Uzbekistan to develop the 1.5 GW Kungrad wind farm in the republic of Karakalpakstan, Uzbekistan; formerly referred to as the Karakalpakstan Wind IPP.

The wind farm shall comprise of three 500MW wind power projects owned by 3 subsidiaries, namely ACWA Power Kungrad Wind 1 LLC FE, ACWA Power Kungrad Wind 2 LLC FE and ACWA Power Kungrad Wind 3 LLC FE.

Each of the 3 projects will also incorporate a 100MW capacity battery energy storage system. Regarded as the largest single-site wind farm in Central Asia to date, and one of the largest of its kind in the world, the wind farm is expected to reach an investment value of USD 2.4 billion.

Located in Kungrad district, Republic of Karakalpakstan, in Uzbekistan, the wind farm is expected to offset 2.4 million tonnes of carbon emissions per year and will have minimum



environmental impact due to the utilisation of the latest mitigation technologies, including bird detecting technology, that combines cutting edge technology in both image sensors and software to prevent bird collision or fatality.

The Kungrad wind farm will bolster the Uzbek government's long-term strategy to diversify the country's energy mix, which targets 8GW and 12GW of solar and wind capacity by 2026 and 2030, respectively.

The project is expected to achieve financial close by 2024 and will be fully commissioned in 2027. When complete, the facility is expected to power 1.65 million households.



# Masdar to develop 5GW of renewable energy for Angola, Uganda, Zambia

Masdar has demonstrated its commitment to helping African nations in their clean energy transition by signing agreements at Abu Dhabi Sustainability Week 2023 with three countries, Angola, Uganda and Zambia, to develop renewable energy projects with a combined capacity of up to 5 gigawatts. The agreements were signed under the umbrella of the Etihad 7 initiative, a UAE-led initiative that aims to raise public- and private-sector funds to invest in the development of Africa's renewable energy sector.

Etihad 7 was launched at ADSW 2022 by HE Sheikh Shakhboot Nahyan Al Nahyan, Minister of State in the UAE Ministry of Foreign Affairs and International Cooperation with the aim of achieving 20 GW capacity to supply 100 million people across the continent with clean electricity by 2035.

The agreements signed under the Etihad 7 umbrella at ADSW 2023 are:

- An agreement with Angola's Ministry of Energy and Water for the development of renewable energy projects with a total capacity of 2 GW.
- An agreement with Uganda's Ministry of Energy and Mineral Development for the development of greenfield renewable projects with a total installed capacity of 1 GW.
- An agreement with Zambia's Ministry of Energy, and Zambian national utility ZESCO for the joint development of develop solar, wind, and hydroelectricity projects with a total capacity of 2 GW.

Last August, Masdar also signed an agreement with TANESCO, the sole provider of electricity in Tanzania, to develop renewable energy projects with a total capacity of up to 2 GW, also under the umbrella of the Etihad 7 program. The two parties are in the process of finalising the establishment of a joint venture company to advance this strategic collaboration.

### Green hydrogen through solar set to turn MENA into second-largest electrolyser installer

Green hydrogen sustainably sourced through solar is set to turn the Middle East and North Africa into the world's secondlargest electrolyser installer by 2040, the World Future Energy Summit in Abu Dhabi heard today. The optimistic forecast came from the Secretary General of the Middle East Solar Industry Association, Denisa Fainis, as she presented the Association's Solar Outlook Report 2023 to attendees at the Solar and Clean Energy Forum - one of six specialised vertical events in the Summit's overall programme.

Fainis said that if MENA realised its production potential – which would see it account for 20% of global green hydrogen production – it would also become a main supply chain hub given its geographic positioning between Asia and Europe.

The MESIA Outlook Report, however, calls on solar PV developers and business owners to look to build competitive tariffs and lower cooling consumption by increasing energy efficiency and implementing building management systems.

Launched at the World Future Energy Summit every year, the report, the 10th from the Association, says while the adoption of electric vehicles in the Middle East remains a challenge in terms of infrastructure and hot weather testing, there are signs that the sector could



Denisa Fainis, Secretary General, MESIA.

bring a major economic boost to Saudi Arabia. MESIA highlights Saudi Arabia's ambitious EV manufacturing plans saying its estimated capacity of 350,000 vehicles will "ignite the creation of an industry with the goal of creating jobs and diversifying the economy."



# Masdar signs MoU with Dutch companies to create a green hydrogen supply chain

Masdar, one of the world's leading clean energy companies, Port of Amsterdam, SkyNRG, Evos Amsterdam and Zenith Energy have signed a memorandum of understanding to explore the development of a green hydrogen supply chain between Abu Dhabi and Amsterdam to support Dutch and European markets. The MoU was signed by Mohamed Jameel Al Ramahi, Chief Executive Officer of Masdar, Gert-Jan Nieuwenhuizen, Managing Director for the Port of Amsterdam, Maarten van Dijk, Chief Development Officer of SkyNRG, Bart van der Meer, Business Development Manager, Evos, and Ellen Ruhotas, Managing Director New Energies for Zenith Energy.

