BUSINESS TRANSFORMATION

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DECEMBER 2019

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TRANSFORMING OIL AND GAS INDUSTRY

How the industry can leverage digital technologies like automation, analytics, data integration, blockchain, to improve process efficiencies.

Abdul Nasser Al Mughairbi,
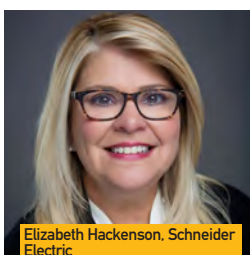Senior Vice President
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Andrew Smart,
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Global Energy Industry
Lead, Accenture

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Digital Innovation Coach,
Energy Industry, SAP
Europe Middle East Africa

Martin Yeomans,
Executive Vice
President EMEA,
AVEVA

Elizabeth Hackenson, Schneider Electric

ORGANISATION SECURITY MORE ABOUT CULTURE

Mihin Shah, Landmark Group

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FLASHY CONSUMER EXPERIENCES NEED ROBUST APP LAYERS

Swing Local - Connect Global

GEC OPEN

DUBAI CORPORATE GOLF WORLD CUP

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EDITOR'S PREFACE

The month of November saw three path breaking events in their own way. This year's Adipec 2019, held in Abu Dhabi, saw the oil and gas majors of the region including ADNOC, begin to talk about their progressing initiatives to digitally transform themselves. The Adipec conference had a separate track on Oil and Gas 4.0 and a separate hall for vendors and suppliers of digital transformation.

At one of the briefing sessions organised by ADNOC, Abdul Nasser Al Mughairbi, SVP Digital, pointed out that business transformation is a combination of technology, people and processes. Technology is the easy part, delivered by vendors and their partners. Who is responsible for the people and the processes? We look deeper into the transformation road map by ADNOC and the industry. Also supported by some global learnings from Accenture's Global Energy Lead, Andrew Smart.

The Dubai Airshow 2019 was the next significant transformation eye opener. 1,200+ companies participated this time around. But what was interesting was the improved visibility of Industry 4.0 use cases. Augmented reality now has enormous traction, for the simple reason that access to an aircraft's engine or airframe or cockpit in real-life is expensive and not easy.

It is far easier to build the expertise using real life simulation through a layered augmented presentation. Displays of robotic automation, and announcements around supply chain automation, blockchain, carbon free air travel, and e-air races, dominated the technology side of this mega-event. Check out our photo feature ahead.

The real climax of the month was the opening of Landmark Group's Mega Distribution Centre. Costing over AED 1 Billion, it has been in the making since 2015. With its daily inbound and outbound capacity close to the 100,000 cartons per day, and a capacity to store and retrieve from close to 0.5 million positions, it is the largest such automated facility in the region.

According to Landmark's Chief Supply Chain Officer, Mihin Shah, this mega facility now brings the retailer into the 48-hour delivery market, a key component of any successful omni-channel strategy.

Equally important, in the four years since the mega facility was first penned on the drawing board, not only has the retail business disrupted itself irrevocably, but so did the Landmark Group. 80% of its Oracle business application, are now hosted in the cloud, supporting 950 stores. Food for thought. When a business wants to transform, get future ready, there is no stopping it! Benchmark for the region!

This month GEC Media Group, concludes its 14-country World CIO200 Summit on 9th and 10th December at Ras Al Khaimah. Catch us on all our social media channels.

Happy retweets, reposts, and shares.

Arun Shankar
arun@gecmediagroup.com

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LEVERAGING DATA AND ANALYTICS TO DRIVE TRANSFORMATION

DIGITAL TRANSFORMATION CAN REVIVE BREXIT-HIT UK

According to Michael Izza at Institute of Chartered Accountants, England and Wales, UK needs influx of technology and infrastructure to revive economy.

MICHAEL IZZA,
ICAEW Chief Executive.

Confidence among business professionals has hit a decade-low as Brexit uncertainty, political instability and slow economic growth take their toll, a study by chartered accountancy body ICAEW has found.

ICAEW Business Confidence Monitor, found profits, investment and employment have all been rising slowly as firms exercise widespread caution amid a lack of confidence. Just over a third of companies 39% said they were seeing productivity rise.

