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ENERGY

IS THE INDUSTRY READY FOR DISRUPTION

Crash in oil prices, green energy improvement, intelligent utility grids, are some of the challenges and opportunities faced by energy industry.



John Mattone, Top executive coach

SIX TIPS FOR SUCCESS-
DRIVEN LEADERSHIP



Matt Walmsley, Vectra

PSYCHOLOGY BEHIND
AN INSIDER THREAT



Alain Penel, Fortinet

STRATEGIES FOR
REMOTE WORKFORCE



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ARE DEEPPAKES A
NOVEL THREAT?



Catherine Darroue, Aetna International

IMPACT OF TECHNOLOGY
ON EMPLOYEES



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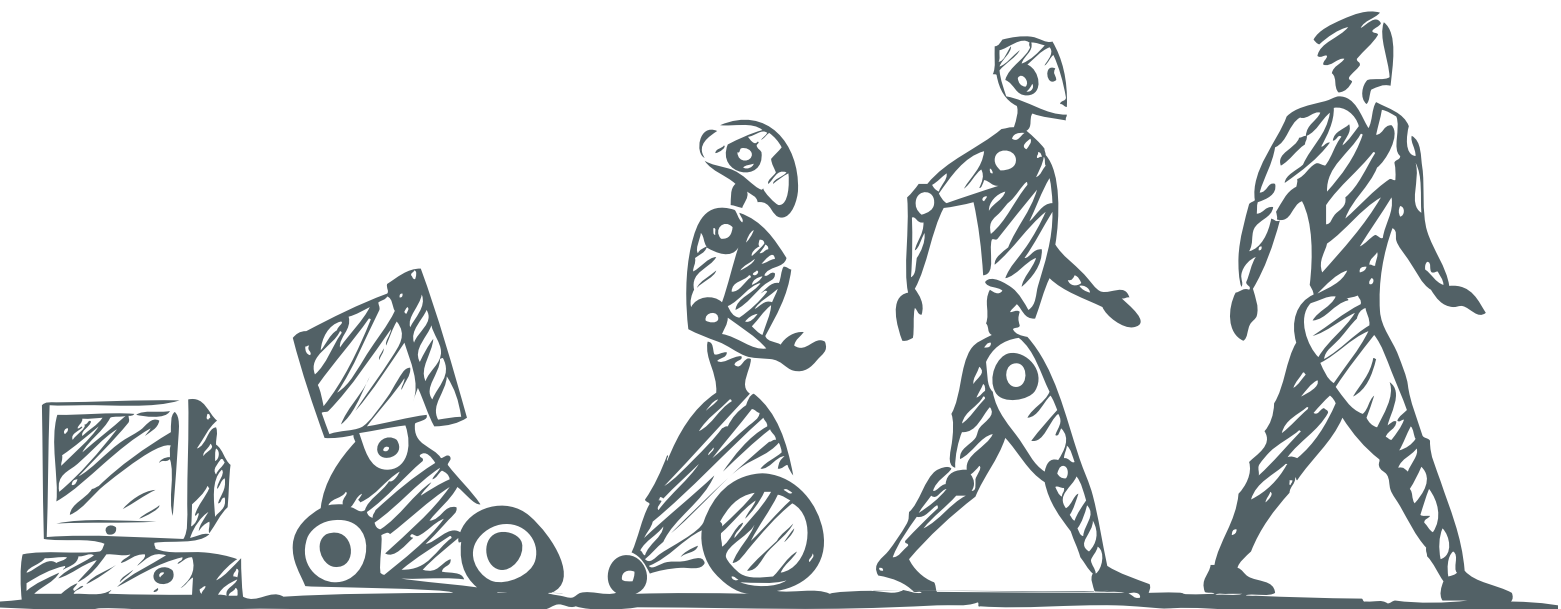
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INFLUENCE
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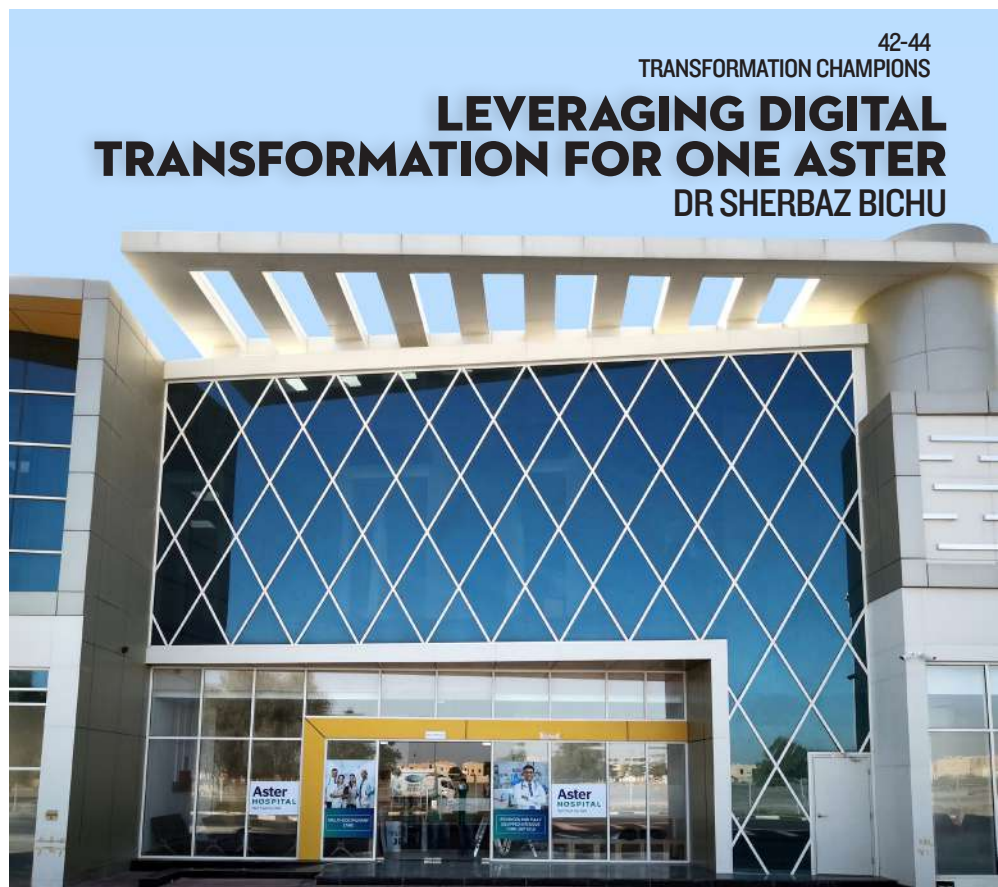
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DISRUPTION IN ENERGY ROUND THE CORNER

The energy sector is scheduled for enormous transformation. It is being impacted by huge volatility initiated by economic slowdown from the pandemic and subsequent recovery surges and dips. It is being impacted by the relentless move towards sustainable energy sources.

And it is being impacted by the falling prices of energy storage and intelligent energy distribution. All these are driving the energy sector into completely new and innovative business models that will disrupt existing players and existing operations.

Abboud Ghanem at Alteryx, points out that sustainability concerns are pushing forward an energy efficiency agenda all over the world. Energy companies that recognise value not only in data but processes will thrive in delivery of services.

Adds Dr Tariq Aslam at AVEVA, a supply glut and a depressed outlook for hydrocarbon prices have been forecast over the medium term. Over the longer-term, oil demand could peak within two decades as fuel demand drops. Success in a post-pandemic world will require innovative thinking and action at scale. Two new technologies will shape a sustainable future, and these are artificial intelligence, cloud computing.

According to MS Prakash at Emerson Automation Solutions, demand crash has hit profitability and operational metrics of several energy producers, causing them to reduce spend levels. Large energy companies are now transforming from oil and gas to more diverse focus such as Shell, Total, BP, who are making efforts towards solar, wind.

As the energy sector undergoes a huge transformation, in tandem with technologies, it will re-design the way we live over the next few decades, says Prof Dr Tadhg O'Donovan, at Heriot-Watt University. At one end, transformation is being driven by a rapidly growing population, prompting the urgency for sustainability.

At the other end, ongoing development of technologies required for sourcing and storing energy from renewables is also gathering steam. And there is no doubt that energy has been impacted by massive decline in consumption due to pandemic's negative impact on economic activity.

The modern distribution grid will use Industry 4.0 and merge physical and virtual worlds, converging the electric grid with the Internet of Things, says Vijay Jaswal at Software AG. Becoming more digitally savvy is one of the core directives of most energy providers globally.

Part of becoming more digital would include transformation of the grid from analogue to a digital smart grid. Information technology and operations technology must both intertwine. The modern distribution grid will be the essence of Industry 4.0 by converging the electric grid with the Internet of Things.

As we come to the end of this year, all thoughts are on what lies ahead in 2021.

Do check some of our answers in the December and January 2021 editions.
Happy thinking.

Arun Shankar

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STRATEGIES FOR PROTECTING THE REMOTE WORKFORCE

Amidst the disruption many have found new ways to conduct business while protecting their remote workforce, explains Alain Penel at Fortinet.



ALAIN PENEL,
Regional Vice President,
Middle East, Fortinet.

KEY TAKEAWAYS

- It took a large-scale event to realise that the nature of work has already been fundamentally redefined.
- Permanently shifting a portion of the workforce from centralised offices to home offices will help reduce capital costs.
- The talent pool will only grow when the search is widened to include those who might not live near the physical headquarters.

Before the pandemic, some organisations had already begun to adjust their security strategies to enable a shift to remote work. While they may have not foreseen this current crisis, their understanding of the need for an effective business continuity plan, and the inevitable changes being brought about by digital innovation led them to rethink what networks and a digital workforce look like in the 21st century.

This included bolstering the network edge, something which has faced increased risk ever since the prioritisation of mobility, IoT, and 5G. For these prescient organisations, the foundation was already in place to meet the challenges of the distributed workforce being faced today. But for those that did not, it took a large-scale event to realise that the nature of work has already been fundamentally redefined, and that the great shift is happening now, not later.

Below are a few of the measures that companies should take to help them adapt and grow amid this shift.

Ensure alignment of business processes: To enable a secure remote workforce, organisations must align business processes such as finance and HR with best practices around communication privacy and authentication. These processes should also align with cultural processes that promote effective communication in an agile, trust-based environment.

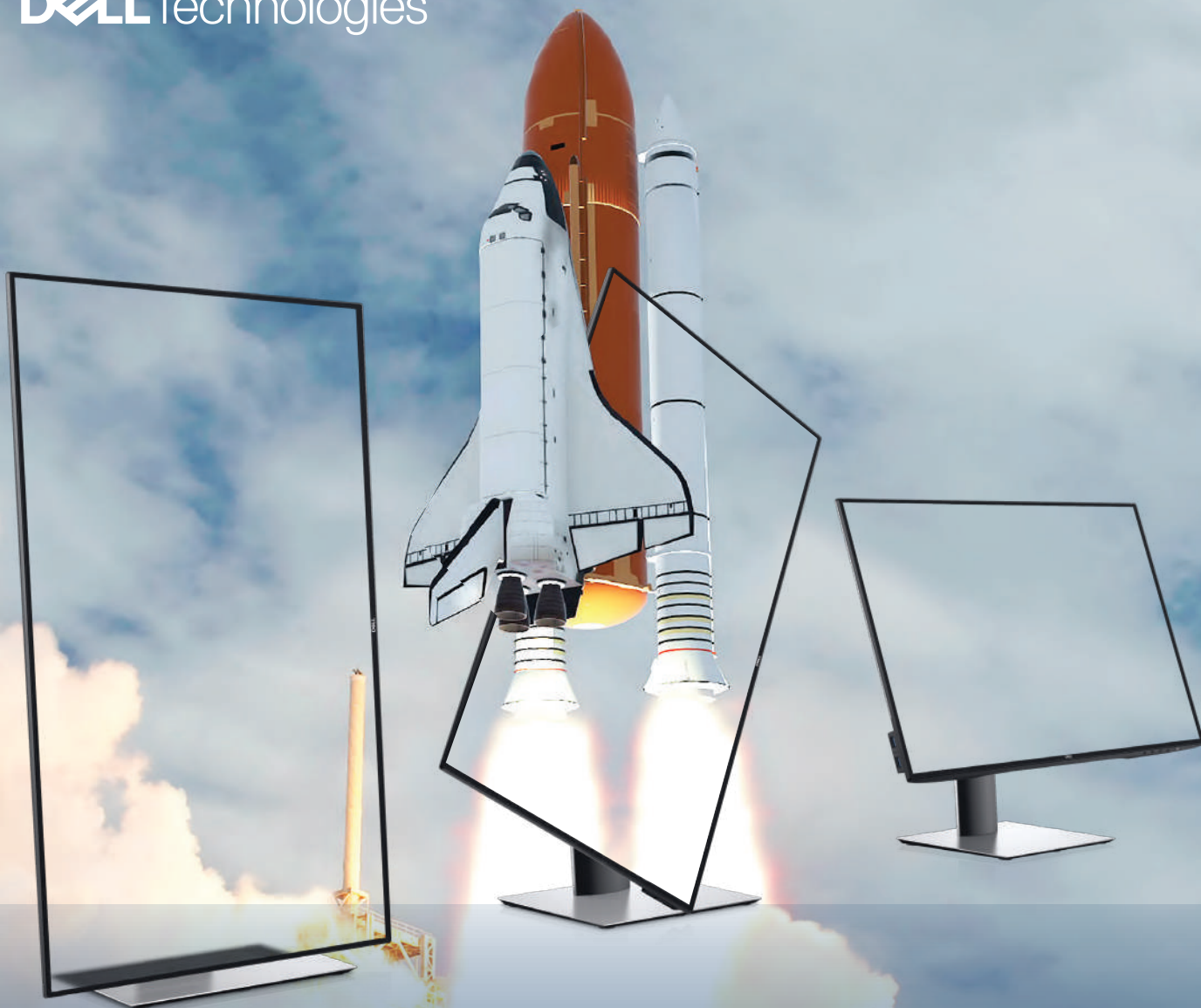
Fund necessary cybersecurity costs by leveraging savings: Permanently shifting a portion of the workforce

from centralised offices to home offices will help reduce capital costs like climate control, office infrastructure, and rent or building loans. These cost savings can then be used to fund the necessary technology and cybersecurity costs associated with the new normal of managing an expansive remote workforce.

Ensure your cybersecurity architecture can support this new business architecture: When building or updating network architectures, things like data privacy, integrity, and confidentiality need to be kept top of mind. And these values need to be applied across the network, not just for remote workers. That's because business applications and workflows need to span from the endpoint to the core network to the company's distributed edge in the cloud.

Enjoy the benefits of telecommuting: There are countless benefits to enabling a remote workforce and adopting a secure network strategy to support it. The carbon footprint of organisations will be reduced when fewer workers are commuting, and the talent pool will only grow when the search is widened to include those who might not live near the physical headquarters.