The agreement was signed in the presence of HE Dr Sultan Ahmed Al Jaber, UAE Minister of Industry and Advanced Technology, COP28 President-Designate, and Chairman of Masdar, and Wopke Hoekstra, Minister of Foreign Affairs for the Netherlands.

Under this MoU, the parties will join their efforts to develop a green hydrogen supply chain, focusing on production in Abu Dhabi and export to the Netherlands through the port of Amsterdam.

The exported green hydrogen will be delivered to key European sectors – sustainable aviation fuel, SAF, steelmaking, and bunkering for shipping – and will also be supplied to new, emerging European offtakers, via pipeline, truck and barge. Together, the parties will explore several hydrogen transportation methods, with a focus on liquid organic hydrogen carriers and liquid hydrogen.



## JA Solar to provide 1.6 million DeepBlue 3.0 modules for Qatar's largest PV power plant

The signing ceremony of the PV module supply agreement of the Qatar 875MW PV power plant project, which is Qatar's largest photovoltaics power plant, was recently held at the Samsung C&T headquarters in Seoul, South Korea. Under this supply agreement, JA Solar will provide more than 1.6 million DeepBlue 3.0 modules for the Qatar 875MW PV power plant project.

The project will be built in the Mesaieed Industrial City and the Ras Laffan Industrial City, and is expected to go into operation in 2024, which will help to promote the transformation of the local energy structure and drive sustainable local economic, social and environmental development.

# Without investment in climate damage, countries can lose AED I trillion finds Standard Chartered

Standard Chartered announced the launch of its latest research report titled 'The Adaptation Economy' which investigates the need for climate adaptation. The report revealed that a AED 10 billion adaptation investment to withstand projected climate damage could contribute more than AED 100 billion to the country's gross domestic product by 2030.

The research features 10 markets, including the UAE, India, China, and Pakistan, and highlights that the lack of action could cost billions in climate damages and lost GDP growth this decade. Across the entire study, without a minimum investment of AED 110 billion, the markets included in the study face projected damages and lost GDP growth of over AED 1 trillion.

The projection assumes that the world succeeds in limiting temperature rises to 1.5°C, in line with the Paris Agreement. In a 3.5°C scenario the estimated minimum investment required more than doubles to AED 225 billion and potential losses escalate dramatically if the investment is not made.

Examples of climate adaptation projects include the creation of coastal barrier protection solutions for areas vulnerable to flooding, the development of drought-resistant crops and early-warning systems



Rola Abu Manneh, Chief Executive Officer, Standard Chartered Bank UAE.

against pending natural disasters.

Among the 10 markets in the study, India is projected to benefit the most from adaptation investment. The market would require an estimated AED 40 billion to prevent climate damages and lost growth of AED 500 billion in a 1.5°C warming scenario – equal to a thirteen-to-one return for the Indian economy of investment in climate adaptation.

Meanwhile, China could avoid an estimated cost of AED 410 billion by investing just AED 30 billion. And Kenya, which requires the least investment, could avoid costs of an estimated AED 8 billion by investing AED 730 million in adaptation.

Market	Minimum investment required (1.5°C)(USD)	Economic benefit (USD)
India	10.6 billion	135.5 billion
China	8.1 billion	111.9 billion
Indonesia	4 billion	39 billion
UAE	2.7 billion	31.5 billion
Nigeria	1.5 billion	19.9 billion
Bangladesh	1.2 billion	11.6 billion
Egypt	900 million	8.6 billion
Vietnam	600 million	8.9 billion
Pakistan	600 million	7.6 billion
Kenya	200 million	2.2 billion

### SUSTAINABILITY

### ME regulatory pressure not strong enough to compel banks to take climate action says BCG

Green and sustainable debt issuance has been growing rapidly in the Middle East, despite the comparative lack of regulation of green financial instruments. In 2021, the total issuance of green and sustainability-linked debt in the region increased more than four times compared to 2020. In these early stages of the climate transition, there is a critical need for patient, high-risk capital for investments in sectors whose paths to decarbonisation are dependent on technologies that are still in the early stages of development, such as iron and steel, heavy road transport, and shipping.

A new report titled "Financing a Net-Zero Middle East" by Boston Consulting Group shows how regulatory pressure in most Middle East countries is not yet strong enough to compel banks to take immediate action on climate issues, even though climate change poses an array of risks to their portfolio. Larger banks in fossil fuelexporting countries typically have high exposures to the oil and gas industry and other high-emitting sectors of the economy such as transportation, construction and infrastructure, and shipping.