Confidence has been generally in decline since the second quarter of 2014, the quarterly survey of 1,000 chartered accountants showed.

As the UK goes into a General Election, ICAEW is calling for any new government to invest in technology and infrastructure to build a sustainable economy for the future. This includes ensuring digital and transport infrastructure projects are rolled out to new areas, to give businesses outside London greater access to skilled staff and new technology.

Meanwhile, widening the scope of the existing research and development tax credits regime to enable businesses to focus on technology and strategies to boost productivity would also be a help, ICAEW said.

It is likely that the downturn in confidence was largely because of Brexit uncertainty, but political instability had played a part. Global factors, problems in the Eurozone and a trade war between the US and China, may also have contributed. The downturn in confidence is true of all sectors of the economy and regions of the UK. Confidence is now at its lowest point since the aftermath of the credit crunch in 2008–09.

Since 2014 businesses have been telling us their confidence has been in decline. It has now hit a 10-year low, with slower economic growth a symptom of the malaise that has set in, driven primarily by Brexit uncertainty and political instability.

This General Election is an opportunity for a government to set out a vision to tackle the challenges faced by businesses and as a society.

ICAEW Business Confidence Monitor found that companies' inventory levels remain high after they stockpiled at the beginning of the year in preparation for a no-deal Brexit. These stocks will help protect companies if Brexit does cause supply-chain problems, but otherwise it is likely businesses will limit production to reduce stocks. Companies expect sales growth to remain moderate next year.

ICAEW Business Confidence Monitor also shows that employment growth is muted. This may partly reflect a gradual downward trend in the number of companies who say that the availability of skills is a pressing issue. Generally, prices are not keeping pace with costs, squeezing businesses. Profits have grown by less than 3%, while both domestic and international sales have been slowing.

Across the economy, the IT and communications sector are performing best, significantly out-performing other sectors on most metrics. Businesses in the manufacturing sector are the most troubled, closely followed by the transport and storage sector. ◼

HOW TO SECURE THE PROCESS OF DIGITAL TRANSFORMATION

Hadi Hosn at SecureWorks describes five steps organisations should put in place to secure the process of their digital transformation.

HADI HOSN,
*Director of Cyber Security
Solutions EMEA, SecureWorks.*

Digital transformation puts technology at the heart of business operations, products, and services. It also puts customer experience at the center of a company's ethos while accelerating competitive differentiation.

Embracing digital transformation is no longer aspirational. Instead it is imperative for survival in an economy driven by sensors and data. Security can enable digital transformation to succeed, but to achieve this it must be a part of the planning and implementation process.

The rapid adoption of technology has created many problems when it comes to cybersecurity. The vast adoption of SMB V1 for network

sharing in SCADA systems made patching known vulnerabilities next to impossible as the cost impact of pulling down factories for patching was deemed to be too high.

The rapid spread of the WannaCry ransomware exposed the shortsightedness of this attitude and emphasised the importance of applying security protocols to the adoption of technology into business environments.

Business needs to be thoughtful about the impact of security on their transformational journey, in some cases taking a step back from digital transformation to consider all the possible impacts. To help with this, here is a checklist of essential actions for protecting your organisation in the digital era. These are five must-haves for securing digital transformation:

#1 Understand where your digital transformation will lead you and the resulting security implications. Foresight is a powerful tool when it comes to preparing for the long term.

#2 Define the security and functionality considerations of each new technology you will introduce as part of your digital transformation. Careful examination and understanding can prevent roadblocks.

#3 Designate at least one SME or group for the ownership of each technology and the subcomponents. Your DevOps team are not security experts, so you need the right expertise to make the right decisions.

#4 Ensure each of the following critical aspects of your security programme are properly prioritised, monitored and measured as your digital transformation progress:
- Data
- Transmission
- Application
- Identity
- Authentication
- Endpoints

#5 Maintain appropriate security goals and metrics for each technology at launch and over time.

The defining aspect of these five suggestions is preparation. The objective of any transformation is positive change, but for each business the form change takes will be different. You can help your organisation set clearly defined goals and objectives to measure the success of your transformation.