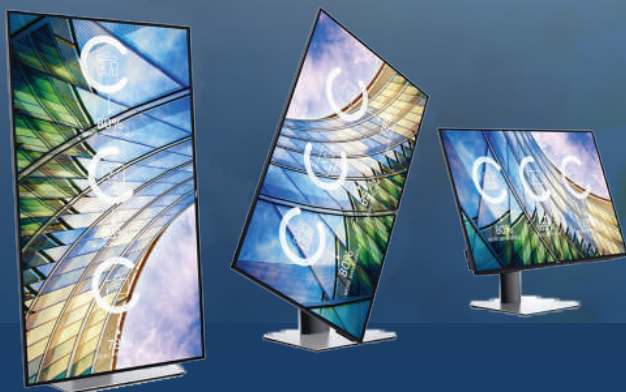
The Covid-19 pandemic has presented new challenges for organisations, but amidst the disruption many have found new ways to conduct business while protecting their remote workforce. The best practices listed above encompass this shift, prioritising an investment in employees, business processes, and the architectures that will be relied upon for sustained growth and success. But as your company works to adjust to this new normal, keep in mind the chief message of these events: the future is now, not tomorrow. ■



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MAKING TECHNOLOGY COOL TO PROTECT REMOTE WORKERS

This is the time to add coolness and fun to technology and help workers become more comfortable with cybersecurity best practices, advises Ned Baltagi at SANS Institute.



NED BALTAGI,
Managing Director, Middle East
and Africa, SANS Institute.

KEY TAKEAWAYS

- By reinforcing positive actions to adopt safe cybersecurity practice, organisations and human communities can benefit.
- Gamifications can help improve the level of compliance towards following basic cybersecurity best practices.
- Remote workers can build up software tools and use them to test the technologies at their remote workplace.
- Encourage teams to be curious about technology, allowing them to make mistakes.

Human behaviour towards cybersecurity practices or managing the risk of the pandemic, varies by individuals. Yet every social action or organisational behaviour has a consequence. By monitoring human activity and reinforcing positive actions to adopt safe cybersecurity practices or following safe-pandemic practices, organisations and human communities can benefit.

Designing applications that reward an individual with points and badges and displays them publicly can help mobilise positive movement. Gamifications can help improve the level of compliance towards following basic cybersecurity best practices in an organisation.

With remote workforces becoming part of the post-pandemic workplace there is a human resource requirement to relook at the level of basic technology skills across the hybrid workforce. However, a gamification approach may be required to add an active element of interest around this activity.

It is essential that remote workers maintain a clean record on the Internet. The post-pandemic phase has seen a disproportionate level of stress and readjustment and this may continue in the months ahead. But venting strong feelings and thoughts across multiple social media sites may just start working against remote workers and their teams.

One of the fastest ways for remote workers to get comfortable and experienced is to allow them to build up software tools and use them to test the technologies at their remote workplace. Instruct remote workers

how to spend hands-on time with technology, engage with technology, break it and then fix-it.

If remote workers are at home let them feel comfortable to build a lab at home. Encourage teams to be curious about technology, allowing them to make mistakes. The more mistakes they make, the more they are learning. And more technology learning helps to boost better understanding of cyber security best practices.

Get remote workers and teams to share their experiences. If you want to physically protect a building, you need to understand doors, windows, and structure. For information security, remote workers need to understand the basics of computer networking.

An experienced worker who is ready to engage with remote teams, can boost the confidence levels of remote workers who may find themselves without support at odd hours of the day or night. Informal mentorship can help plug such gaps and help to retain confidence in the organisation's technology set up across remote workers and remote teams.

On a final note, every remote worker has their favourite device, app or feature. Use that as a starting point for them to explore, learn, share and move forward. Conforming to and understanding the organisation's cybersecurity best practices may just become an easy ride for them as they plunge into technologies that help them to work better and better.

Capture the Flag events are not only a great way to interact with your peers and like-minded individuals, they are also a great way to learn and apply new skills in a real-life situation. Playing either on your own or with your team and really help you hone your skills. ■

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DIGITAL TECHNOLOGY HAS TRANSFORMED THE CFO ROLE

Today's CFOs are transforming into real-time analysts, and they're part of a C-suite task force leading digital transformation, says Pieter Bensch at Sage.



PIETER BENSCH,
Executive Vice President,
Sage Africa and Middle East.

KEY TAKEAWAYS

- Most CFOs thought of digital transformation as a technology play, a channel strategy or a customer experience concern.
- CFOs play a key role in overseeing data, fraud, cybersecurity, and data privacy.
- We are seeing a growing appreciation among CFOs of how digital technology can help them improve financial performance.
- C-suite leaders can develop a strategy for prioritising digital investments that produce or result in the best possible outcomes.

Until a few years ago, digital transformation was not high on the agenda of most finance executives. Although they recognised IT was important, most CFOs thought of digital transformation as a technology play, a channel strategy or a customer experience concern. That picture is changing fast as digital technology pulls finance in exciting new directions as a real-time, digitally-fuelled and data-driven competency.

What's behind the rise of digital as a CFO priority?

Along with risk and compliance teams, CFOs play a key role in overseeing data, fraud, cybersecurity, and data privacy. They need to be keenly aware of how digital technology introduces new risks and how they can use it to enable real-time decision making and build resilience into the business.

Secondly, the CFO's role is shifting as a result of the adoption of technologies such as the cloud, artificial intelligence, robotic process automation and machine learning. This combination of technologies is creating a new breed of trailblazing senior financial decision-makers who use data and emerging technology to drive their function. We are seeing a growing appreciation among CFOs of how digital technology can help them improve financial performance. More than half of all respondents of a recent Sage survey believe emerging technology will continue to support them in their roles.

This adoption of digital technology within finance is helping to spur the interest of CFOs in playing a more

significant part in their enterprise's digital transformation strategy. In trusting technology to automate much of the finance function and allowing data to change the dynamics of decision making, senior finance managers have more time to focus on digitalisation to drive growth.

That brings us to the third reason CFOs are playing a key role in digital transformation. No one is better placed to understand how the adoption of digital technology might impact key business metrics and outcomes. Digital transformation is no longer the sole responsibility of the CIO and is central to the overall business strategy.

While the CEO might provide the vision for digital transformation, and the CIO may propose the means, the CFO can help draw up the budgets and the metrics for success. Undoubtedly, the CFO's insight into the financials is key at a time when organisations need to drive a real return from the investments they make into digital technology. Working together, C-suite leaders can develop a strategy for prioritising digital investments that produce or result in the best possible outcomes.

One thing is clear: Today's CFOs are transforming into real-time analysts, and they're part of a C-suite task force leading the digital transformation agenda in their organisations. Finance is no longer just a reporting function but a data-driven insights centre that propels key business initiatives. CFOs that ride the technology wave will have an easier time of leading through uncertainty and using digital to deliver high business impact. ■

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THE PSYCHOLOGY BEHIND AN INSIDER THREAT

There is little evidence and scant public data about insider threat incidents. Vectra's Matt Walmsley analyses what drives insiders to spy or steal.



MATT WALMSLEY,
EMEA DIRECTOR, VECTRA.

The insider has no way back to the old reality of a normal life.

Analysing the psychological underpinnings of an insider threat case is a complex undertaking because there is little evidence and scant public data about insider threat incidents. The fraud triangle theory focuses on the triggers that lay the groundwork for the insider to turn. In contrast, the multiple life-stage model considers a much longer timeline, including the period before, during and after an attack.

Similar to the fraud triangle, the multiple life-stage model starts off with sensitisation and stress stages.

Hurtful experiences in childhood may scar and sensitise, but do not necessarily lead to insider spying.

BEWARE OF THE PERSONAL BUBBLE

In the fraud triangle, when the rationalisation of potential spying or theft kicks in, the insider creates a personal bubble within which everything makes perfect sense and the actions are clear and justified. A possible sense of inner failure to face climactic stress is denied and blame is projected outwards to colleagues, the workplace or life circumstances.

The insider creates a plan of payback within the personal bubble, where money problems are solved and pressures are relieved through one simple, completely justified action. At this stage, if a third party is involved in the insider spying or theft, little or no recruiting effort is needed because the insider reaches out and self-recruits in an effort to relieve the inner pressure. The climax and decision typically occur within a short timeframe of 1-2 months.

HONEYMOON AND A COLD SHOWER

Once the decision is made, the malicious insider enters the honeymoon phase where there is a feeling of relief and resolution of financial pressures, work stresses or family problems. Everything makes perfect sense now within the personal bubble.

However, once the pressure is relieved, reality kicks in. The

personal bubble was created and decisions were made while the insider felt intense inner pressure. Once these pressures are relieved, the reasoning that made complete sense earlier is suddenly hard to follow. The insider is left with a shocking cold-shower sense of what was I thinking!

NO WAY OUT

There is no way back for the malicious insider. Because the decision to steal confidential information or spy on an organisation is highly unacceptable and punishable by law, the insider has no way back to the old reality of a normal life.

Malicious insiders will actively steal and spy for some time and might enter what is called a dormancy stage, where there is no activity. For some, the public revelation of their actions might constitute a demonstration of their technical abilities and sophistication. For others it's another shameful point of failure in life.

The final stage of punishment, which in most cases involves imprisonment, is often the first time they reflect on their actions. Previously torn between comparison to others, life pressures, and opportunities, isolation will eliminate these distractions and provide a more realistic view into the insider's life, poor choices and consequences. ■



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6 TIPS FOR SUCCESS-DRIVEN LEADERSHIP

When leaders and their teams commit to and believe in the central purpose, success is inevitable, asserts John Mattone.



JOHN MATTONE is the world's top executive coach and the co-founder of the Intelligent Leadership Executive Coaching Franchise.

Success-driven leadership must have a strong purpose to be effective. Making money is great, but in order to truly reach high success, a bigger purpose must be the focus. Are you helping people?

Are you creating something new and innovative? Are you bringing positive change into the world? These are the type of questions that leaders should be asking themselves in order to grow.

This purpose then serves as the cornerstone to your business. The successful leader is able to communicate this purpose with the rest of the organisation and create a high-level of buy-in. When leaders and their teams commit to and believe in the central purpose, success is inevitable.

Here are 6 tips that can benefit success-driven leaders:

Find what gets you up in the morning. Establish what is most important to you. Whatever you think about when you get up every morning is usually the thing you are passionate about. Find a way to turn this into your purpose. It will be the most rewarding thing you can do.

Make purposeful decisions. As a leader of an organisation, there are lots of decisions to be made. Lots of times the traditional choice is easy to make, but you need to make sure it aligns with your purpose or else eventually the whole culture you are trying to build will come tumbling down. Even though it may seem like there aren't any ways around it, just remember, you always have a choice.

The successful leader is able to create a high-level of buy-in.

Find team micro-purposes. Each team should have its own purpose that they can get behind and be motivated to use in order to produce results. These micro-purposes are relatives of the main purpose. Once a team can buy-in to knowing why they exist, they get a new motivation that brings high-fulfilment. This, in turn, breeds success.

Fight off attacks on your purpose. Remember, this purpose is everything. You cannot allow other people's views or influence infiltrate your purpose. Not everyone will see your vision and that's ok. Move on as appropriate.

Shift focus to giving rather than getting. Any true purpose excels at providing value to other people. When you are authentic with it, personal success will come and it will be more rewarding.

Use failure to get better. Purposeful leaders see failure as a stepping stone. They don't see it as a setback, but rather as an identifier of an area of improvement. They welcome failure because it reveals what works and what doesn't. ■

KEY TAKEAWAYS

- Find what you are passionate about and turn this into your purpose.
- Each team should have its own purpose that they can get behind.
- Any true purpose excels at providing value to other people.

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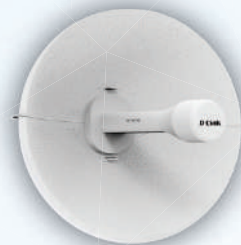
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Dassault Systèmes, Aden Group launch digital twin solution

Dassault Systèmes and Aden Group have introduced a turnkey, ready-to-use infectious disease hospital solution, Akila Care. This solution can be quickly deployed and easily maintained in Arab countries severely impacted by Covid-19 and urgently in need of high quality medical facilities. This new initiative comes in light of the successful world premiere of the hospital experience set up in a few days in Wuhan, China as well as in other countries. The two companies have

worked together to develop new hospital engineering, construction and operations processes by leveraging Dassault Systèmes' 3DEXPERIENCE platform and Aden Group's Akila Care smart and connected hospital concept.

The solution relies on a virtual collaborative environment for the design, simulation and development of hospitals that can be built and made operational within 150 days and remain operational for many years, as well as for optimising

their operations and maintenance throughout their entire lifecycle. As part of the collaboration, the two companies have assembled a consortium of companies specialised in medical equipment, engineering and construction to offer the solution to countries needing it most.

The hospital solution provides a virtual collaborative environment in which employees and suppliers are invited to use a virtual twin of a hospital to optimise space planning, module design, negative pressure isolation rooms and other features, simulate manufacturing and equipment, and train for its construction. After the hospital is built, the solution will be used for digital asset management by connecting the facility with state-of-the-art medical equipment to monitor digitalised hygiene procedures and hospital floor robots.

Dassault Systèmes' 3DEXPERIENCE platform is used throughout the Middle East and North Africa by customers of all sizes including a large number of academic institutions that have recognised its business value and its capability to enable the workforce of the future.

Women employees in STC grow by 23%, reach 3,000 in 2020

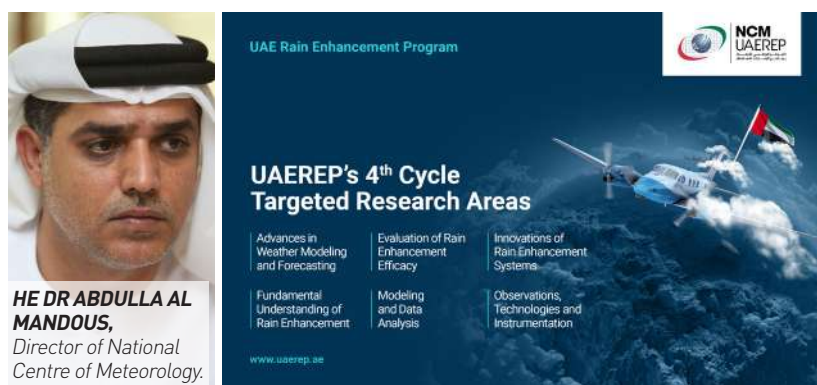
The number of female employees at STC during the current year 2020 increased by 22.6% compared to the previous year, while the percentage of female employees nominated for leadership positions increased dramatically, making up around 18% of the members of High Potential Employee Programme, HIPO. It is the company's most important programme designed to prepare outstanding employees for leadership positions in the future. Only three years after the company began hiring women, STC now employs around 3,000 female employees.