Considering development banks and funds have a critical role to play in supporting green investments, BCG's report offers three core



(Left to right) Shelly Trench, Managing Director and Partner at Boston Consulting Group and Aytech Pseunokov, Project Leader at Boston Consulting Group.

recommendations to meet the above mandate:

- Providing financing for non-bankable green projects with lower risk-adjusted returns or higher investment risks, such as supporting research and development of innovative technologies such as renewable power and CCUS.
- Mobilising private capital investments in green projects by improving their riskadjusted returns with various risk mitigation instruments.
- Using their expertise to provide support and advice to policymakers and regulators on the reforms needed to scale up climate finance.

Regional bank alliances prove key to this end, such as the Net Zero Banking Alliance, NZBA and the Science-Based Targets initiative, SBTi, as well as joining working groups such as the Partnership for Carbon Accounting Financials, to influence the global standard-setters.



### Mubadala Energy signs MoU with OMV and PARCO for sustainable fuel in Pakistan

Mubadala Energy, the Abu Dhabi-based international energy company, has announced the signing of a Memorandum of Understanding, MoU with OMV Downstream GmbH, OMV and Pak-Arab Refinery, PARCO to explore opportunities in sustainable fuels and feedstock production in Pakistan.

Under this agreement the companies will explore the possibility of pursuing projects in circular economy initiatives, including plastics production and recycling, sustainable fuels and feedstock as well as the development of synthetic oil and chemical products. The collaboration builds on a well-established partnership between Mubadala Energy, OMV and PARCO and seeks to utilise cutting edge technologies while leveraging existing infrastructure and market access.

In line with Mubadala Energy's strategy to pursue opportunities in new energy sectors and low carbon solutions, the agreement also supports its recently launched sustainability strategy that pinpoints three key priorities: Creating a positive environmental impact, supporting responsible operations, and being a partner of choice. Through the MoU the partners also hope to further support efforts to ensure energy security within key customer centers.

CEO LEADS C-SUITE, C-SUITE DRIVES BUSINESS

CEOs need to work closely with their CIOs and other department heads to understand the exact impact that the network could have on every area of their business.

s a CEO, it is impossible to be involved in every single business decision, which is why you are supported by a strong C-suite, with each member responsible for ensuring that their area of the business runs smoothly.

So does that mean that you can be a CEO without having a relationship with IT and the network

The short answer is no. Not given the pace of digitisation, when technology now powers and enables so much of your business.

The long answer is that when it comes to the network, CEOs all have varying degrees of understanding and input. But the stronger the relationship between the CEO and the network, the bigger the impact on IT, the business functions it

INDUSTRY COMMENT

### **INDUSTRY COMMENT**



**LARS KOELENDORF** EMEA Vice President, Solutions and Enablement, Aruba HPE.



- Does that mean that you can be a CEO without having a relationship with IT and the network?
- The stronger the relationship between CEO and the network, the bigger the impact on IT.
- You could also automate your systems which would streamline operations.

supports, and the business at large.

#### INVESTING IN THE NETWORK

Is there any department that would not benefit from the ability to work better, faster, easier, smarter, cheaper and more secure Or any strategic priority that wouldn't be advanced

The pandemic has already demonstrated why digital transformation is now fundamental to business survival. Having the latest technologies means you could help client- and customerfacing departments to provide higher quality and more competitive products and services, and to keep up with evolving demands. It means empowering back-end functions to provide better support to the rest of the business.

And it means that employees - regardless of which department they belong to or where they choose to work can have the best experience possible, without any technical roadblocks and complications to stop them from delivering their best work. Indeed, many employees actually experienced very good connectivity while working from home during the pandemic – and now demand that same easy and seamless experience coming back into the workplace.

You could also automate your systems, which would not only streamline operations, eliminate human error and overcome human limitations, but free up your employees to focus on projects that drive real value. Speaking of real value, with the right technology, you could also finally be able to derive actionable insights from the deluge of data that your company has been accumulating.

Enterprise data has the potential to deliver significant cost savings, improve operational efficiency and even unlock new business opportunities and revenue streams. But first, it needs to be stored, secured, sorted and analysed – all of which a great enterprise network can help with.

This is only the tip of the iceberg in terms of what the network can do. To unlock its full potential, CEOs need to work closely with their CIOs and other department heads to understand the exact impact that the network could have on every area of their business.

#### **NETWORK IS KEY**

Sustainability is not just a strategic priority. For most companies around the world, sustainability has become the priority, given that it is being driven both from the top down, by company boards and investors, and governments and from the bottom up, by employees and the general public.

You could even say that the network and sustainability have something in common: they both have an impact on all areas of the business.

Which, in fact, means that the network can have an impact on all areas of sustainability!

The network plays an integral role in allowing companies to become more sustainable,



The network can have an impact on all areas of sustainability



to measure and prove their sustainability, and to build more sustainable products and services. And for this reason alone, investing in the right network infrastructure should be the top of any modern CEO's agenda.