The most successful adopters of any strategy clearly define their goals, outcomes, and measurements well in advance. This allows them to collect the data that shows how a given digital transformation initiative has met, exceeded, or fallen short of the defined goals. Robust planning also helps organisations react quickly as transformation progresses and increases efficiency to reduce overall cost.

You must define success for your organisation's digital transformation from the beginning. Preparation will enable you to successfully secure digital transformation and fully realise all the business advantages it offers. ∎

NEW BREED OF DIGITAL APPLICATIONS WILL BE SELF-AWARE

The integration of machine learning, analytics and DevOps is creating a new breed of self-aware applications more suited for digital enterprises.

GENG LIN,
Chief Technology Officer, F5 Networks.

In recent years, enterprises in every industry sector have been embarked on a digital transformation journey in one way or another. Business enterprises are taking advantage of the proliferation of digital technologies to define new business models or to improve business productivity with existing models.

While the pace of digital transformation varies based on the business and the sector it is in, overall, the journey of digital transformation has three stages.

TASK AUTOMATION

In this stage, digitalisation leads businesses to turn human-oriented business tasks to various forms of automation, which means more applications are introduced or created as part of the business flow. This began with automating well-defined, individual tasks to improve efficiencies.

DIGITAL EXPANSION

As businesses start taking advantage of cloud-native infrastructures and driving automation through their own software development, it leads to a new generation of applications to support the scaling and further expansion of their digital model. The driver behind this phase is business leaders who become involved in application decisions designed to differentiate or provide unique customer engagement.

BUSINESS AUGMENTATION

As businesses further advance on their digital journey and leverage more advanced capabilities in application platforms, business telemetry and data analytics, and machine learning technologies, businesses will become artificial intelligence-assisted. This phase opens new areas of business productivity gains that were previously unavailable.

AGILE ORGANISATIONS

The steady rise in leveraging application, business telemetry and data analytics enables organisations to scale digitally. Adopting an agile development methodology to quickly iterate modifications has shortened the lifecycle of code to users. In digital enterprises, the code embodies the business flow and the speed of change in code to users represents business agility.

In this new era of digital economy, applications have become the life blood of the global economy. Every business is becoming an application business and every industry is becoming application-centric industry.

Behavioral analysis can be used to distinguish legitimate users from bots attempting to gain access. Technology and analytics have enabled artificial intelligence-assisted identification of those users to let them in, boosting revenue and improving customer retention.

As IT infrastructure automation and application-driven DevOps processes have been largely established across the industry, we envision that a layer of distributed application services that unifies application infrastructure, telemetry, and analytics services is emerging.

The scale, agility, and complexity of digital enterprises demands their applications to have self-awareness and the ability to automatically adjust to operating and business conditions. This will breed a new generation of application services to collect, analyse, and act on the telemetry generated by apps and their infrastructure. These capabilities create new business uses.

End-to-end instrumentation from code to customer will enable application services to emit that telemetry and act on insights produced through artificial intelligence-driven analytics. These distributed application services will help application owners to improve application performance, security, operability, and adaptability without significant development effort. ▪

MANAGING TRANSFORMATION AS DYNAMIC, CHANGING PROCESS

It is not enough to plan for digital transformation as a static project, since it involves people who are dynamic explains Chris Pope at ServiceNow.

CHRIS POPE,
Vice President Innovation,
ServiceNow.

As we near the end of 2019, I have been thinking back to the conversations that I have been having with businesses over the last 12 months. In all the strategic conversations, digital transformation has always featured high up on the agenda.

Perhaps it is no surprise, as business leaders are increasingly recognising the importance of transforming the way their organisations work, making the shift from complexity to simplicity, and driving efficiencies through workflow digitisation.

But, too often, businesses start looking at digital transformation through the wrong lens. Before the cloud, the datacentre, and the mobile device in your pocket, any digital transformation needs to start with people, not technology.

DEMOCRATIC EXPERIENCES

The reality is that no one application or piece of software is going to be the panacea to transforming a business. The fundamentals of change management lie at a personal, human level.

And if people are the crux of digital transformation, then this people first factor has to be truly democratic.

Everyone, from Gen-Z newbies to millennial middle management to battle-scarred Baby Boomer consultants, needs to remember that nobody can know everything about everything, all of the time.