During the Women's Forum



event held at STC headquarters, Eng Nasser Sulaiman Al Nasser, STC Group CEO, stressed that the accelerating numbers in female recruitment and empowerment reflect STC's commitment to implementing the company's DARE strategy in accordance with its values, namely Dynamism, Devotion, and Drive which were inspired by Saudi Arabia's Vision 2030.

He explained that the empowerment of women is not limited to recruitment and leadership positions, but also comes in the form of providing an opportunity for continuous development. STC is currently working on providing its female employees with easy access to educational resources, enriching their knowledge and increasing their expertise in the areas required to achieve STC's strategy as well as involving them in the company's development programmes such as the Specialist Development Programme, noting that female employees represent 33% of this programme's organisers.



UAE Rain Enhancement Programme announces research areas

The National Centre of Meteorology, NCM, has announced the targeted research areas for the UAE Rain Enhancement Programme. This is in preparation for the official opening of the UAE Rain Enhancement Programme's, UAERP, fourth cycle for proposal submission in early 2021. Identified by a team of prominent international experts and scientists in atmospheric research and technologies, the updated research areas complement the existing ones and build on the programme's previous work.

These areas were selected during

the fourth cycle UAERP solicitation workshop, based on the outputs of the nine research projects awarded between 2015 and 2017, the fourth International Rain Enhancement Forum and the recommendations from the World Meteorological Organisation, WMO, expert meeting held in Geneva, and the fourth cycle programme solicitation workshop.

The updated research areas place high priority on emerging technologies and innovations to drive the development rain enhancement science. These areas include advances in weather

modelling and forecasting using artificial intelligence and ensemble modelling, evaluation of rain enhancement efficacy through the utilisation of cloud chamber and use of randomised inputs in statistical methods, innovations in rain enhancement systems through the integration of new measurement and numerical tools, and testing and leveraging several rain enhancement models.

In parallel, the programme will continue to support previously targeted areas to help the awardees fulfil the objectives of their projects. Launched under the patronage of HH Sheikh Mansour bin Zayed Al Nahyan, UAE Deputy Prime Minister and Minister of Presidential Affairs in 2015, the UAE Research Programme for Rain Enhancement Science supports innovative research and technology proposals that advance the field of Rain Enhancement Science, particularly in arid regions. The Programme offers each winning research proposal a grant of up to \$1.5 million distributed over three years with a maximum annual amount of \$550,000.

Managed by NCM, the programme aims to promote fundamental scientific understanding of rain enhancement as well as stimulate the development and deployment of rain enhancement technologies.

GCC e-commerce to reach \$50B in 2025, forecasts Kearney

The GCC e-commerce sector is forecasted to reach a value of \$50 billion by 2025, according to a new report by Kearney Middle East. The report titled GCC e-commerce unleashed: a path to retail revival or a fleeting mirage?, predicts that e-commerce will become the main source of growth in the retail sector over the next five years. The report forecasts a larger acceleration in e-commerce between 2020 and 2022, at 20% CAGR, and 14% until 2025. Without Covid-19, the same growth was projected at 14 and 10% respectively. This highlights the impact of the pandemic on accelerating the growth of the sector in the region.

While the report highlights the effects of a more definitive shift to online on major retail groups, it also explores the likely implications and imperatives on the two other key actors within the retail ecosystem; real estate and small and medium enterprises.

Key challenges including the rise of pure play e-commerce marketplaces, the large investment in digital by retail giants, and the declining physical store sales pose a threat commercial real estate and the survival of SMEs that have not yet adopted to online sales channels. An earlier survey by Kearney in the UAE indicates that just 36% of SMEs have made the investment so far, while only 4% planning to sell online in the future.



ADEL BELCAID,
Partner, Kearney Middle East.



WHO's Soumya Swaminathan on CNN warns vaccine efficiency still unclear

In a wide-ranging interview with CNN's Becky Anderson, Soumya Swaminathan, Chief Scientist at the World Health Organisation, WHO, spoke on how to mitigate the continuing spread of Covid-19. Also, whether you can catch the virus twice. Swaminathan reaffirmed that a vaccine for Covid-19 is still not a certainty and stressed it will still take several months to understand its efficiency. As Europe continues to experience a second wave of the virus, Swaminathan also told Anderson that lockdowns should only be considered a temporary measure.

COVID-19 VACCINE TIMELINE

We can be optimistic, but there's still an if. We have a large number

of vaccines in development, so we are already hopeful that a couple of them, or several of them, will actually turn out to be safe and effective. We still haven't seen the results of any phase three clinical trials. These are the trials that tell us about both safety and about efficacy, or the protective efficacy, of a vaccine. We're likely to start seeing results late 2020, early 2021.

ON HERD IMMUNITY

Herd immunity or population immunity is generally referred to in the context of a vaccine. There's never been a disease, an infectious disease, for which herd immunity or population immunity has just come about through natural infections. It's never happened before.

HOW MANY INFECTED

What we do know is that about 38 million people have been detected to have been infected or diagnosed to have been infected. But what we also know is that in actual reality a far higher number. We know there have been over a million recorded deaths due to Covid-19, but we also know in many countries around the world there have been an excess of deaths during the last nine months which have not been attributed to Covid. The number of deaths is also going to be higher than what we've been able to count.

EFFECTIVENESS OF LOCKDOWNS

I think what we have to look at a comprehensive set of interventions and this is what the WHO has said from the beginning: Do it all, no one thing is going to work. A lockdown is a temporary measure. It is done when things are out of control, and it's done to buy time for health systems to put in place the systems. But what we do know is we know where it spreads now, we know the three C's, the crowded settings, the closed poorly ventilated settings and the close contact. We have to avoid these amplifying events, which occur in these indoor settings.

Source: CNN Connect.

UAE's NY Koen bids for Israel's third-largest airline, Israir

UAE-based NY Koen Group have announced that they will be making a bid to purchase Israir, Israel's third-largest airline, at the upcoming auction. NY Koen Group is excited about the potential purchase of Israir and the opportunities this presents. Aero Private Jet, a subsidiary of NY Koen Group, has a great deal of experience in the field of business aviation and sees the purchase of Israir as a chance to expand their services.

Through the years of experience the company's subsidiary has accrued, and NY Koen Group's reputation in the area, Israir stands to gain a great deal should they succeed in purchasing the company.

Israir Airlines is the biggest



tour operator and third biggest airline in Israel. The company specialises in curating packages in the Mediterranean and Europe for middle class Israelis, both individuals and groups. Israir is a one stop shop for all flights, hotel bookings, transfers and other ground services.

The airline offers highly competitive rates and places a great emphasis on offering a peerless customer service. Israir operates scheduled and chartered flights

to various popular destinations across Europe – and flies over a million passengers per year on both international and domestic flights. The company has built a great reputation for itself over the years, and NY Koen Group looks forward to inheriting the Israir brand and legacy that comes with it.

Aero Private Jet has operated in the business aviation sphere since 2003. The company cooperates closely with the largest operators and private owners of business jets across the globe and has access to over 7,000 planes and 4,000 airports. The airline is responsible for over 3,200 flights. Aero Private Jet offers a full range of services, helping organise VIP flights for both business and leisure, along with individual customer service.



Dubai's La Perle installs Epson's 20,000 lumen projectors

La Perle, the first permanent, aqua-based, live show in Dubai and the Middle East, has invested in state-of-the-art Epson projectors to transform the audience experience, as the Emirate reopens for tourism. The show, located in a purpose-built theatre in Al Habtoor City, hosts 10 shows per week and 425 shows per year to hundreds of guests for each performance. The auditorium counts 1,288 seats, with performances spanning across 270-degree. Complimenting the artistic performances and special

effects of the show are high-quality and immersive projections.

Previously, the lamp-based projectors were leading to high lamp and maintenance costs. Every year, La Perle was spending \$300,000 on lamp changes alone, this is in addition the high costs of maintenance and manpower.

La Perle reviewed its projection options in terms of suppliers, quality of the projection, depth of images, and reliability. Following the review, La Perle installed eight Epson EB-L20000U projectors, which

offer 20,000-lumen projection. Both performers and guests alike are enjoying a new, vibrant experience, brought to life with enhanced brightness, contrast, vivid colours, and consistency.

Epson and local distributor NMK worked with La Perle on-site to remove the old projectors and install the new technology and software which made the installation process smooth. Epson also offered a 5-year or 20,000-hour warranty. Moreover, the in-built self-recalibration feature means that these projectors can be installed and forgotten about.

IATA presents reports demonstrating low passenger risk

The International Air Transport Association, IATA, demonstrated the low incidence of inflight Covid-19 transmission with an updated tally of published cases. Since the start of 2020 there have been 44 cases of Covid-19 reported in which transmission is thought to have been associated with a flight journey, inclusive of confirmed, probable and potential cases. Over the same period some 1.2 billion passengers have travelled.

The risk of a passenger contracting Covid-19 while onboard appears very low. With only 44 identified potential cases of flight-related transmission among 1.2 billion travellers, that's one case for every 27 million travellers. Even if 90% of the cases were un-reported, it would be



one case for every 2.7 million travellers. IATA says these figures are extremely reassuring. Furthermore, the vast majority of published cases occurred before the wearing of face coverings inflight became widespread.

New insight into why the numbers are so low has come from the joint publication by Airbus, Boeing and Embraer of separate computational fluid dynamics research conducted by each manufacturer in their aircraft. While methodologies differed slightly, each detailed simulation confirmed that aircraft airflow systems do control the movement of particles in the cabin, limiting the spread of viruses.

Data from the simulations yielded similar results:

- Aircraft airflow systems, High Efficiency Particulate Air filters, the natural barrier of the seatback, the downward flow of air, and high rates of air exchange efficiently reduce the risk of disease transmission on board in normal times.
- The addition of mask-wearing amid pandemic concerns adds a further and significant extra layer of protection, which makes being seated in close proximity in an aircraft cabin safer than most other indoor environments.

ServiceNow finds 93% execs worry about remote work's business impact

ServiceNow has released The Work Survey, a comprehensive global survey on Covid-19's impact on work. As also the opportunities ahead for a wave of digital innovation in how people work and businesses operate. Executives and employees across the globe agree technology enabled them to pivot to new ways working faster than thought possible, and digital transformation will accelerate innovation. Fielded in September by Wakefield Research on behalf of ServiceNow, The Work Survey engaged 9,000 executives and employees across industries including financial services, health care, telecommunications, manufacturing, and the public sector.

KEY GLOBAL FINDINGS INCLUDE:

- 92% of executives say the pandemic made their company rethink how they work and 87% of employees say their company has created better ways of working since the crisis began.
- 91% of executives and 87% of employees say their company transitioned to new ways of working faster than they thought possible.
- Covid-19 has reduced operating expenses for 88% of global businesses surveyed, creating

opportunities for investments in digital transformation, research and development, marketing and growth.

50% executives and 53% of employees think transitioning to the new normal will be even more challenging than the initial shock of Covid-19. This challenge is exacerbated because most businesses are at a digital disadvantage, with 91% of global executives admitting they still have offline workflows, including document approvals, security incident reports, and technology support requests. Progress has been made, but months into working from home, 60% of executives and 59% of employees say their companies still do not have a fully integrated system to manage digital workflows.

BUT CONFIDENCE IS LOW

New systems that were developed, and put in place on the fly, as a result of Covid-19, were seen to have created new and better ways of working by 87% of employees across the globe. However, such systems are felt to still be vulnerable to the next major disruption, with most executives and employees stating that key business functions, such as Customer Service, HR and Finance, would not be able to adapt



TOM CHEESEWRIGHT,
applied futurist and author.

within 30 days in the event of another disruption. This showcases the need, and opportunity, for robust digital transformation across the enterprise.

EMBRACING DISTRIBUTED WORK

While 90% executives and employees 94% overwhelmingly tout the benefits of remote working, the challenges are becoming more apparent. Both executives, 93%, and employees, 83%, express real concerns about how remote work will impact the business moving forward. The biggest concerns and benefits with continued remote work depends on where you sit.

- Across the globe, executives are most worried about outputs, delays in product or service delivery, 54%, while their employees are most concerned about the inputs, reduced collaboration between business units, 48%.
- Employees across the globe say that time saved from not commuting or travelling to a workplace, 54%, has benefited them most, while executives believe that better use of technology to improve efficiency, 50%, is the greatest benefit to their teams.

Emirates Global Aluminium goes virtual with employee training

Emirates Global Aluminium, EGA, has successfully shifted employee learning online to support talent development during Covid-19, with over 40,000 uses of a specially-developed virtual learning platform since February. At the start of Covid-19, EGA moved workshops and learning circles entirely online in just five weeks, launching a new virtual learning platform called My Learning.

EGA also trained its instructors and facilitators to deliver courses online rather than face-to-face. My Learning provides access to EGA's entire range of courses and modules, covering core skills related to safety and compliance, management and leadership skills, and technical training amongst many other development areas.

EGA also developed new training content to empower its employees with core skills required during the pandemic



including Covid-19 prevention, leading virtually, virtual accountability, emotional resilience, and fostering positive mind-sets.

EGA has digitised the entire training framework for EGA's National Training programmes, which apply both theoretical and practical training for operational and technical roles. Currently, 64 young Emirati trainees are productively engaged in full-time virtual classes, including some 21 National Trainees who have joined since July. EGA has run National Training programmes since 1982.



Barco finds collaboration main driver for back to office routine

A survey of white-collar workers around the world, published by Barco, has revealed surprising findings about employee expectations for the workplace in the aftermath of the Covid-19 pandemic. The study, which surveyed 1,750 employees around the world through global research panel provider Dynata, found that only 15% of employees want to continue to work from home full-time after Covid-19 restrictions are lifted. Nearly half of those surveyed said they enjoy working from home less now than they did at the start of the pandemic, citing challenges in collaborating with colleagues, struggling to contribute to meetings and missing the social side of office life as the main reasons for wanting to return to the office.

Instead, employees want a hybrid workplace model, where most of their time is spent in the office but they have the flexibility and freedom to work from home when it works best for them or suits the type of work they need to do. The survey found the ideal balance on average globally to be 3 days in the office, with a maximum of 2 days a week

Chart 1: Biggest benefits of working in the office
% selecting each benefit, total

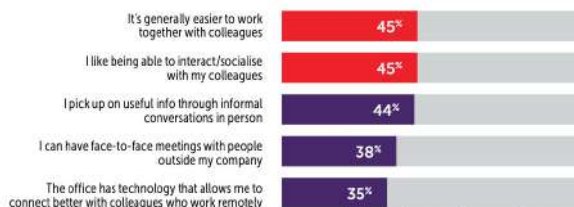


Chart 1: Biggest benefits of working in the office
% selecting each benefit, total



working remotely.