#### NOT JUST ABOUT KEEPING UP

Given the rate of change and disruption, any CEO simply using the network to keep operations moving and up with the latest technology has already lost the game.

It used to be that if the

network were down, your employees could do other manual work while waiting for a fix. Today, however, if there are issues with the network everything stops. In that sense it has become fundamental to keeping businesses running.

But the network has so much more potential than this – to help the business continually stay ahead of and be differentiated from the competition.

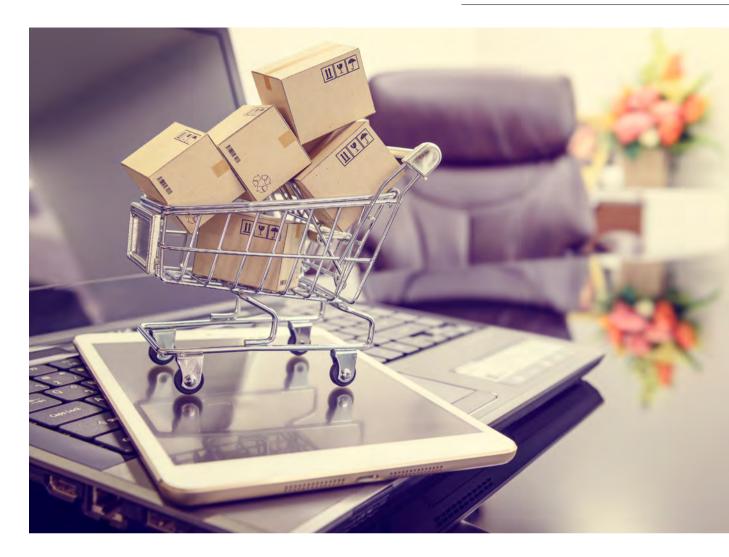
This is predominantly because investing in an agile network creates the foundation for every area of the business to innovate, from IT teams themselves to the company's R&D department.

With an agile network, the infrastructure is always ready to integrate, support, secure and fund any new technological developments that might help the business to move the needle on its goals.

Today, things move quickly. It is up to the CEO to ensure that their business can move just as fast.

So, for CEOs, my advice is simple. Focus on how you can empower your CIO to be an advocate for the network in your business, and support all your C-suite members to work together towards building a network that helps them achieve both their individual departmental and collective organisational goals.

After all, the business drives the network. But it is the C-suite that drives the business, and the CEO that leads the C-suite.



# PREDICTIVE DEMAND FORECASTING FOR RETAILERS

Companies can leverage specially crafted and customer-tailored demand forecasting solutions to transform data into demand insights and help grow sales.

B usinesses that want the flexibility to navigate the changes and challenges produced by rapidly growing digitalisation will have to make digital resiliency a top priority. This will both reinforce current market positions and provide companies with the competitive advantages needed to grow.

Drastic shifts in consumer behaviour driven by digitalisation have already profoundly impacted retail and consumer-packaged goods, CPG companies. This has made it critical to keep pace with shifting consumer preferences and more diverse demands and expectations, which will only be achieved by those companies that embrace robust digital strategies.

Retailers and CPG businesses that deploy innovative technologies like artificial intelligence and machine learning, will have access to indepth insights, data, and information regarding consumer behaviours and preferences. This can be derived from customer touchpoints, such as previous transactions and feedback surveys to help firms make better informed and more appropriate decisions. These will not only strengthen business operations, but for CPG companies, it will also guarantee that the product stock-keeping unit,



LAITH AL-BAZIRGA Sales Director Middle East, SoftServe.

### KEY TAKEAWAYS

- Drastic shifts in consumer behaviour driven by digitalisation have already profoundly impacted retail and consumer-packaged goods.
- The ability to predict demand for products has always been important.
- Given the impact of the global pandemic on supply chains, primary goods production, in-store and online commerce, it is now critical.
- A lot of businesses continue to use laborious manual methods to predict demand, which are timeconsuming and prone to errors.
- Retail businesses require automated forecasts that can predict seasonality, spikes, trends, across the wide range of situations they encounter.

SKU is optimised.

One such solution is automated demand forecasting, which helps organisations to generate more business value by producing more progressive insights. Companies can leverage various specially crafted and customer-tailored demand forecasting solutions, which efficiently transform data into demand insights and help grow sales.

The ability to predict demand for products has always been important but given the substantial impact of the global pandemic on supply chains, primary goods production, and both in-store and online commerce, it is now critical. However, a lot of businesses continue to use laborious manual methods to achieve this, which are both time-consuming and prone to errors.

Retail and CPG businesses require automated forecasts that can predict seasonality, spikes, trends, and anomalies across the wide range of situations they now encounter. This would further help them enhance supply chain operations and build a thorough understanding of customer preferences and requirements.