Knowledge comes in all forms, so bridging between exuberant youth and seasoned experience is something that organisations must address on their digital journeys.

BEST WAY

Make your digital transformation strategy truly inclusive. Ask every employee what is not working; ask them how they think they could work better; find out what would really make work more meaningful.

Digital transformation that is engineered to create great experiences and unlock productivity will go a long way in ensuring adoption and engagement with any digital tools that are introduced to enable this strategy. Failure to put people first might create change, but it is far less likely to be lasting change.

Repetition is the mother of learning and the great-aunt of adoption

Few businesses will be able to flick the digital switch overnight — and in truth I would worry if they did. Digital transformation is a journey and the aim must be constant, measurable progress, not immediate perfection.

Redefining processes and creating new digital workflows underpin digital transformation, but these technology-driven initiatives will not succeed in isolation. Your ever-increasing number of stakeholders must be on the journey with you, if you are to achieve and maintain high levels of engagement and adoption.

Once again it comes back to the people factor. You might be rolling out high-end technology as the backbone of your digital transformation, but that technology must be put to work in the service of people, not the other way around.

Keep people at the forefront

> LASTING TRANSFORMATIONS PUT PEOPLE AT THE CRUX OF THIS MOVEMENT.

of your mind when it comes to deployment, training, and ongoing engagement. Use the communication tools, talents, and channels at your disposal to keep your teams informed and create a dialogue throughout the process.

Most importantly, make sure they know what is in it for them. Whether it is an agent on a service desk, a salesperson on the road, an accounts manager battling payroll or a facilities manager handling a desk move, think beyond profit and cost savings.

Simpler workflows will allow these individuals to spend more time doing meaningful tasks and the work they really enjoy doing. This will only inspire proactive workers to forge their own way ahead.

NEW SKILLS

To make any digital transformation process enduring, a business needs the buy-in, the support, and the engagement of its people. That means having a clear understanding of your business' skills base and culture. Skills can be learnt, and culture can be nurtured and developed, but you need to know where you are before you can decide where you want to be.

Once we have categorised and codified our skills base, we can start to develop new skills inside every role in the organisation. At this point, the whole spectrum of skills opens up and we can start to recognise the wider potential that every individual has to offer.

In practice, this might mean

that, for example, administration staff start to directly input the sales function, or customer support work directly with human resources and so on, right across the business.

Encourage employees to learn new skills and take control of their own projects. Not only are you more likely to hang on to great talent by empowering them, your business will benefit from new ideas and fresh approaches.

It is not enough to talk about big-picture, strategic digital transformation as an idyllic end state. To create lasting change, we need to account fully for how these changes will affect the individuals who will have to live with those changes on a day-to-day basis.

Successful digital transformation focusses on using the best that technology has to offer to create an organisation that can move faster, make better decisions and compete effectively. Lasting transformations put people at the crux of this movement. ◼

KEY TAKEAWAYS

- We need to account how these changes will affect individuals on a day-to-day basis.

- Few businesses will be able to flick the digital switch overnight.

- Digital transformation is a journey.

- The aim must be constant, measurable progress, not immediate perfection.

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ORGANISATION SECURITY MORE ABOUT CULTURE THAN TECHNOLOGY

Sensitizing the employees to the dos and do nots of cybersecurity cannot be left out of the culture, argues Elizabeth Hackenson at Schneider Electric.

ELIZABETH HACKENSON,
Chief Information Officer,
Schneider Electric.

Each of us can recall at least one major cyber breach within the last few months. If you dig deep enough during the recovery phase, you will find that the floodgate to the unseemly cyber underworld more often than not was opened by a single individual. In most cases inadvertently. It goes without saying that creating a strong cybersecurity culture is imperative for any digital enterprise.

It takes only one unsuspecting person to launch a thousand ships, so to speak, and the average cost of a single data breach globally is $3.86 million. Not to mention a company's reputation and customer confidence. Data breaches are just one business risk. In critical environments, worker and public safety is at risk as well.

As IoT endpoints proliferate across the industrial ecosystem, the means of attack go beyond bad emails and malware. Today, every employee has a role to play in creating a sound cybersecurity culture that leads to digital trust.