There was a significant demand from workers for their employers to invest in better facilities, and particularly technologies, to enable this hybrid working balance. The most desired investment by employees was for better video conferencing technologies, which 1 in 3 of the 1,750 employees globally named as an investment priority. This was perhaps unsurprising, given nearly 8 in 10 employees said they use video conferencing rooms in their office more than once a week, with 1 in 3 using them every day or more.

EPI expands to manufacture components for Boeing 787 Dreamliner

EPI, the precision engineering backbone of the UAE's aerospace and defence industry, has announced it is expanding its manufacturing capabilities to support the Boeing 787 Dreamliner. EPI will machine aluminium trailing edge ribs for use in the 787-commercial aircraft. The serial assembly lines will be an extension to the Abu Dhabi facility, with the processed parts additionally going through EPI's surface treatment plant launched last year.

Established in April 2019, the plant is part of an industrial collaboration agreement between Tawazun Economic Council, Boeing Defence, Space and Security, and EPI, to build a chemical processing plant that would ramp up its existing production capabilities, and move beyond machining and into aircraft assembly for aerospace OEMs.

The Boeing 787 Dreamliner is an all-new, super-efficient family of commercial airplanes that brings big-jet ranges and speed to the middle of the market. Boeing designed the 787 family with superior efficiency, allowing airlines to profitably open new routes and fly people



directly to where they would like to go in exceptional comfort. Since entering service in 2011, the 787 family is flying more than 1,900 routes and has made possible 300+ new nonstop routes around the world.

The move consolidates EPI's status as a leader in commercial aircraft production. Earlier this year, the company became a key regional manufacturer of Airbus aircraft parts. EPI manufactures high-quality complex engineering components for the defence, aerospace, and oil and gas sectors at its advanced facilities in Abu Dhabi. The company's capabilities span engineering, production, surface and heat treatment, machining, coating, repairing and tooling.

EPI is part of the Mission Support Cluster within EDGE, an advanced technology group for defence and beyond. EDGE was inaugurated in November 2019.

Egypt's Polyserve announces plans to transform using SAP

Polyserve Fertiliser and Chemicals has announced a digital transformation partnership with global technology company SAP. Polyserve is adopting the S4HANA Cloud real-time business suite, the Ariba Sourcing platform for paperless procurement and connecting with a global network of more than 4.6 million companies. It is connecting with SuccessFactors human experience management suite along its 4 subsidiaries, Abo Zaabel Fertilisers and Chemicals, Aswan Fertilisers and Chemicals, Ferchem Egypt, and Polyserve Trading, as the first phase of its digital transformation journey.

As Egypt sees a rise in Industry 4.0 connected manufacturing and supply chain, with SAP, Polyserve is also seeking to explore next-generation

innovations. In the second phase of its digital transformation journey, Polyserve will examine digital solutions across big data analytics, the Internet of Things and predictive maintenance, and environment, health, and safety, and the SAP Digital Boardroom.

Egypt Vision 2030's sustainable development strategy aims to develop the country's manufacturing and agricultural sectors as a pillar of diversified economic growth and job creation. At the heart of this growth will be increased fertilisers consumption to improve crop yields and productivity.

As a result, Egypt's agricultural market is set to grow by about 20% from EGP 35 billion in 2018 to EGP 41 billion by 2024, according to a recent report by Mordor Intelligence



DR SHERIF EL GABALY,
Chairman and Managing Director, Polyserve
Fertilizer and Chemicals.

LLP. US AID says that agriculture accounts for 28% of Egypt's jobs and 15% of the GDP. Polyserve is already one of Egypt's important agriculture supply chain players, with annual turnover of EGP 2.5 billion and more than 2,000 employees.

AMMROC delivers first C-130 aircraft after Programmed Depot Maintenance

AMMROC, a provider of military maintenance, repair, and overhaul, MRO, services in the region, has announced the delivery of the first C-130 aircraft from its new state-of-the-art MRO depot in Al Ain. The company is set to deliver nose-to-tail advanced MRO services, and holds the capability to modify and upgrade multiple aircraft types. The C-130 aircraft delivered from the Al Ain facility underwent a Programmed Depot Maintenance to increase its capability through extending the aircraft lifecycle. This is the first of many PDMs that are scheduled to take place at this world-class facility.

With the capability to support more than 35 different aircraft types, both fixed and rotary wing, AMMROC's facility offers one of



the region's largest military and civil MRO hangar capacities, spanning an area of 36,500 sq m. It is also the only certified Lockheed Martin Service Centre for C-130 aircraft in the region, and is at the forefront of aircraft PDM and integrated fleet sustainment services in line with its wider mandate to support the UAE and other regional markets.

In March 2020, AMMROC inducted a CN235 and an A330 Multi Role Tanker Transport aircraft, marking the launch of the 1-square-kilometre operations facility.

Incorporating four multi-purpose hangars, over 30 back shops and a specialised environmentally controlled strip/paint facility, AMMROC's MRO hub is also unique in serving as a dedicated Black Hawk depot facility that provides nose-to-tail MRO capabilities, inclusive of rotors and transmissions, blades, engines, components and aircraft sub-systems.

AMMROC is part of the Mission Support cluster within EDGE, the advanced technology group for defence and beyond. In July 2020, EDGE announced that it had entered into a conditional agreement to acquire the remaining 40% stake in AMMROC, held by Lockheed Martin Corporation and Sikorsky, a Lockheed Martin company.

UAE Space Agency signs NASA's Artemis Accords to boost space exploration

The UAE Space Agency, UAESA, was amongst the first signatories of NASA's Artemis Accord at the 71st International Astronautical Congress. In May 2020, NASA formally announced the Artemis Accords, based on a shared vision for principles, grounded in the United Nations' Outer Space Treaty of 1967, to create a safe and transparent environment that facilitates exploration, science and commercial activities for the benefit of all humanity.

In a virtual event hosted by NASA, Her Excellency Sarah Al Amiri, Minister of State for Advanced Technology and Chair of the UAE Space Agency and Jim Bridenstine, NASA Administrator along with the heads of the Space Agencies of Australia, Canada, Italy, Japan, Luxembourg and the United Kingdom.

The UAE is committed to the advancement of space exploration while ensuring the sustainability of space. The Accords aligns with the UAE's long-term programmes to explore outer space and collaborate internationally on better understanding our solar

system.

Though a young nation with a relatively young space programme, the UAE has made significant strides in space science and exploration having launched several satellites, as well as the UAE Astronaut Programme, which made history last year with the first Emirati astronaut visiting the International Space Station. But the nation's most notable of achievements thus far is the successful launch of the Hope Probe Emirates Mars Mission, that will provide us with a comprehensive understanding of the weather system of Mars along with better understanding of underlying factors that could cause climate change.

With this mission the UAE will release the data to the global science community without an embargo period. This aligns with the accords that emphasises the importance of data sharing across missions along with the interoperability of systems to drive space exploration.

In line with the principles outlined in the Artemis Accords, signatories agree to conduct all activities for peaceful purposes, and to publicly and transparently



HER EXCELLENCY SARAH AL AMIRI,
Minister of State for Advanced Technology
and Chair of the UAE Space Agency.

describe their policies and plans. In complying with open standard requirement, signatory nations strive for interoperability, ensure the provision of emergency assistance, register space objects to help avoid harmful interference, release scientific data publicly, and endeavour to protect sites and artefacts of historic value.

Furthermore, signatories to the Accords agree to extract and use space resources in accordance with the Outer Space Treaty and provide public information about the location and nature of operations, while also working to deconflict where necessary and mitigate orbital debris.

UK's Fasset to test tokenisation of assets in Bahrain's Regulatory Sandbox

UK-headquartered Fasset, a provider of blockchain-powered platforms for the financing of sustainable infrastructure, has received authorisation to test its solutions for the tokenisation of hard assets in Bahrain's FinTech Regulatory Sandbox. The authorisation, issued by the Central Bank of Bahrain, is the first of its kind in the world. The company has raised some \$4.7 million in pre-seed investment from strategic backers in the UAE, Saudi Arabia, Bahrain, Kuwait, and Singapore.

Fasset aims to address climate change acceleration by bridging the sustainable infrastructure funding gap estimated by the World Economic Forum to reach \$15 trillion by 2040. Through its two flagship products, Fasset Enterprise Platform and Fasset Exchange, Fasset aims to increase investor exposure to assets that were previously illiquid, inaccessible, or had high barriers to entry.

Simultaneously, asset owners can bypass costly middlemen to directly list their assets on an exchange, gain faster access to liquidity and court a wider base of like-minded investors. FEP provides a tokenisation service for sustainable infrastructure assets, fractionalising, or breaking down large assets into smaller pieces or tokens using blockchain technology. FEX is a platform to where these tokens can be traded.



DALAL BUHEJJI,
Director of Business Development,
Financial Services at Bahrain
Economic Development Board.

Almarai integrates with HANA Enterprise Cloud



MAJED NOFAL, CEO, Almarai.

Almarai, a food and beverage manufacturer and distributor of dairy products, baked goods, poultry, juice, food, desserts, and infant formula, has announced the next phase of its digital transformation with SAP, to optimise operations and support food self-sufficiency in Saudi Arabia and the region. Daily, Almarai delivers high-quality products to tens of millions of consumers across the GCC, Egypt and Jordan.

Brands include Almarai, L'usine, 7DAYS and ALYOUM. As part of its alignment with Saudi Vision 2030's economic diversification and self-sufficiency goals, Almarai has extended its two decades' partnership with SAP. The SAP S/4HANA real-time intelligent suite is spread across all lines of business to support future business growth and help create Almarai of tomorrow.

As part of its roadmap, Almarai is working with digital business consultants McKinsey and SAP Services. Almarai is deploying SAP S/4HANA real-time business suite, which will run on a HANA Enterprise Cloud platform that is managed by SAP. As part of its digital transformation roadmap, Almarai is also exploring emerging technologies such as robotics, chatbots, and the next phase of cloud innovations.

Digital service providers to increase connectivity 5X by 2023

The latest Global Interconnection Index, GXI, an annual market study published by Equinix, shows that the Covid-19 pandemic has already had a dramatic effect on how businesses are planning their digital infrastructure initiatives over the next three years. Digital service providers, within industries like telecommunications, cloud and IT services, content and digital media and technology providers, are forecast to increase private connectivity bandwidth 5x by 2023, driven by greater demands from enterprises to close digital gaps at the edge.

Even before the current pandemic, enterprises were implementing digital transformation initiatives, reassessing their cloud adoption strategies and cloud readiness, and moving towards digital solutions and tools to ensure business continuity. As the pandemic continues to accelerate the shift to digital, enterprises facilitating more remote working, such as telecommunications and cloud and IT providers, are expected to contribute to 54% of the total interconnection bandwidth growth in EMEA, outpacing other industries in the region.

The report also forecasts that overall interconnection bandwidth, the measure of private connectivity for the transfer of data between organisations, will achieve a 45% CAGR, from 2019 to 2023, within the EMEA region. The expected growth is driven by digital transformation, and specifically by greater demands from enterprises extending their digital infrastructure from centralised locations to distributed edge locations. This comes as businesses scale and support real-time interactions by strategically interconnecting workflows closer to, and across people, things, locations, cloud and data. The capacity of this connectivity is equivalent to 64 zettabytes of data exchange, which is enough bandwidth for every human



KAMEL AL-TAWIL, Managing Director, Middle East and North Africa, Equinix.

on the planet (7.8 billion) to transmit their full DNA sequence in an hour.

DIGITAL ADOPTION PATTERNS

- The digital adoption pattern has altered, with service providers now forecast to provision more interconnection bandwidth, 10,284 Terabits per second by 2023, than enterprises, by a factor of nearly 2x.
- However, much of this service provider demand is anticipated to be in support of enterprises that are prioritising their digital transformation in preparation for post-pandemic recovery.
- Enterprises with a digital infrastructure will extend their competitive advantage and continue to lead in business growth, while those without have struggled and are dependent on service providers to transform their business models.

EDGE-FIRST ARCHITECTURE

- Traditional business, within industries like banking and insurance, manufacturing and business and professional services, will represent a combined 30% of global interconnection bandwidth by 2023. This is led by the growing need to move workloads to the digital edge while scaling core IT infrastructure. By 2023, these traditional businesses are expected to reach a peak interconnection bandwidth growth rate of 50% annually.
- Healthcare and life sciences and government and education are expected to lead the traditional enterprises in their interconnection growth rate as public and private initiatives on artificial intelligence and machine learning are forecast to drive a combined 47% CAGR in interconnection bandwidth from 2019 to 2023.



APOORVA MEHROTRA,
CEO and Managing Director, Airtel.



TODD ASHTON, Vice President and Head of
Ericsson East and South Africa.

Airtel, Ericsson partner for disposal of electrical equipment in Zambia

Airtel Networks Zambia has partnered with Ericsson on a Product Take-Back programme to minimise the potential environmental impact associated with the disposal of decommissioned

electrical equipment. The Product Take-Back programme is part of Ericsson's Sustainability efforts geared towards taking accountability for environmental impacts of all products and services during their

lifecycle. The programme ensures that end-of-life material is treated and recycled in an environmentally responsible manner.

Airtel continues to be committed to ensuring that the beauty of Zambia is sustainably conserved and understands that environmental impact starts with its own operations. Ericsson provides free product retrieval and safe disposal services for equipment that has reached its shelf life, as part the company's extended producer responsibility. Ericsson offers the programme to all customers globally, which guarantees that e-waste does not end up in trade-restricted areas or landfills.

E-waste, not recycled properly, is an under acknowledged environmental hazard around the world. Airtel Zambia's initiative is geared towards creating awareness and minimising the potential environmental impact associated with the disposal of decommissioned electrical and electronic equipment in the country.

DISH selects Blue Planet to build 5G virtual cloud network services

DISH has chosen inventory and service order management software from Blue Planet, a division of Ciena, to intelligently automate its 5G wireless network. As DISH builds a cloud-native, OpenRAN-based, virtualised 5G network, Blue Planet's software will help provide a completely automated solution to drive operational efficiency. To support end-to-end automation, Blue Planet seamlessly integrates into DISH's network slices, which reduces OpEx and better ensures customer satisfaction.

Blue Planet is a key component within the 5G platform, allowing DISH to dynamically manage all of network inventory and service orders in real-time. With Blue Planet's open, agile and programmable approach, DISH can rapidly deploy services and allocate resources to wholesale and enterprise customers, allowing them to provision network slices based on SLAs. With closed-loop automation from Blue Planet, DISH will execute its innovative network strategy and usher in the 5G era.



RICK HAMILTON,
Senior Vice President, Blue Planet.