To achieve these, many CPG and retail companies are now leveraging AI and ML tools to help them develop models and interpret the data with groups of data scientists. The results minimise overall risks, help gain a clearer understanding of short and long-term business objectives and enable planning for scalable success.

There is certainly no shortage of data, given daily data points covering everything from sales and production to distribution and marketing. But what many businesses lack is a thorough understanding of how to automatically transform these data points into useful forecasts. Companies that attempt to do so manually, frequently employ spreadsheets that are challenging to sustain or use complex financial tools that are not scalable.

Furthermore, many businesses overlook other crucial factors that can help to determine demand including store location, holidays, product attributes, promotions, discounts, store size, and specific client demographics when combining pricing, discount, and SKU data.

Businesses that lack experience in creating forecast models or those who are unsure of the number of time series that should be supported, face additional difficulties. All of this results in outcomes that either require too much time to produce or are devoid of the data to be useful. Forecast alignment is further complicated since CPG and retail organisations view the same data and processes from different perspectives that can often yield poor demand forecasts that do little to help the business.

#### **AUTOMATED FORECASTS**

The customer-tailored demand forecasting solution offered by a professional digital solutions provider enables retail organisations and CPG companies to overcome many of these challenges, test hypotheses, and swiftly produce automated forecasts, without the requirement for in-depth technical expertise or knowledge. The solution identifies the data insights that clients need the most, going well beyond simple forecasts, and uses end-to-end retail and CPG data science and

"

This would help them enhance supply chain operations and build understanding of customer preferences and requirements



analytics experience to bring results.

Organisations from a variety of industries can access forecasts and fine-tune models on any cloud provider or on-premises. They can quickly upload historical data and let the demand forecasting system handle the rest, due to its specially designed, automated approach to forecasting. A company's historical data series, also referred to as time-series data, is composed of information gathered from previous sales by product, date, and place over a predetermined time frame.

Automated forecasts are produced by combining this time-series data with additional business-specific variables. The forecast assumptions are then verified by decisionmakers, turning those into betterinformed strategies which can drive further business improvement.

Numerous setup options and use recommendations can further accelerate data intake, enhance the accuracy of forecasts, and provide outcomes in line with corporate objectives. These forecasting solutions frequently produce outcomes that are significantly better than those developed alone.

Companies have been able to successfully fine-tune their product mix by area, demography, and season with the aid of this demand forecasting technology, and consequently significantly improve customer analytics and inventory management.

This solution can also be customised to reflect client demand and requirements. For instance, it can be modified for "what–if" scenario analysis to enable companies to forecast the effects of various changes and modifications to their business, supply chain, and financial models. This can then be more widely used for resource planning to help improve operational efficiency.

This means the forecasts ensure that clients have the required supplies, transportation, personnel, e-tail capacity, and distribution facilities on hand to satisfy demand, meet customer expectations, and grow the business.



# CYCLING AND WORKING AT ONE DESK

Acer announced the eKinekt BD 3 bike desk, a desk combined with a stationary bike to empower healthier lifestyles. The eKinekt BD 3 lets users exercise as they work by using kinetic energy from the rider's pedalling to power the machine and charge devices. The LCD display and a companion smartphone app provide information to help riders stay on track with their progress during exercise regimes and work periods. Users can adjust the bike resistance, seat, and desk height based on desired placement to provide added flexibility and comfort when working or training. The device is equipped with two USB Type-A ports and one USB Type-C port, a bag hook, and a beverage holder for added convenience whether in the office or in

the comfort of home.

As the rider pedals, the eKinekt converts kinetic energy into an electric charge. One hour of constant cycling at 60 RPM on the bike desk can generate 75 watts of self-generated power. The useable energy is then utilized to charge laptops and other devices, so users can get work done and stay active at the same time. The eKinekt BD 3's desk top and the casing that protects the bike's components are made from post-consumer recycled plastic.

# GRAND REVEAL OF ATLANTIS, THE ROYAL

The new iconic landmark of Dubai, Atlantis The Royal welcomes guests to an experience that will redefine their perspective of luxury. Crafted by the world's leading designers, architects and artists, this is a destination where everything has been designed to challenge imagination. Atlantis The Royal ignites with a collection of 795 elegant rooms, suites and signature penthouses with 44 of them having private infinity pools.

The red-carpet reveal featured global A-listers including Beyoncé, Kendall Jenner, Liam Payne, Rebel Wilson, Ellen Pompeo Winston Dukes and Letitia Wright. Stars from around the world also gathered including Germany's Verona Pooth, British TV presenter Mark Wright with wife Michelle Keegan, former Australian Masterchef judge and chef Gary Mehigan, as well as former champion boxer Amir Khan. Dubai faces Huda and Mona Kattan and Mahira Abdelaziz joined Bollywood stars Sibani Dandekar and Farhah Khan on the carpet that brought together celebrities from the four corners of the globe.

Eight years in the making, Atlantis The Royal has been designed to reshape what ultra-luxury travel means.