CYBERSECURITY CULTURE

How can you reboot your company's mindset to ensure cybersecurity thinking becomes second nature instead of a costly afterthought? Employee training is essential.

As attackers get better and better at disguising attacks, example phishing and targeting individuals within companies, spear-phishing, ongoing training is a must. Only with education will employees be able to recognise these attacks and, more important, prevent them without really even having to think twice about doing so.

For any employee to be a good cyber citizen, they need an understanding of what digital trust means to the company and to our shared global digital economy. Depending on their role, some employees may need a deeper understanding than others. But all should be thinking – Is cybersecurity and data privacy top-of-mind as I get my job done today?

Also look for ways to make security easier for your employees. Strong passwords are table stakes; not having them is like leaving your front door open. But let us be honest – it is difficult for employees to remember multiple complex passwords for all their applications.

A good solution is single sign-on, where one username and password, gets them into all their applications. As an added bonus, it will also boost productivity, since employees will not be constantly shut out of applications and asking for password resets.

Multi-factor authentication tools are also taking great steps forward, with the ability to use a phone as a token rather than a separate fob that may be lost or forgotten. Biometric-based authentication systems likewise make the process easier for employees; nobody forgets to bring their finger to work.

And across research, supply chain,

and lines of business, it helps to show simulated breaches via penetration tests. As soon as you can reveal to someone that you have accessed their code, the conversation changes drastically. The intent here is not to have a Gotcha! mentality but, instead, to work with the business teams as partners, fostering a we culture instead of an us versus them one.

WE CULTURE

Creating a cultural shift does not happen overnight. It requires a consistent drumbeat, not a one-time effort. Encourage employees to talk about security. As you bring groups together for regular meetings, spend five minutes talking about cybersecurity. Ask if anyone has any questions or concerns or has experienced anything suspicious.

It does not have to be anything formal, but it is important to get conversations started and make it clear that it is okay, even encouraged to share concerns, issues and problems.

Examples of potential issues are all around us, and those employees on the front lines are in the best position to identify them. Many industrial control systems, for example, are old, built before good password hygiene and secure control room operation were common.

Establishing this we culture will help you to connect the dots across the company. Find those weak links, and maintain always-on vigilance. If your organisation can demonstrate, cybersecurity is ingrained in the culture, and that every employee is on-board, you can earn the valuable digital trust that is essential for advancing your digital transformation and success in the digital economy. ◾

COMBATTING INSIDER THREATS MORE CHALLENGING THAN OTHERS

JONATHAN CARE,
Senior Director Analyst, Gartner.

Although mature organisations have well-defined incident response plans and procedures for common security events, few have dedicated efforts to better understand how to mitigate and respond to insider threats. This makes combating insider threats one of the most critical issues for chief information security officers, CISOs.

Insider threats are a reality, and CISOs must account for these when creating an incident response plan. To combat these threats, CISOs cannot simply deploy a product, implement a process or increase user awareness. Insider threats require a multifaceted, multidisciplinary approach.

Invest in monitoring and surveillance capabilities to gain a better understanding of, and more visibility into, people and assets — from how data is handled to identifying employee behaviors that do not follow standard policy. Such investments will help you efficiently roll out response, mitigation and recovery when violations occur.

Thorough background checks of employees and vendors and monitoring anomalous data exchanges gives CISOs a view into user entity behavior analytics. This is critical for understanding sources of risk and their subsequent risk mitigation plan. Incident response scenarios come from developing user profiles and personas that can help identify unusual behavior for users or groups with high-risk activities.

Identify potential risky behaviors and map them against potential solutions or mitigation. While they will vary by organisation, common scenarios include installing unsanctioned software, failing password attempts and attempting access to other employee accounts. As you get more in-depth insight into user profiles and personas, these scenarios could be made more pointed.

Look to past insider threat incidents in your organisation and use them to test and refine your incident response preparation and readiness. Work with your legal and HR teams to do so, as they typically document such incidents. You can also examine post-incident reporting and add it as a critical source to your scenario planning.

FLASHY CONSUMER EXPERIENCES NEED ROBUST APP LAYERS

Flashy interfaces may draw consumers but unless they are supported by scalable networking, they may work against retailers, writes Paul Griffiths at Riverbed.