Mimecast appoints Jonathan Corini as SVP of Global Channel Sales

Mimecast has announced Jonathan Corini has been appointed the new Senior Vice President of Global Channel Sales. In this role, Jonathan will be responsible for the strategy and execution of Mimecast's global channel programme. Mimecast is dedicated to ensuring its partner community is supported, engaged and armed for success and the appointment of Jonathan will help unify and strengthen its commitment to the channel.

Jonathan brings more than 20 years of experience building and managing technology relationships, as well as the teams responsible for driving joint sales within the channel partner community. As the Senior Vice President of Global Channel Sales, Jonathan will oversee the strategy and execution of Mimecast's global channel programme and will work closely with the teams to ensure alignment and maximise the value for partners. Prior to joining Mimecast, Jonathan was the Vice President of Worldwide Channel Sales at Forescout Technologies where his team delivered a customer-first mission to all Forescout channel partners, spanning more than 90 countries and more than 1000 resellers. Under Jonathan's leadership, Forescout's channel partner programme received



Euisun Chung elevated to Chairman of Hyundai Motor Group by board members

Hyundai Motor Group has announced that Euisun Chung, Executive Vice Chairman, has been elevated to the position of Chairman of the Group. Chairman Mong-Koo Chung was moved to the position of Honorary Chairman. Hyundai Motor Company, Kia Motors Corporation and Hyundai Mobis Co each held extraordinary board meetings to discuss the appointment. All members of the boards unanimously endorsed the appointment of Euisun Chung as the new Chairman of the Group.

Hyundai Motor Group will open a new chapter in its history under Euisun Chung's leadership. Embracing the vision Together for a Better Future, the Group will develop and acquire key technologies and capabilities to overcome market uncertainties, including Covid-19. In his inauguration remarks, Euisun Chung presented the future direction of the Group as one focused on customers, humanity, future, and social contribution.



Farnek appoints Khaldun Aburok to drive business development

UAE-based facilities management company Farnek has appointed Khaldun Aburok as Director of Business Development. Aburok's previous experience in business development includes a senior role with major Japanese corporation OMRON, initially reporting into their regional HQ for EMEA in Amsterdam. He started out as a field sales engineer based in Switzerland, and after almost three years' service, in 2015, he was promoted to Regional Sales Manager for the MENA region, heading up the Dubai branch office.

Prior to that, Aburok worked in the research department at the Swiss Federal Institute of Technology in Zurich, having graduated from the University of Applied Sciences and Arts Northwestern Switzerland, with a Bachelor's degree in electrical engineering and IT.

The Swiss national has been given the responsibility for supporting the corporate

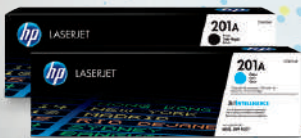


Mashreq elevates Scott Ramsay to Group Head of Compliance, Money Laundering Reporting

Mashreq has appointed Scott Ramsay as its new Group Head of Compliance and MLRO, Money Laundering Reporting Officer. In this role as a part of the senior leadership team, Scott will be responsible for establishing and maintaining a robust enterprise-wide compliance programme for the bank. He will evaluate and improve the effectiveness of internal controls and governance processes to ensure that the bank adheres to all regulatory guidelines across all markets. He will also provide support to operational teams in the development and implementation of regulatory policies across the bank.

Scott joined Mashreq in June 2020 as the Head Of International Banking Compliance. He will continue to perform his responsibilities in both the roles until a suitable successor is announced for the position.

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to help you make success sustainable.



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perform consistently.



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Experience outstanding print quality
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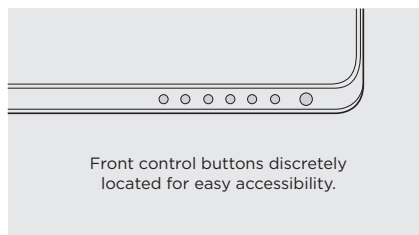
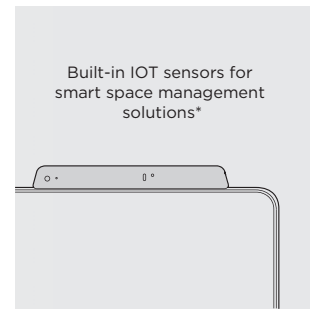
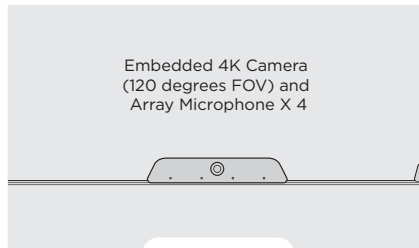
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RVP Middle East
and Africa, Alteryx



Dr Tariq Aslam,
Head of Middle East
and Africa, AVEVA



Prof Dr Tadhg
O'Donovan, Head of
School of Engineering
and Physical
Sciences, Heriot-Watt
University, Dubai



MS Prakash, Strategic
Planning and Marketing
Director, Middle East
and Africa, Emerson
Automation Solutions



Vijay Jaswal, Chief
Technology Officer,
Middle East and Turkey,
Software AG



ENERGY

IS THE INDUSTRY READY FOR DISRUPTION

Crash in oil prices, green energy improvement, intelligent utility grids, are some of the challenges and opportunities faced by energy industry.



ALTERYX

PROCESSES, DATA, ANALYTICS CRITICAL FOR IMPROVEMENT

Analysing data can determine root cause of mishaps, prevent future failures, reduce cost by analysing consumption, and predict energy demand.

Energy companies that recognise the value not only in data, but processes and people that surround it, and use this to drive insights, will thrive in their delivery of products and services. The reality is, when an organisation acts on feedback, customers, feel that they care.

From connected smart home technologies and IoT devices to upgrading infrastructure, maximising grid and load efficiency, and minimising risk while improving profitability, disruption affects many areas in the energy production and distribution sector. Whether a producer, distributor, or reseller, data science, analytics, and predictive modelling can uncover critical intelligence, model scenarios, and see into the future.

Preventing future failures through analysing data to determine the root cause of previous mishaps; reducing cost and service options via analysing end-customer consumption; predicting energy demand via combining usage data from smart meters; and minimising fuel costs and maximising load capacity to improve profit margins.

The oil, gas, and energy sector require constant accuracy and operational flow. The Alteryx Analytic Process Automation Platform enables the energy industry to automate business processes and grants even novice-level knowledge workers direct self-service access to business-critical data insights at speed.

One of the main challenges currently faced in the energy sector is the transformation to sustainable renewable energy. Moreover, the fluctuations in demand and increasing consumer interest in renewable energy are leading to various alternative energy sources to distribute and offer as new services.

Bringing more options for consumers than ever before, while pressuring providers to reduce costs and increase competition. Maintaining consumer confidence and rewarding loyalty is now pivotal.

Yet, this requires an organisation to move to a customer-centric approach. From scoring customers on their likelihood to switch to another provider to proactively intervene and retain them, data



ABBOUD GHANEM,
RVP Middle East and Africa,
Alteryx.

Energy companies that recognise value not only in data but processes will thrive in delivery of services.

and analytics play an essential role in understanding – and responding to – customer demands and expectations for every business.

Major sustainability concerns are pushing forward an energy efficiency agenda all over the world, which makes the necessity and urgency to find future solutions that preserve natural resources more relevant than ever.

The UAE has ambitious targets to meet the National Energy Plan 2050 and deliver energy efficiency and renewable energy.



Image for illustrative purpose

Sustainability concerns are pushing forward an energy efficiency agenda all over the world.

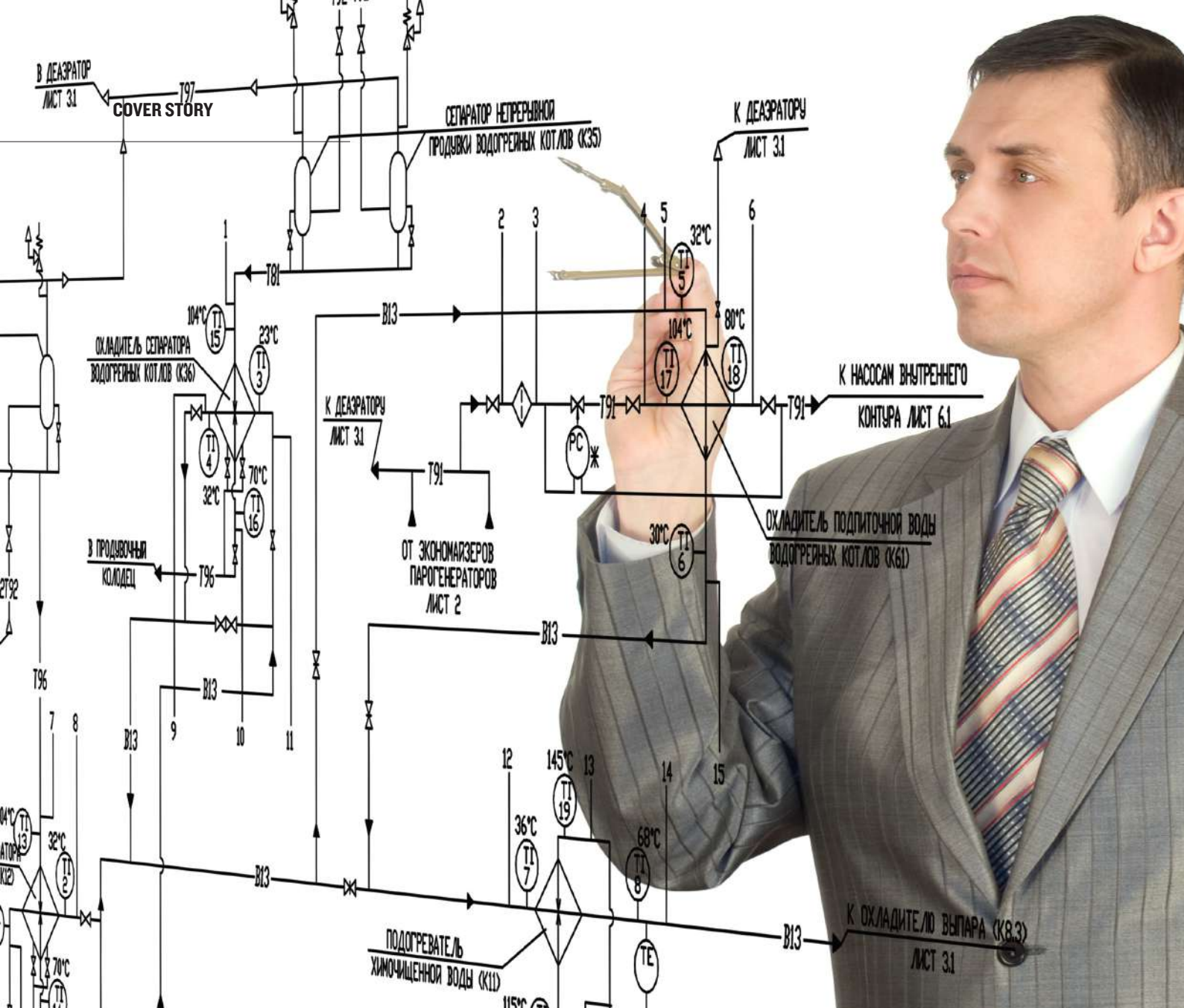
These developments, coupled with technological disruptions, will be key to accelerating global economies, but will also bring a broad spectrum of challenges.

Descriptive, predictive and location analytics will be key for data analysts in the oil and gas industry to connect, cleanse, and join data from multiple sources — spatial, geological, seismic, weather, and more to make informed decisions.

Only by empowering data workers within the energy sector to quickly build repeatable AI-informed predictive models without the need for coding or performing complex statistics will they be able to reimagine processes with fresh data-driven insights. ■

KEY TAKEAWAYS

- When an organisation acts on feedback, customers feel they care.
- Preventing future failures through analysing data to determine the root cause of previous mishaps.
- Oil, gas, energy sector requires constant accuracy and operational flow.
- The Alteryx Analytic Process Automation Platform enables the energy industry to automate business processes.
- Data workers within the energy sector can build repeatable AI predictive models without the need for coding or complex statistics.



AVEVA

AI AND CLOUD DRIVING SUSTAINABLE CHANGE IN ENERGY

Artificial intelligence can produce insights and recommendations with less error, while cloud is the technology glue that binds it all together.

The current pandemic has shown the oil and gas sector how dependable enterprise operations can be upended almost overnight. Workforce routines at extraction sites and refineries have been disrupted, causing unplanned outages, as we saw at the Sharara

oilfield. With supply chains interrupted, parts manufactured in traditional source markets could not be delivered on time, delaying essential maintenance. Border closures and an unprecedented drop in demand have further constricted already tight economic operations.

Not only do these conditions look set to continue over the short term, but other challenges loom over the foreseeable future. A supply glut and a depressed outlook for hydrocarbon prices have been forecast over the medium term, and over the long-term, oil demand could peak within



Image for illustrative purpose



DR TARIQ ASLAM,
Head of Middle East and
Africa, AVEVA.

KEY TAKEAWAYS

- A supply glut and a depressed outlook for hydrocarbon prices have been forecast over the medium term.
- Over the long-term, oil demand could peak within two decades as fuel demand drops.
- Success in a post-pandemic world will require innovative thinking and action at scale.
- Two new technologies will shape a sustainable future, and these are artificial intelligence, cloud computing.
- Artificial intelligence enables people to make better decisions and recommends courses of action.
- McKinsey predicts that artificial intelligence will drive a 2% growth in manufacturing and energy for the next decade.
- Artificial intelligence can produce insights and recommendations for workforces with less chance of error.
- If artificial intelligence underpins better decision making, cloud is the glue that binds it all together.

two decades as fuel demand drops and pressure to act on climate change mounts.

Success in a post-pandemic world will require innovative thinking and action at scale. Two transformative new technologies will shape a sustainable future for oil and gas and its partner industries, and for the world around us. These are artificial intelligence, or artificial intelligence, and cloud computing.

Artificial intelligence has been with us for over three decades. As it becomes more sophisticated, with wider use cases, it allows organisations to improve productivity. With unified smart analytics that bridge complete data stacks, teams can leverage mathematical thought processes

across all their activities. Individuals are thus afforded scale and capacity that would otherwise have been unavailable: knowledge, data-led intelligence, and the capacity to recognise new opportunities.

Artificial intelligence enables people to make better decisions – and even recommends courses of action – that enhance the capabilities of human staff. Overall, McKinsey predicts that artificial intelligence will drive a 2% growth in manufacturing and energy for the next decade – or \$1 trillion every year.

Artificial intelligence can produce increasingly more complex insights and recommendations for human workforces quicker and with less chance of error. If artificial intelligence underpins better decision making, cloud is the glue that binds it all together.

As an example, consider ENEL, which uses next-generation predictive maintenance to leverage artificial intelligence-driven simulation and forecasting. As soon as an issue is flagged up via predictive maintenance, technicians can seek answers to several follow-up questions.