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### Mashreq appoints Aziz Ata as Global Head of Financial Institutions and NBFI

Mashreq, one of the leading financial institutions in the UAE, has appointed Aziz Ata as its new Global Head of FI and NBFI. Aziz's responsibilities involve overseeing Mashreq's FI and NBFI segments worldwide, developing and implementing the business plan for the division, providing senior leadership for key client relationships, and managing regulatory, industry, and obligor risks across the portfolio.

Aziz is a trusted senior banking executive with a proven track record of delivering consistent revenue growth. He has had a variety of roles at HSBC including Regional Head of Debt Capital Markets, MENA and Regional Head of the Debt Financing and Liability Solutions platform.



### Luxury fashion and lifestyle mobile game, DREST appoints Henri Holm as CFO

DREST, the company behind the world's first luxury fashion and lifestyle mobile game announces gaming, tech and Web3 authority Henri Holm as its new CFO, as the company prepares for its next phase of worldwide expansion.

Holm has 20 years of international experience in the games industry, having worked with privately funded, venture capital-funded, and publicly listed companies, driving finance, business development and digital strategy creation. Holm brings a wealth of knowledge in scaling up multinational firms such as

Fandom Sports Media, Nokia Greater China and Rovio Entertainment, where he oversaw the development of the Angry Birds franchise across Asia.



# Carl-Peter Forster, previous board member of Volvo Cars, joins StoreDot as Chairman

StoreDot, the pioneer of extreme fast charging battery technology for electric vehicles, announced the appointment of global automotive industry leader Carl–Peter Forster as Chairman. This key appointment, effective immediately, signals yet another step in StoreDot's global expansion and even closer ties with the global automotive industry, as it remains firmly on track for the mass production readiness of its game-changing '100in5' extreme fast charging cells by 2024.



# Mashreq hires Radu Topliceanu to grow digital bank Neo and Personal Banking

Mashreq, has appointed Radu Topliceanu as its new Head of Neo and Personal Banking. In this role, he will help Mashreq grow its award-winning customer-centric digital bank Neo as well as its Personal Banking Division.

Radu's responsibilities include developing innovative digital banking propositions, designing customer journeys to deliver superior customer experience, driving customer acquisition, revenue, and profitability, and building synergies with external stakeholders in the digital ecosystem to support

Mashreq's expansion plans. During his over two decades of retail banking experience, Radu has established himself as a digital banking pioneer, using comprehensive expertise in segment and product management to spearhead multiple successful business model transformations.



# Etihad Airways appoints Arik De as Chief Revenue Officer responsible for revenue, e-commerce

Etihad Airways announced the appointment of Arik De as its Chief Revenue Officer, overseeing a new organisational division focused on revenue. Since April 2022, De has served as Vice President of Revenue and Commerce at Etihad Airways, responsible for revenue management and e-commerce.

Having started his career over 20 years ago in finance at the International Monetary Fund, De has spent the last 15 years working within the aviation industry. He has previously held leading positions at WestJet, Air Asia, Aeroméxico, and

most recently, TAP Air Portugal, where he was the Chief Revenue and Network Officer.



### Former President of Walt Disney Imagineering Bob Weis joins Gensler as Immersive Leader

Gensler, the global architecture, design, and planning firm, announced today that former President of Walt Disney Imagineering, Bob Weis, is joining the firm as Global Immersive Experience Design Leader. A visionary within the entertainment industry, Weis brings to Gensler more than 30 years of leadership, creating, designing and developing some of Disney's most iconic projects around the globe.

During his time at Disney, Weis led more than 200 major projects around the world with a capital value of more than \$30 billion. From the U.S. to Shanghai, Tokyo to Paris, Weis' design and innovation imprint has been indelibly left

on theme parks, attractions and rides, resorts, and cruise ships. He has also consulted with major clients including Smithsonian, National Geographic, NASA, and the United States Navy, among others. Bob has received numerous industry accolades and awards and remains closely connected to his Disney roots.



# Lee Blakemore moves from Anthology to Introhive as Chief Executive Officer

Introhive, the world's leading Customer Intelligence Platform, announced that Lee Blakemore has been appointed as Chief Executive Officer. Blakemore brings over 30 years of software and sales experience to lead Introhive through its next phase of growth, with a focus on customer growth and product research and development.

Lee has a proven track record of success and deep expertise in scaling software businesses to a global audience. Throughout his career, he has led go-to-market,

operations, customer support, and international operations at leading global enterprise software companies. He is a seasoned technology leader who leads business transformations to drive growth.



### Nadine Chakar moves from State Street Digital to join Securrency as CEO

Securrency, developer of institutional-grade, blockchain-based financial and regulatory technology, announced that Nadine Chakar will join the company and assume the role of Chief Executive Officer. Chakar's leadership will combine her deep financial services, technology, and market experience with Securrency's ground-breaking technology to deploy market-leading solutions on a global scale.