PAUL GRIFFITHS,
Senior Director, Office of the CTO,
Riverbed Technology.

Experience is everything in retail. A positive customer journey can be the difference between retaining a loyal customer base and losing out to competitors. Indeed, Riverbed's 2019 Retail Digital Trends Survey found that 89% of global consumers believe having a positive digital shopping experience is just as important to their loyalty to a retailer store as their prices.

As White Friday gains momentum in the Middle East there is a huge opportunity for retailers to build a positive reputation with the influx of shoppers heading their way.

Breakthrough technologies such as artificial intelligence, the Internet of Things and cloud computing are redefining the retail experience. Both online and in-store, retailers are adopting this technology to bring them one step ahead of the competition. This technology land-

KEY TAKEAWAYS

- Experience is everything in retail.
- A positive customer journey can be the difference between retaining a customer base and losing out.
- Riverbed's Retail Survey found 89% consumers believe positive shopping experience is as important to loyalty as price.
- Everything needs to work all the time and sustain bursts of increased activity during busy periods.
- The ability to continually access, develop and monitor infrastructure in a proactive manner will be invaluable.

grab has the potential to be of huge benefit to customers, but only if businesses have a strong supporting infrastructure to unlock these benefits.

As customers rush to the stores, and every retailer competes to grab their attention, it will be those with the complete digital offering that succeed. Not just those with the flashiest front end.

The retail experience today is almost unrecognisable from the stores of 20 to 30 years ago. The closest thing to state-of-the-art-technology would have been the analogue Point-of-Sale device.

Nowadays, it is commonplace for staff to be roaming across the store with digital touchpoints in hand, supporting customers on the fly. Or consider Amazon's attempt to change the PoS completely, with the introduction of Amazon Go. The in-store experience has to continually develop in order to differentiate its value offering from the seamless online experience offered by digital-first retailers.

These technologies are also being supported by the growth of the personalisation trend. Both online and in-store, retailers are collecting data on individual previous experiences and preferences. This enables the technology to address each person with products most relevant to them.

But, with this comes a problem for the IT teams tasked with supporting data-hungry applications and digital touchpoints. The IT infrastructure supporting retailers has had to change dramatically in a short period of time, as consumer expectations have accelerated at unprecedented speeds. If businesses fail to adapt, their competitors will. And ultimately, customers will follow the leader.

Technology investments cannot be made in isolation. Underpinning every new layer of flashy consumer-facing technology needs to be a base layer of infrastructure which allows these retailers to measure and manage digital experience in real-time.

This is where a scalable infrastructure offering like software-defined networking can shine. SD-WAN provides a single, unified orchestration and connectivity fabric across the entire distributed enterprise network with embedded security, optimisation and visibility. This boosts agility, security and operational efficiency across the network.

At the base level, SD-WAN enables these businesses to have a flexible network that allows them to implement new front-end solutions with ease. Above this, IT teams will be armed with dashboards that give them invaluable insight into the health of their network.

This is especially important because it is not unusual for development teams to prepare for the main event by building new applications and services in the cloud ahead of time.

Testing can be performed away from the public eye to ensure that everything functions as designed before bringing it into production. But application stability and scalability are also key. Everything needs to work all the time and sustain bursts of increased activity during busy periods. While the cloud environment may be ideal for elastically hosting applications at this special time in the retail calendar, getting to and from the cloud when accessing them can be risky for at least two reasons.

One, because connectivity to the cloud hosted applications will most likely be using the Internet for some or all of the path which could lead to a loss of control and visibility. Two, it is quite probable that the network capacity has been provisioned solely for this time in the season and therefore unproven for production.

Equipping DevOps and IT teams with the appropriate visibility, management and acceleration tools de-risks the environment and enables them to collaborate effectively, ensuring that the customer experience does not suffer during times of high traffic. During these periods, such as White Friday, this ability to continually access, develop and monitor the infrastructure in a proactive manner will be invaluable.

A great experience is just as memorable as a bad one, and customer loyalty is earned and lost through these experiences. As retailers become increasingly digital first in their approach, a smart approach to network infrastructure is vital to support retailers' continuous charge into flashy front-end technology.