Are there enough system resources to make it the next planned outage, or is an emergency maintenance shutdown required? What is the best time for maintenance to reduce adverse impacts on operations? What knock-on effect could an outage have, and what preventative actions can alleviate it?

The cloud helps scale the benefits of artificial intelligence across the entire range of enterprise operations as opposed to the past, when narrow artificial intelligence was infused into various products. This broader artificial intelligence leads to general artificial intelligence – the ability to make a complex decision using combinations of different types of artificial intelligence, to learn something in one place and apply it elsewhere. ■

EMERSON AUTOMATION

DEMAND CRASH DRIVING ADOPTION OF IOT, AI, ML PLATFORMS

Large energy companies will be transforming from oil and gas to more diverse focus such as Shell, Total, BP, who are making efforts towards solar, wind.



MS PRAKASH,
Strategic Planning and Marketing
Director, Middle East and Africa,
Emerson Automation Solutions

Over the next five years, we expect the digital transformation pace to increase with rapid adoption at a site level. Energy producers will also be exploring project development to incorporate technologies such as digital twin, artificial intelligence, machine learning, and analytics as a basis for their design.

As there will be a strong focus on sustainable development, global and country-level initiatives focused on sustainability will drive a strong momentum towards carbon neutrality through a technology mix and energy efficiency initiatives.

Large energy companies will also be looking at transforming from being oil and gas centric to organisations with a more diverse focus. These changes are already prominent in organisations such as Shell, Total, and BP who are making focused efforts towards solar, wind, and power generation.

Oil companies such as Aramco and ADNOC are moving their focus from volume to value through partial privatisation, diversification and focus on efficiency.

Over next five years, we expect pace of digital transformation to increase with adoption at site level.

KEY TAKEAWAYS

- Large energy companies will be looking at transforming from oil and gas centric to more diverse focus.
- Changes are already prominent in Shell, Total, BP who are making efforts towards solar, wind, power generation.
- Oil companies Aramco and ADNOC are moving focus from volume to value through partial privatisation, diversification, efficiency.
- Demand crash has hit profitability and operational metrics of several energy producers, causing them to reduce spend levels.
- On-site access to support activities on infrastructure has become a challenge for operators due to access and restrictions.

A significant factor is the changing demand dynamics. Demand crash has hit profitability and operational metrics of several energy producers, causing them to reduce spend levels and re-purpose planned capex towards enhancing plant profitability.

On-site access and capability to support activities on critical infrastructure has also become a challenge for operators due to the limited access and flying restrictions imposed globally. Pandemic-related fallout has also impacted production planning and fulfillment levels of various manufacturers, delaying project timelines which in turn

increases costs and risk.

To overcome new diverse and significant challenges, energy producers are launching several initiatives:

Several technologies were identified to help with the transformation of energy company objectives towards increased profitability and plant reliability. Wireless-enabled IIoT frameworks provide access to rich data, artificial intelligence and machine learning and data analytics help keep equipment online, and these also help optimise operations.

With limited site access during the pandemic, game changers in technology innovations provide remote experts with asset diagnostic and reliability data. Global expertise focused on equipment and process can now be harnessed at a site level.

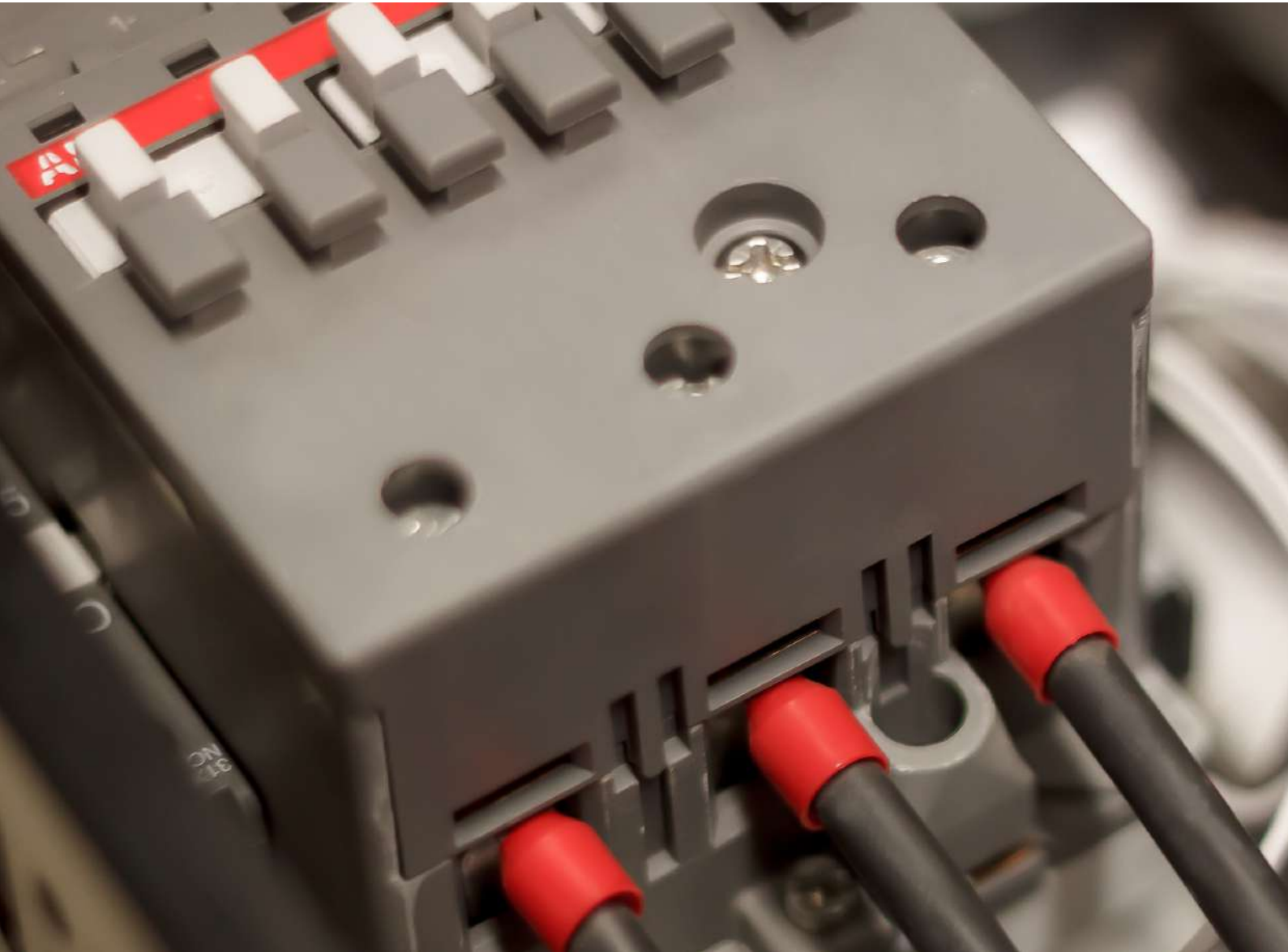
In the energy distribution space, we are seeing technologies at play such as blockchain which are making transactions and logistics more secure and transparent in the process.

Covering multiple segments, Emerson's portfolio includes control systems and software solutions, measurement solutions through to final control elements. These are coupled with the digital transformation portfolio that leverages the power of IIoT.

SOLUTIONS INCLUDE:

- KnowledgeNet's analytics application software integrates with Emerson's leading Plantweb digital ecosystem.
- Open Systems International transforming and digitising operations for incorporation of renewable energy sources, and energy efficiency and reliability improvement.
- Progea Group, provider of industrial internet of things, plant analytics, human-machine interface, and supervisory control and data acquisition technologies. ■





HERIOT-WATT UNIVERSITY DUBAI

TRANSITION FROM CENTRALISED TO DECENTRALISED GENERATION

The potential for energy storage and trading, coupled with a shift to electric vehicles can have a significant impact on the energy system.

Technological innovation is vital for ramping up the process of a successful global energy transition, that is the shift from conventional generation, fossil-based, where incumbent power companies distribute their energy

from large power plants to the end-user, to decentralised generation where energy consumers manage their own energy portfolio on-site via distributed energy resources.

The potential for new business models, energy storage and trading,

coupled with a shift to electric vehicles can have a significant impact on the energy system.

Supporting technologies such as predictive artificial intelligence, machine learning, IoT, and blockchain can play an instrumental

KEY TAKEAWAYS

- Supporting technologies can play an instrumental role in analysing demand and adjusting how much power is drawn.
- It is essential for digitalisation to shift from the recommended phase to the mandatory phase, where digital technologies become mature.
- Examples include virtual power plants, home energy management, cloud computing solutions, digital twins.
- As energy undergoes a huge transformation, in tandem with technologies, it will re-design the way we live over the next few decades.
- At one end, transformation is being driven by a rapidly growing population, prompting the urgency for sustainability.
- At the other end, ongoing development of technologies required for sourcing and storing energy from renewables is also gathering steam.
- There is no doubt that energy has been impacted by massive decline in consumption due to pandemic's negative impact on economic activity.

simulated replica of a power plant or grid.

As energy undergoes a huge transformation, in tandem with technologies such as artificial intelligence and IoT, it will re-design the way we live over the next few decades. At one end, this transformation is being driven by a rapidly growing population, prompting the urgency for sustainability, at the other end, the ongoing development of technologies required for sourcing and storing energy from renewables is also gathering steam.

As the world needs to scale up renewable energy at least six times faster in order to meet the Paris Agreement goals, several national governments have already begun to incentivise its adoption. However, current plans and policies are not nearly ambitious enough to meet the 1.5°C goal by 2050. Fulfilling the innovations needed for energy transition will require a grand coalition between nations, regulators, policymakers and the private sector.

There is no doubt that the energy sector has been deeply impacted by the massive decline in consumption due to the pandemic's negative impact on economic activity across the globe. And at the same time, the increasing demand for cleaner and greener sources of energy, as opposed to conventional sources, means that the energy sector now needs to balance demand and supply in a more optimised manner to grow at the rate needed to mitigate climate change.

This also means that existing energy sources are in need of modifications that can help eliminate or lessen their environmental impact for which more investment will be required. However, the International Energy Agency expects global energy investment could fall by \$400B; this is a worrying sign as it can slow down, for instance, the proliferation of key clean energy technologies that is ultimately imperative as a step towards addressing climate change. ■

Image for illustrative purpose



PROF DR TADHG O'DONOVAN,
Head of the School of Engineering
and Physical Sciences, Heriot-Watt
University Dubai.

role in analysing demand and adjusting how much power is drawn from where across the distributed grid. Such types of applications are yet to be fully deployed in the power industry.

To effectively orchestrate the different elements of new power ecosystems, it is essential for digitalisation to shift from the recommended phase to the mandatory phase, where digital technologies become mature, fully integrated and business-critical. Examples include virtual power plants, home energy management, cloud computing solutions, and digital twins which create a



SOFTWARE AG

TRANSFORMING DISTRIBUTION GRIDS WITH IOT AND IR4.0

The modern distribution grid will use Industry 4.0 and merge physical and virtual worlds, converging the electric grid with the Internet of Things.

Energy has been at the core of human advancements over the last millennia. It is the essence and the heart of everything that humanity requires to survive and is required to power our industries, agriculture, technology and the Internet which consumes 10% of the world's electricity!

The sector is going through numerous challenges currently including an increased demand for energy, especially cleaner renewable energy to ensure environment protection.

From a distribution perspective many providers distribute electricity on old creaking analogue infrastructure where up to 50% of power can be lost between power station to urban consumer area. Some energy providers also suffer from energy theft, where entire villages illegally tap into a grid for free electricity, which is not only illegal, but very dangerous.

Becoming more digitally savvy is one of the core directives of most energy providers globally. The ability to operate in the most operationally efficient manner is fundamental to energy organisations in the world and bar none. Harnessing technology for increased responsiveness to customers, to have immediate visibility to ascertain how the business is performing, as well as to provide pro-active alerts to potential issues are all essential.

Part of becoming more digital would also include infrastructural transformation of the grid from analogue to a digital smart grid. Information technology and operations technology must both intertwine. In fact, the modern distribution grid will be the essence of Industry 4.0 by merging physical and virtual worlds, converging the electric grid with the Internet of Things.

Software AG operates in the areas of digital transformation, integration and IoT, and can help deliver electricity sustainably, efficiently and securely using smart power grids. Energy consumption can be monitored in real time and energy distributed based on consumption—for



VIJAY JASWAL,
Chief Technology Officer, Middle
East and Turkey, Software AG.

Becoming more digitally savvy is one of the core directives of most energy providers globally.

example, supply more power to industrial zones when residential zones require less.

By using live IoT data for demand-based power generation and distribution, operating costs can be lowered, efficiency increased, and environmental goals met.

Advanced distribution management systems using Software AG's IoT-enabled technologies can reduce outages by as much as 60 minutes through accurate predictions of incident locations and identifying nested incidents. Several global organisations are rapidly



Image for illustrative purpose

The ability to operate in the most operationally efficient manner is fundamental to energy organisations.

adopting Software AG's Trendminer as a self-service industrial analytics software for smart factories and Industry 4.0 operations and Cumulocity and ARIS to harness data to drive business futures.

One thing is certain that the sector will be more digitally ready and will harness technology to support its operational needs. The power grids of the future will most definitely have more IoT sensors on them. They will need to be more adaptable and configurable, to accommodate changes such as renewable energy sources, increase efficiency, and become future-ready and more sustainable. ■

KEY TAKEAWAYS

- Harnessing technology for increased responsiveness to customers, to have immediate visibility are essential.
- Part of becoming more digital would include transformation of the grid from analogue to a digital smart grid.
- Information technology and operations technology must both intertwine.
- The modern distribution grid will be the essence of Industry 4.0 by converging the electric grid with the Internet of Things.







ASTER HOSPITALS

HOW THE PANDEMIC BOOSTED TRANSFORMATION OF PATIENT CARE

Remote consultations, increased safety standards, expectations of seamless services, have accelerated digital technology adoption at Aster Healthcare.

The arrival of the pandemic has accelerated the growth of digital healthcare. A lot of services like automation, e-ICU and teleconsultation, which were expected to take years to get adopted, have moved forward in months. “This has really pushed our team to think out of the box and

see how these things can be done without much interactions,” says Dr Sherbaz Bichu, CEO Aster Hospitals and Clinics UAE.

During the pandemic months, a primary starting point was to reduce the exposure of the front-line health workers. Aster Hospitals UAE began to use remote tools like workstation

on wheels and interaction with patients through tablets. A secondary initiative was to access the pool of doctors from Aster’s hospitals in India, to support telemedicine consultations for patients in UAE.

Healthcare is also being transformed from a sick-care approach, where you come to the



DR SHERBAZ BICHU,
CEO Aster Hospitals and
Clinics UAE.

hospital only when you are sick, into coming to the hospital even when you are healthy and before you get sick. And it is because of this, that Bichu feels, "Healthcare is going to be the next disrupted market."