She has been recognized as one of the most powerful women in finance and is a vocal champion for using technology to revolutionize financial services. Chakar

brings over 30 years of experience in global wealth and asset management to Securrency.



### Luke D'Arcy appointed Executive Vice President of Business Development at Spiro

Spiro, the brand experience agency within the GES collective, announced appointment of Luke D'Arcy as Global Executive Vice President of Business Development. In his new role, D'Arcy will direct and oversee the efforts of the experiential marketing agency's growing worldwide team and work in close conjunction with today's top brands to deliver dynamic, impactful experiences for audiences.

D'Arcy brings more than 20 years of brand experience to the Spiro table, most recently holding numerous executive roles at Momentum Worldwide, where he helped develop and propel experiential marketing initiatives for the likes of American Express, Coca-Cola, Nike and Samsung, among other major names. A Harvard Business School alumnus, D'Arcy also honed his skills at lauded global advertising agencies Havas Creative and Iris and served as partnership director during the launch of Sir Richard Branson's United Kingdom-based Formula 1 Virgin Racing team.



(Left to right) Brock Ballard, Chief Revenue Officer, Bentley Systems and Eric Boyer, Investor Relations Officer, Bentley Systems.

#### Bentley Systems elevates Brock Ballard to Chief Revenue Officer, Eric Boyer joins Investor Relations

Bentley Systems, the infrastructure engineering software company, announced that Brock Ballard, previously vice president and regional executive, Americas, has been promoted to the role of Chief Revenue Officer, and that Eric Boyer has joined as Investor Relations Officer. Ballard succeeds newly retired Gus Bergsma who joined with Bentley Systems' acquisition of RAM International in 2005.

Boyer brings over 20 years of experience in investor relations and equity research, a deep knowledge of capital markets, and a strong network of relationships. During his tenure as senior vice president and head of investor relations at IHS Markit Ltd., which was a global information services leader, its market capitalization increased from \$8 billion to \$44 billion.



# Dr Sarah Trice joins Al powered XtalPi as COO US operations based in Greater Boston

XtalPi, a pioneering pharmaceutical technology company powered by artificial intelligence and automation, announced that Dr Sarah Trice has joined the company as chief operating officer of US operations. Dr Trice will report directly to XtalPi CEO Dr Jian Ma, leading the company's growth strategy and corporate operations in the U.S. and European markets.

Dr Trice has spent over 17 years building a celebrated career across the life science and pharmaceutical sectors. Prior to joining XtalPi, Dr Trice co-founded Entos, Inc., an AI-driven biotechnology company, where she oversaw all day-to-day operations and directed external business activities as the COO.



# Sarah Otten joins global pharma Medison as VP, GM of Americas region

Medison Pharma, a global pharma company focused on providing access to highly innovative therapies to patients in international markets, is proud to announce the joining of Sarah Otten, in the role of VP, GM of Medison's Americas Region.

For the past 3 years, Sarah has held the position of VP Global Market Access and Commercial Strategy for Apellis Pharmaceuticals. Before that, she spent 9 years at Vertex Pharmaceuticals holding senior roles in Commercial and Corporate Compliance, including Executive Director Global Geographic Expansion and Head of Latin America, and an additional 12 years at Pfizer, where she held numerous roles in sales operations and market access.



# Ecolog International appoints Juan Chaparro as Executive Director and Chairman of Board

Ecolog International, a global provider of integrated services and logistics solutions for life support, supply chain, energy and healthcare industries, announced appointment of Juan Chaparro as Executive Chairman of the Board.

With over 30 years' experience as an executive in supply chain management, procurement and sourcing, having worked for globally recognized companies such as Zara, Esprit and Primark, Chaparro brings a wealth of expertise in complex logistics management in fast-paced environments as well as the B2C focus. This aligns with Ecolog's vision and growth strategy and makes him a valuable addition to the leadership team.

Chaparro's appointment comes at a pivotal time as Ecolog progresses with expanding its service offering into customized healthcare solutions, clean water and renewable energy as well as sustainable food technologies. With projects in both emerging and established markets catering to various institutional clients, Ecolog is set to leverage its scale and footprint to also provide direct services to consumers.



### DH Park moves from Hyundai Motor India to Head Middle East and Africa Regional HQ

Hyundai Motor Company announced appointment of DH Park as its new Head of Hyundai Motor Company Middle East and Africa Regional HQ. With HMC, Park has assumed his duties at the regional headquarters in Dubai as of this week. He is to oversee operations across the Middle East Africa region.

During his career at HMC, Park has worked in nearly every role related to Marketing and Sales and has extensive work experience in numerous countries across Canada and Australia, as well as Spain where he served as President of Hyundai Motor in the country.