White Friday is not just a challenge that retailers need to survive. It is an opportunity to impress the swathe of new customers that could be heading their way. You do not get a second chance at a first impression, so every effort should be made to ensure it is a positive one. ◾

World CIO 200 Summit roadshow reaches finale

The World CIO 200 Summit roadshow completed 13 of its events by the end of November and was headed for its finale in Dubai. Recap of recent events in GCC.

The role of a CIO is a critical one in today's business. CIOs partly hold the future of innovation, productivity and competitiveness in their hands. At the Global CIO Forum, members exchange best IT leadership strategies and practices to enhance business results. They develop a strong voice to ensure that CIOs are represented at key industry and government decision tables. In other words: Integrate. Influence. Impact.

The Global CIO Forum recognises and awards CIOs on the basis of the following criteria. Leaders: Those CIOs and IT heads with 10-15 years of experience. Masters: Those CIOs and IT heads with 15-20 years of experience. Legends: The supreme category, for those CIOs and IT heads with more than 20 years of experience. A recap of the latest events under the Global CIO Forum.

EGYPT

The Egypt edition of The World CIO 200 Summit roadshow was held on 25th of November in Fairmont Nile City Hotel, Cairo. Attended by over 120 CIOs and IT heads in the country, the event was successful in bringing TechTalk and high-level networking to the table. Vistar Egypt were the country partners for the World CIO 200 Egypt. The sponsor partners of the event were; Nutanix, Rittal Middle East, Spectrami, EMT Distribution, Authlogics, Safetica, Barivion, Veritas Technologies and Trust Information technologies.

The key speakers for the event were Mohamed Adel, Africa and Levant Channel Lead, Veritas Technologies; Kamber Devjianie, Global Sales Leader, Authlogics;

Yasser Ali, General Manager Egypt, Levant and North Africa, Spectrami; Ahmad M Abdel Hamid, Founder and CEO, Trust Information Technology; Jiri Hosek, Technical Consultant, and Naresh Kumar, Sales Development Safetica Technologies; Ahmed Mostageer, Senior Regional Sales Manager, Nutanix MEA; and Ibrahim Ali, Territory Sales Manager Egypt, Rittal Middle East.

The winners of the Egypt edition are as below:

LEADER

Mohammad Akram, Gnzouri Specialized Hospital; Mohamed Abdelghafar Hassan, Gemsa Petroleum company

LEGEND

ADEL ABO ELNOUR, Ministry of Housing; Mohamed Mahmoud, Eid Labib Group; Germin Abouel Atta, Credit Guarantee Egypt; Sherif Haze, Central Bank of Egypt; Inas Sobhy, Ministry of education; Amr Zahra, EZZ Steel; Ramy Kato, Global Leasing Company; Sayed ackl, Ncc; Ayman Hashem, Abd El Aziz Bank Misr; Ashraf EL Senoussi, AIB Bank; Ayman Saad, El Sewedy For Plastic; Howaida Mohamed Kamel, Agricultural Bank of Egypt; Tarek El-Sherif, Al Ahli Bank of Kuwait Egypt; Joseph Makram Tadros,Egyptian Arab Land Bank;

MASTER

Mohammad Musharraf, Elaj Group; Hossam Safwat, Baheya Hospital; Rehab Lotfy, Chamber of Information Technology and Telecommunication; Ismail Sibay, National Bank of Egypt; Yehia

Elshayeb, DMG Mountainview; Mohamed Mazroa, Telecom Egypt; Essam El Sayed Ahmed, Sina Cement; Walaa El-Deen Farouk, Cairo Oil Refining Company.

NEXT-GEN

Ahmed Samy Ahmed Badawy, National Cancer Institute Cairo University.

BAHRAIN

The Bahrain Edition of the World CIO 200 Summit roadshow was held under patronage of Al Shura Council, Bahrain. The event was held at The Four Seasons Hotel, Bahrain Bay on 6th November 2019 and was attended by over 200 IT heads and decision makers in the country. The inauguration was done by HE Ali Bin Saleh Al Saleh, Al-Shura Council Chairman. The sponsor partners of the Bahrain edition were Veritas Technologies, Rittal Middle East and Finesse Middle East.