Bichu would like to believe that Aster Hospitals UAE can be modelled along the lines of US based Kaiser Permanente. Kaiser Permanente is one of the largest nonprofit healthcare plans in the United States, with over 12 million members. And Kaiser Permanente's quality of care has been highly rated and attributed to a strong emphasis on preventive care.

"Rather than us getting paid when they are sick, we are looking forward for getting paid to keep them healthy," feels Bichu. "To put it in a nutshell,

Covid has really accelerated the digital growth in healthcare."

TECHNOLOGY CHALLENGES

Unlike some of the markets like banking, telecommunication, manufacturing, information technology is yet to penetrate into healthcare in a big way. "There is a huge gap in healthcare and the problem is that it is quite unique," says Bichu. "Unlike other industries, healthcare is a place where, I would say ideas have not encroached as much as compared to banking and things like that."

Many a time, IT solutions that work well for one industry also work equally well for other industries. But the healthcare industry appears to be an exception to that rule.

SNAPSHOT

Aster Hospitals UAE is part of the Aster DM Healthcare Group, which is operating in seven countries. The Group employs 17,500+ employees, 3000+ doctors, and operates through accredited hospitals, clinics and diagnostic centers. Inside UAE, available services include general surgery, obstetrics and gynecology, gastroenterology, orthopedics, ENT, neurosurgery, dermatology, cardiology, cardiac surgery, pediatrics, amongst others.

Aster Hospitals UAE runs its operations using Hospital Information System, Picture Archiving and Communication System, Electronics Medical Records, Revenue Cycle Management, and Management Information System. The networking platform is built around the recently implemented OmniVista 2500 Network Management System from Alcatel-Lucent Enterprise.

KEY TAKEAWAYS

- Healthcare is also being transformed from a sick-care approach.
- Healthcare is going to be the next disrupted market.
- In a region where governments are running faster than private sector, technology is important for healthcare.
- Artificial intelligence is going to augment healthcare.
- Artificial intelligence is going to help predict disease and patient behaviour better.
- The arrival of 5G is expected to boost efficiency of healthcare systems.
- Robotic process automation will help improve efficiency of hospital operation teams.

“In other industries, where it is cut, copy, and paste, here we may have to do a lot of homework for ourselves and design it for ourselves. So that is where the challenge comes in with all this plug and play things coming in. And then devices are not talking to each other,” continues Bichu.

Continuing with the relative limitations of IT within the healthcare industry, is the fact that most implementations are rolled out as a pilot project or on limited basis. Bichu feels a much larger implementation can put patient's healthcare at risk.

“Since healthcare IT is not as developed as the banking sector, we want to go in phase-wise. What we do is we put it in one place and nurture it in that place, and make sure that it is robust before taking it to the other place,” he explains.

However, once an IT solution has been rolled out successfully, the approach of Aster Hospitals UAE, is to have it replicated across all its hospitals. “What we believe is it should be the same experience everywhere you go,” continues Bichu. These challenges of

technology adoption have not stopped Aster Healthcare UAE, to continue on its journey of modernisation, innovation, and digital transformation.

SETTING THE PACE

In a region where the government and public sector are running faster than the private sector, technology is very important for aspiring players in the healthcare industry, like Aster Hospitals UAE. The Hospital has been wanting to create a seamless patient experience. This starts right from the time a patient books an appointment with a doctor to the time they leave the hospital, post care.

Aster Hospitals has 3,000+ doctors working for it and many of them are top specialists. A good technology architecture will help to connect with them for their expert diagnosis, ultimately benefitting patients.

Aster Hospitals UAE has built its applications on Microsoft Azure Cloud using its UAE Data Centre. The Microsoft Azure datacentre guarantees patient data safety and long-term data retention. Aster Hospitals UAE does not host any server-based applications.

“Artificial intelligence is going to augment healthcare. “I do not say it will replace, it cannot replace, it is going to really augment the way we operate at the moment,” says Bichu. He also expects artificial intelligence to help predict disease and patient behaviour better. The arrival of 5G is also expected to boost the efficiency of healthcare systems

“It is going to give us a lot of insight about patient and patient behavior. That will make the life easy for doctors and for patients,” he explains. Robotic process automation on the other hand will help to improve the efficiency of the hospital operation teams.

Inside Aster Hospital UAE, decisions with regards to go or no-go on IT projects are taken by operations, finance and IT. “We do take a collective call,” says Bichu. “We need a platform to grow. We cannot be pennywise, pound foolish at this moment. We definitely realise that for the future of healthcare, it is very important to keep abreast and pace,” he adds. ■



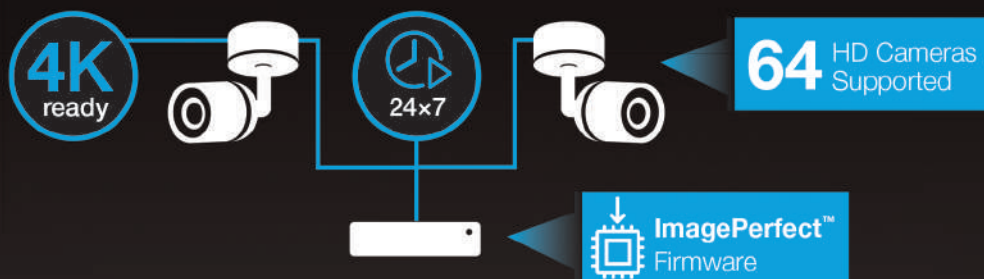
Vigilance Built From Within

CHOOSE THE RIGHT SURVEILLANCE STORAGE



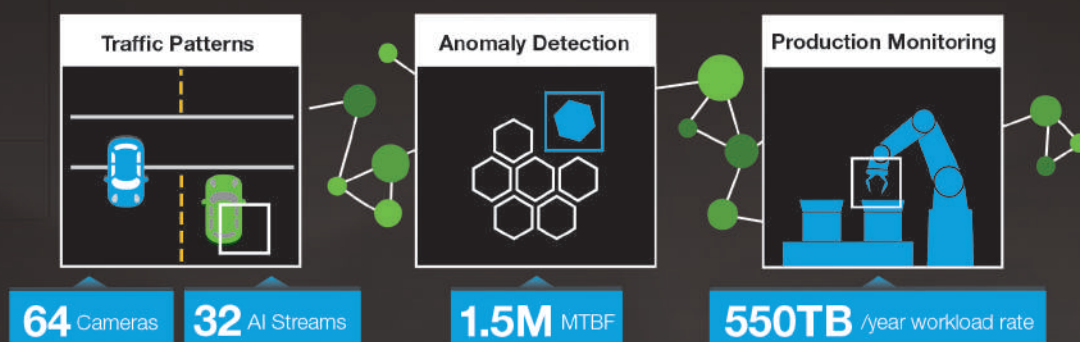
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STABILITY THROUGH ACCELERATED DIGITAL TRANSFORMATION

During a time of great uncertainty, digital transformation allows companies to provide stability and to innovate ahead of their competition, asserts Ravi Gopinath at AVEVA.



*RAVI GOPINATH,
Chief Cloud Officer and Chief
Product Officer, AVEVA.*

According to the World Economic Forum report, digital transformation in the oil and gas industry could unlock approximately \$1.6 trillion of value for the industry, its customers and wider society while creating around \$1 trillion of value for oil and gas firms.

Given the increased volatility and expectation of a lower crude oil price environment, companies are accelerating their digital transformation initiatives as a means to reduce operational costs and gain competitive advantage amid market chaos. The drive towards digitalisation has gained further momentum through the adoption of the Industrial Internet of Things which provides a missing link that

moves hydrocarbon industries to a new level of connectivity.

THE JOURNEY BEGINS WITH DATA

All industries are embracing technology to reshape their operating landscape and reap the benefits of improved productivity, higher efficiency, and increased cost savings. The Oil and Gas industry is not a stranger to this and is progressing towards digital maturity.

Data is the foundation of every analytics and machine learning application. Data is the raw material that feeds into analytics and AI and, in turn, enables data modelling to optimise process, to predict machine failures before they happen and to support decision making. Tagging operating assets with low quality and noisy data at the start of the process is likely to generate inferior or inaccurate results at downstream, reducing the value that can be extracted from the data. Therefore, ensuring robust technology infrastructure to store, manage and contextualise data is a first step towards execution of Digital Transformation initiatives.

Getting design right first time is simply unrealistic and not achievable in most cases as this ideology does not have the flexibility needed to cope with client, legal, contractor and environmental changes which influence scope changes throughout the project. Evolutionary design requires the design process to be adaptable to change and should be

allowed to cycle through alternatives as quickly as possible until its most ideal form is achieved.

Improvement in project performance lies in the ability to manage the design spiral effectively to reduce iterations and enable better communications between designers and constructors. This requires a collaborative digital environment that enables all the engineering and design disciplines to respond to multi-discipline changes in an ordered and organised manner. As design information is created, it needs to be shared across other design disciplines and across contractual boundaries to make sure that the project progresses to schedule.

Integrated petrochemical production networks are highly complex and difficult to visualise for planning and operations. While at the same time, increasing volatility of supply and demand in feedstock enables opportunities for margin improvement. Through digital transformation, business units that have historically been disconnected silos can connect in real time to create a unified supply chain model that maximises profitability by taking advantage of data between real-time economic and market data sources and current plant and production status data.

Through digital transformation oil and gas producers can explore opportunities, reduce operational risk and shrink the gap between

Data is the foundation of every analytics and machine learning application.

plan and actual results. Product value streams can be maximised within the petrochemical value chain through a site wide planning model. Optimal feedstocks can be selected based on real-time economic data to maximise margin. And maintenance costs can be reduced through optimised part inventory and the combination of multiple logistics facilities into a single envelope. Digital transformation also offers opportunities to improve workforce training, productivity, safety and regulatory compliance.

Equally, reconciliation and back casting allows businesses to understand how and why deviations from plans occurred, enabling increased planning efficiency while making it easier to generate feasible and robust schedules that shrink the gap between planned and actual operations. The amount and accuracy of production information increases substantially, equipping users with tools and insights to go beyond basic data. Overall Equipment Effectiveness and lean manufacturing principles to discover the real metrics that are driving performance, availability and quality throughout all levels of supply chain management, planning and operations.

UNLOCKING HIDDEN BENEFITS

There are four key areas where digital transformation can enable oil and gas operations:

- **Protect workforce and operations continuity:** Safety is always the top priority in oil and gas operations. Now, the biggest threat to workforce safety and operations continuity is proximity to co-workers. Connecting an agile but remote workforce to perform digitally enabled tasks such as remote maintenance, engineering and operations is key to protecting

teams' safety and reducing the risk of outbreaks.

- **Supply chain agility:** A robust supply chain management cloud platform combined with real-time crude management tools enables rapid modelling of refinery production planning that reduces business risks while improving collaboration between globally dispersed teams.
- **Operations agility:** Process optimisation capabilities enable operations to respond to changes in feedstocks and product specifications as well as process performance and constraints based on first principles simulation techniques to maximise profits.
- **Maintenance agility:** Predictive analytics enables hydrocarbon producers and refiners to not only remotely monitor asset health but also improve asset reliability by providing early warning notification and diagnosis of equipment issues days, weeks, or months before failure.

SUSTAINABLE LONG-TERM RESULTS

True digital transformation platforms provide the ability to choose between deployment options including on premise, cloud or hybrid rollouts. Agility in procurement options allows enterprises to obtain the required tools through several options, including perpetual licensing or subscription-based services solutions for implementing technology on an as needed, staged approach help the enterprise reduce upfront costs and decrease time to value of new technology investments while accelerating a path toward increased profitability.

During a time of great uncertainty, digital transformation allows companies to provide stability, to create new capabilities and to innovate ahead of their competition. It is a journey through deployment of technology and driving behavioural change in workforce, changing when, where, which, and how work is performed and evolved. Making the transition successfully can be profoundly rewarding for companies. ■

KEY TAKEAWAYS

- Improvement in project performance lies in the ability to manage the design spiral effectively to reduce iterations.
- Reconciliation and back casting allow businesses to understand how and why deviations from plans occurred.
- True digital transformation platforms provide the ability to choose between deployment options including on premise, cloud or hybrid rollouts.

PREPARING FOR THE NEXT WAVE OF DIGITAL TRANSFORMATION

Pushing intelligence out to the edge will drive change in the design of our products, services, processes, and organisations, insists Jacob Chacko at HPE Aruba.



JACOB CHACKO,
Regional Business Head, MESA,
HPE Aruba.

The C-Suite and business leaders understand the value of technology and the benefits it can bring to their bottom line, but there is one key technological shift on the horizon that they can't afford to ignore. Networking at the edge.

Over the next five years, organisations in every industry will experience change on an unprecedented scale as people, digital devices, smart technologies, and an ever-expanding network come together to transform commerce, work, education, healthcare, recreation, and more. The path to 2025 will spawn new

customer-centric businesses, enable entire new industries and reinvent existing ones, challenge us to adapt and evolve, and facilitate greater access, equity, and inclusion across every aspect of society, this is the potential of the Edge.

We define the Edge as the new experiences being enabled by edge technologies for customers, employees, students, patients, and any users of network services. Edge technologies allow the processing of data by devices at the edge of networks, which is where users and devices are.

The opportunity at the Edge is driven by many things, including smart applications powered by artificial intelligence and machine learning, mobile devices, Internet of Things technologies, data analysis, next-generation Wi-Fi, 5G communications, and edge-to-cloud computing.

The new edge network combines AI, ML, and automation to continuously learn, predict, and adapt to changes, needs, and threats in real time. The new edge network utilises technologies and software to make sense of the resulting insights, enabling businesses to act and respond, optimising the experience for the customer or user wherever they are. Pushing intelligence out to the edge will drive change in the design of our products, services, processes, and organisations, and

transform how decisions get made, giving greater autonomy to the devices at the edge.

Edge-based strategies are driving five critical shifts shaping the future of business and work over the next five years:

- User empowerment. The technologies are enabling a fundamental redesign of the user experience, be they customer, student, patient, or employee, giving users the tools to define what they want, how they want it, and even how they want to pay for it.
- Transformational leadership. The scalability and rapid capability enhancements of exponentially advancing technologies such as AI, ML, IoT, and cloud computing are enabling leaders to pursue and deliver experiments to drive 2x to 10x greater improvements across their businesses.
- The Pursuit of digital innovation and excellence. The increasingly central role of digital technologies demands that we raise digital literacy across the organisation and prioritise the rapid evolution of our digital capability to accelerate the adoption of a digital mindset and speed up the creation of digitally based products and services based on insights generated from data collected.
- Embracing and embedding smart. The Edge is helping organisations embrace the true power of smart devices to deliver

Over the next five years, organisations in every industry will experience change on an unprecedented scale.

mass customisation and deep personalisation of a range of user experiences. Rapid advancements in AI and ML are enabling the establishment of smart spaces and creating the opportunity for smart personalisation, adaptation, and continuous learning in the applications offered to users.