Later, he went back to Hyundai HQ as the Head of the Asia and MEA Group. Park's previous position was at Hyundai Motor in India where he was the Executive Director of Sales, Marketing, and Services. Park brings over 27 years of automobile experience with global leadership roles in various positions at Hyundai Motor Company.





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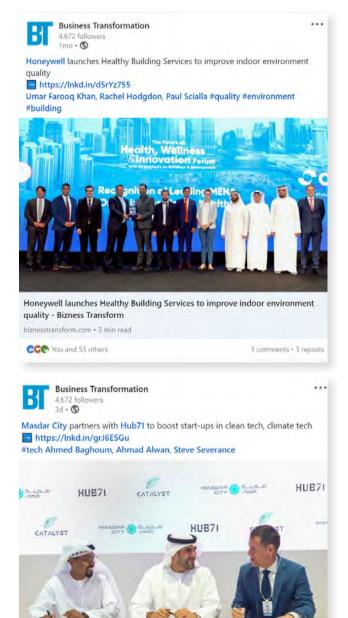
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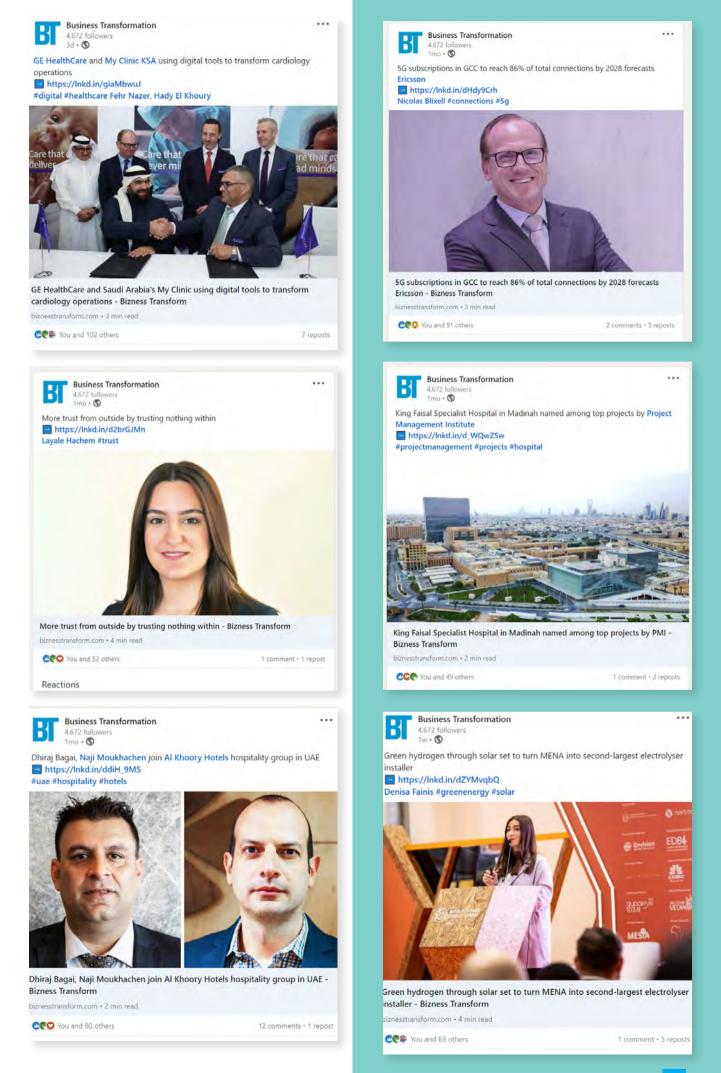


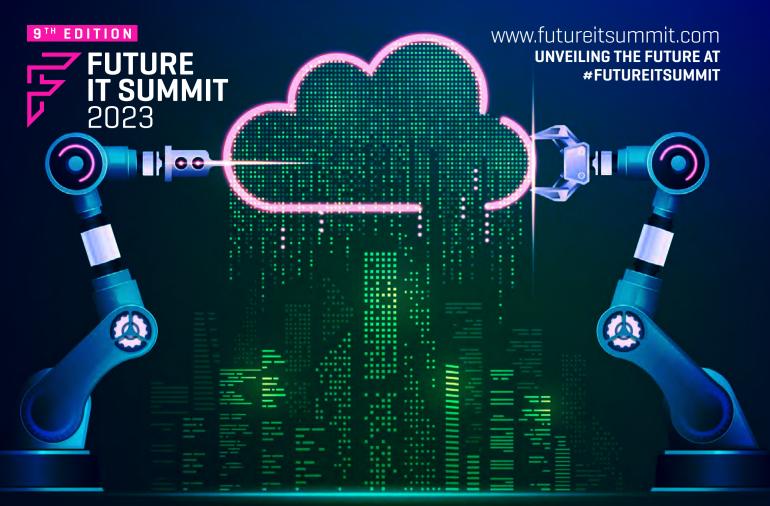
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