- Emergence of new businesses and industry sectors at the Edge. The focus on solutions tailored to customer needs is driving opportunities from the creation of new businesses to the birth of new trillion-dollar industry sectors.

CALL TO ACTION

Capturing the Edge opportunity requires radical shifts in strategic thinking, an investment in developing deep digital experiences, experimentation with new business and revenue models, and evolution of the IT function. This change needs to be owned and driven from the C-suite. Such initiatives clearly require a vision, defined goals, and a robust delivery plan. However, before an organisation can start to articulate these, most need to go through a preparatory phase to ensure they are ready to embark on a transformation of this scale.

Seven key enablers of that preparatory process are identified below:

- Leadership awareness. The starting point is rapid immersion in the top team to ensure they understand the opportunity, are aware of the associated risks, know what it takes to succeed, can prioritise what's to be done, and maintain a clear dialogue with all stakeholders.

- Open and flexible technology options. Ensuring the adoption of open, agile, and secure technology choices that allow teams to pursue future options that may not have been considered initially.

- IT alignment. Making sure the IT function can lead and deliver the journey to the edge and has the capabilities to manage the demands, security challenges, and risks of an edge-based technology ecosystem.

- Mindset and digital literacy. Driving organisation-wide awareness of the shifts taking place in the marketplace and the new business paradigms being pursued, and building high levels of digital literacy and capability to deliver on the opportunity.

- User dialogue. Understanding expectations and concerns to ensure solutions genuinely meet the requirements of their intended users.

- Business case and investment funding. The true potential of the opportunity at the Edge will only reveal itself once solutions are in the field, the business case and investment funding strategy need to evolve in line with the evidence from the projects delivered.

- Focused project approach. The pilot projects and experiments undertaken should be meaningful, should have clear goals, leadership, and dedicated resources, and should be delivered rapidly to ensure business focus, with rapid sharing of lessons learned to drive subsequent projects.

The opportunity at the Edge represents a new way of conceiving business. Although it may seem that the concept is in its infancy, the nature of competition and the exponential rate of advancement in the underlying technologies mean that the pace of adoption will accelerate. This will lead in turn to transformational shifts in the experiences created and the business and revenue models adopted across every sector. For the C-suite, the call to action is clear. The only question is: how quickly can you respond to start building the future? ■

KEY TAKEAWAYS

- The new edge network combines AI, ML, and automation to continuously learn, predict, and adapt to changes.
- The opportunity at the Edge represents a new way of conceiving business.
- Capturing the Edge opportunity requires radical shifts in strategic thinking.

IMPACT OF TECHNOLOGY ON EMPLOYEES' WELL-BEING

Business leaders should harness lessons learnt during the pandemic to create a more holistic approach to employee well-being, says Catherine Darroue at Aetna International.



CATHERINE DARROUE,
Senior Director of Customer Proposition
and Global Head of Corporate
Communications, Aetna International.

It comes as no surprise that digital technology has transformed the way many businesses operate and support their employees. From the Internet of Things, communications platforms and collaboration software to smartphones, apps and virtual services, tech is an undeniably powerful force, something that has become glaringly evident over the last few months. But, when it comes to its impact on employees' health and well-being, is it a force for good or for evil, or a little bit of both? And what can employers do to leverage the positive influences and diminish the negative impact on workers?

TECHNOLOGY AS A HEALTH PROMOTER

According to the recent Aetna International Digital Health Dilemma 2020 report, survey respondents have clearly bought into technology's ability to improve connectivity, collaboration and productivity and, as a result, worker health and well-being. 93% of workers in the UAE say technology lets them complete simple tasks quickly, connect with co-workers across different locations and receive job support. 85% say technology lets them manage time better, thus reducing stress levels. And 54% of UAE workers say technology helps them improve physical and mental health overall.

TECHNOLOGY AS A HEALTH DETRACTOR

While most employees recognise the advantages of workplace technology, they do acknowledge that it has its drawbacks. For example, 72% of UAE respondents believe that being able to have a company mobile phone to handle work calls and emails remotely helps them better manage their mental health. Yet 69% worry that they use their phones too much. That's probably why 61% try, but apparently fail, to check their phones less often.

STRIKING THE RIGHT BALANCE

There is a clear opportunity for organisations to harness the positives that technology enables. And while the coronavirus outbreak will one day run its course, few

organisations will fully return to the norms, cultures, policies and practises that were in place pre-pandemic. It's now more incumbent upon organisations than ever to understand how to apply technology in ways that enable collaborative, flexible, productive and healthy working practises for the benefit of all.

Employees clearly see the value that workplace technology brings, but they just as clearly see its shortcomings. They want to unplug when they're out of the virtual office, which can be difficult to do when they carry all the tools of their trade in their pockets. Employers should leverage employees' call for more help curbing always-on culture and tech overload by:

Establishing workplace policies: If organisations provide technology to workers and expect them to use it, they should also erect guardrails to help individuals unplug outside office hours. And those policies should be enforced, not to punish workers but to protect them.

Communicating clearly: Communicate workplace policies and educate workers on how to keep work from bleeding into personal life. And that means limiting work-related communications to work hours. Again, organisations operating internationally or across different time zones need to provide a degree of flexibility, give and take, and trust when it comes

The pandemic will one day run its course, but few organisations will fully return to the norms and practises that were in place pre-pandemic.

to establishing boundaries for working hours and out-of-hours communications.

Leading by example: It's important that business leaders model the company culture they are promoting, especially since they often struggle more with work/life balance than many of their workers. Some practises, such as in-person meetings, might be difficult for international or virtual teams. Being available through one-to-one calls to offer emotional and professional support is a powerful way for leadership teams to explore new or improved guidance or support mechanisms to help meet employees' needs.

Some organisations and workers alike have embraced digital health tools, as evidenced by the proliferation of wearable fitness trackers, joint mobile health applications and workplace wellness programmes that are tied to them. These tools can help members establish goals, set fitness schedules and stay on top of their well-being by sending reminders whenever a member is due for a check-up, flu shot or repeat prescription.

Yet, there is room for improvement and organisations can do more to ensure employees harness the power of technology to improve their physical and mental health:

Know your audience: Rather than simply handing out Fitbits or launching a wellness initiative, organisations should first engage workers via surveys or one-on-one line manager discussions to find out about their areas of interest and appetite for health and wellness apps.

Identify your priorities: Audit the employee population to identify health risks and high health claims.

Personalise your approach: Create a customised wellness strategy by identifying and implementing benefits and digital tools to meet the unique needs of your workforce.

Employers need to set clear data-use policies, educate employees and allow employees to share in the organisation's future direction. To help alleviate concerns, organisations should establish policies to protect workers' health data and ensure that workers are aware that they retain ownership of that data.

Inspire confidence and trust: Communicate the organisations' commitment to upholding data privacy and to empowering employees to own and retain control over their data. Detail the relevant processes, policies and regulations at play.

Build the culture together: Give employees a voice and the chance to help shape the company's culture and join the company on its journey through a shared sense of purpose and values.

Celebrate successes: If the use of anonymised health data leads you to start a program that yields measurable results, share that success with workers. Let them see the impact analysing health data can have.

FINAL WORD

Business leaders today have a once-in-a-generation opportunity to reconsider how their organisations deploy technologies and digital tools to help improve workers' health and well-being. Working in tandem with their health benefits and technology partners, business leaders should harness lessons learnt during the pandemic to create a more holistic approach to employee well-being, embracing the power of technology to positively influence health and well-being. ■

KEY TAKEAWAYS

- It's important that business leaders model the company culture they are promoting.
- Audit the employee population to identify health risks and high health claims.
- Organisations should establish policies to protect workers' health data.
- Business leaders have a once-in-a-generation opportunity to help improve workers' health.

ARE DEEPFAKES A NOVEL TREND OR A NOVEL THREAT?

Deepfakes is a rapidly advancing technique for generating highly realistic media, and it can be very disruptive when misused, explains Yossi Naar at Cybereason.



YOSSI NAAR,
Chief Visionary Officer and
Co-founder, Cybereason.

Speculation over the potential for misuse of AI and machine learning technologies have been bandied about for longer than the practical applications of these technologies have been available. We've seen concerns manifest in popular culture as depictions of a dystopian future, and while reality is considerably less dramatic, there have been some developments that are nonetheless worthy of examination.

To be clear, there is still no semblance of real intelligence in AI tech in the way we understand

human intelligence. What does exist today is a fairly good approximation of human decision-making that can be applied to perform specific tasks with great efficiency at scale. That said, some advancements in AI tech have raised some eyebrows. One in particular is deepfakes, a rapidly advancing technique for generating very realistic media that has the potential to be very disruptive when misused.

DEEPFAKES IN BRIEF

Deepfakes are a machine-aided synthetic media technology used for the generation or manipulation of text and video that can appear quite realistic to the untrained eye, and they have the potential for considerable implications across culture, geopolitics, and security.

It is important to delineate the three main types of deepfakes so we can understand their implications:

Mimicking fakes: this is a technique where video of one person is superimposed on a target video using AI to enhance and mask the manipulation. Think of this as an advanced green screen process that effectively lets one person do all the talking while it appears to be someone else, right down to movements and gestures.

Generative fakes: this technique also employs AI algorithms, but in this case, they are used to completely synthesise new audio and video from existing materials to produce ultra-realistic content.

Generative text fakes: this more common technology uses AI applications such as the OpenAI GPT-3 to allow computers to generate text content on almost any subject that is incredibly close to actual human writing.

Each of these applications pose a separate and distinct threat on their own if misused, but in combination, have the potential to produce generative personas that in the near future will be extremely difficult to distinguish from the real thing. This is where the security implications come into play.

MALICIOUS DEEPFAKE APPLICATIONS

Generative text fakes using GPT-3 level tech have the potential to make phishing attacks far more convincing and much harder to detect in an automated fashion, as the newer iterations of these techniques can generate text in individualised speaking styles that closely resemble specific people.

Right now, advanced generative text technology is largely confined to a defined group of people that OpenAI granted access to. They blocked the last generation of the tech from public release due to fear of abuse. So, for the moment, that channel isn't a significant threat. That said, the massive knowledge base used in model training means the tech is getting very close to being indistinguishable from actual human authorship, and it's not clear that a strategy exists to better detect these

What exists today is a fairly good approximation of human decision-making.

KEY TAKEAWAYS

- The massive knowledge base used in model training means the tech is getting very close to being indistinguishable from actual human authorship.
- You might one day find yourself in a video conference call with someone you think is your CEO but is actually an attacker.
- More than human intuition will be required to make a solid determination on authenticity of texts or videos.

Deepfakes are a machine-aided synthetic media technology used for the generation or manipulation of text and video.

fakes in the future.

Mimicking fakes with superimposed video are already good enough to fool an unwitting viewer to a reasonable degree. If this technology can be applied in real-time and coupled with advanced audio fakes, there is the potential that you might one day find yourself in a video conference call with someone you think is your CEO but is actually an attacker.

Think of the impact that the abuse of fake social media accounts has had on the success of malicious state-sponsored disinformation and influence campaigns in recent years. Now imagine it's not just mono-dimensional sock puppet personas inundating media channels, but dynamic manifestations of what appear to be real people saying and doing real things.

Finally, consider the implications a convincing deepfake video of a high-profile figure, going uncontrollably viral on the internet, could have on public safety or geopolitical relations. The potential for real harm is significant.

IDENTIFYING DEEPFAKES

Generally speaking, the successful detection of fake generated media will be based on our ability to recognise repeated patterns

generated by the algorithms used in their production. In the case of text fakes that leverage GTP-3, the machine learning relies on a massive collection of human generated text, and the same machine learning techniques used to create the fakes would also be used to identify true text vs fake text. This is a case where the better machine learning application has the advantage.

GTP-3 tech is so advanced that it could be abused to create deep-phishing messages that speak in the voices of many and will be impossible for the current generation of anti-phishing systems to identify. Algorithms for both generation and detection of deepfakes rely on the same data pool for training the models, so it's very hard to distinguish between text generated by the newer algorithms.

As for video deepfakes, at this point they generally have a perceivable artificial quality to them, even really well-executed fakes. The best weapon we humans have for determining if a video is a deepfake for now is for us to learn to recognise and acknowledge that uneasy feeling that what we're looking at doesn't feel real and is somewhat alien. This uncanny valley is the key to unravelling fakes, they just feel wrong intuitively.

But as these technologies improve, it's clear that more than human intuition will be required to make a solid determination on authenticity, and it may be the case that it is simply not going to be possible without the creators of the technologies or the fakes themselves intentionally leaving an indicator of some sort, like a virtual watermark.

Either way, deepfakes and our ability to ensure they cannot be utilised maliciously, are definitely a subject worthy of further discussion before the technology advances to the point where we can't put the genie back in the bottle. ■

MIDDLE EAST NETWORK & CLOUD READINESS SURVEY 2020

LOOKING GLASS

Conducted by IDC, this survey provides insights into just how prepared the networks of large Middle East enterprises are to support the growing need for cloud as businesses rapidly rethink how they operate. It also uncovers the network investments that will set organisations up for long-term

CLOUD IS THE WAY FORWARD FOR MIDDLE EAST ORGANISATIONS



75% of Middle East companies agree that cloud is 'important' to their organisation's network strategy



71% believe cloud is crucial to their digital transformation

MASS MIGRATION TO THE CLOUD IS ALREADY UNDERWAY



29% of Middle East organisations have already migrated workloads to the cloud



A further **51%** will execute such migrations within the next two years

The Riverbed Future of Work Global Survey 2020 is the result of an online survey completed in June 2020 by Wakefield Research with 700 business decision makers from United States, United Kingdom, Germany, Australia, UAE and Saudi Arabia.

APP PERFORMANCE IS KEY TO ENHANCING WORKFORCE PRODUCTIVITY



LOOKING GLASS

77% say it is 'very important' to optimize connections to SaaS applications and ensure consistently good performance at all times.

WHAT'S DRIVING NETWORK TRANSFORMATION?

Three key factors driving network transformation are



50%

Improving app performance



44%

Improving network monitoring and optimization



40%

Greater visibility into network and app performance

NETWORK INVESTMENTS FUTUREPROOF BUSINESS AND ENSURE CONTINUITY



52% of Middle East companies are already undergoing network transformation with the objective of



62%

Improving operational efficiency



52%

Improving business productivity

The Riverbed Future of Work Global Survey 2020 is the result of an online survey completed in June 2020 by Wakefield Research with 700 business decision makers from United States, United Kingdom, Germany, Australia, UAE and Saudi Arabia.

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