The Bahrain edition's opening keynote was made by Dr Jassim Haji, Chairman of the Artificial Intelligence Conference. It was followed by presentation done by Dr Christos Gatzoulis, Head of School of ICT and Web Media, Bahrain Polytechnic and Sh Khalid Bin Hamad Al Khalifa, CIO, Supreme Council of Health.

The women in panel discussions included Dr Jaflah Alammari, Board member RCCI, as the moderator. The panelists included Dr Fay Al-Khalifa, University of Bahrain; Dr. Hessa Al-Junaid, Smart Sustainable Urbanism Lab; Dr Ebtesam Bin Butti, University of Bahrain.

The winners of the Bahrain edition are as below:

NEXT-GEN

Mohamed Niroz Mohamed Thawoos, Head of IT; Abdul Rahman Kanoo, International School; Hasan Isam Naser Muhi, Information Security Assistant Manager, Kuwait Finance House Bahrain; Mohammed Buallay, CTO, Kiwi.

LEGEND

Ali Jassim Ahmed Al Alaradi, Director of Information Systems, MINISTRY OF FOREIGN AFFAIRS; Ali Hassan Ahmed Hasan, Acting Director, ICTS, Bahrain Polytechnic; Khalid Jalal, GARMCO; Ebrahim Al Tamimi, Director IT, Prime Minister Court.

MASTER

Sh Khalid AlKhalifa, Project Director, Supreme Council of Health; Mahmood Al Adraj, Senior Manager Information Technology, Bahrain National Holding; Ahmed Saleh Albalooshi, Managing Director, Fintech IT Services and Consultations; Ahmed Mohd Hassan Buhazaa, Deputy Chariman, Bahrain IT Society; Salman F Abdulla, Head of Information Technology, CrediMax; Ahmed Naeemi, Head of Digital Transformation, Operations and Project Management, Bahrain Institute of Banking and Finance; Nawaf Mohamed Abdulrahman, Head Information Technology, Mohammed bin Khalifa Cardiac Center; Mohanned Al-Anni, Vice President Board of Directors, Gulf University; Jawad Alalawi, Director Information Technology Services, Start Services IT Business Solutions; Abeer AlObaidy, Director ICT, AlShura Council; Mohamed Adel Abu Hassan, Director Information Systems Directorate, Ministry of Works Municipalities Affairs and Urban Planning.

LEADER

Mounir Chehab, Chief Innovation Officer, Leap Management Consulting; Anas Kamaluddin, Head of Group IT, YBA Kanoo; Abubakar Arshad, Head of Information Security, Batelco; Fru Christian Bills, CISO, SADAD Electronic Payment System.

KUWAIT

The Kuwait Edition of the World CIO 200 Summit roadshow was held at the Radisson Blu Hotel in Kuwait City on 3rd November 2019. The Gala dinner, held in conjunction with the CIO networking session was attended by over 90 IT heads and decision makers in the country. The sponsor partners of the Kuwait edition were; Veritas Technologies, ITS, Rittal Middle East and Finesse Middle East.

The evening kicked off with an exclusive briefing by Veritas on Aptare IT analytics, conducted by Brett Samuel, Head of Technology, Middle East and South Africa, Veritas. The roundtable discussion was spearheaded by Roy Joseph, IT Director of Kuwait Hotel Companies and attended by over 15 leading CIOs in Kuwait.

The Kuwait edition's opening keynote was done by Brett Samuel, Head of Technology, Middle East and South Africa, Veritas. It was followed by presentation done by Muawiya Abu Jubain Chief Operating Officer ITS. The event concluded with recognising the IT champions of 2019.

QATAR

The Qatar Edition of the World CIO 200 Summit roadshow was held at the Mandarin Oriental Hotel in Doha on 22nd October 2019. The Gala dinner, held in conjunction with the CIO networking session was attended by over 80 IT heads and decision makers in the country. The sponsor partners of the Qatar edition were; Veritas Technologies, QCS, Nutanix, Rittal Middle East and Finesse Middle East.

The opening keynote was done by Samir Pawaskar, Information Security Expert, Government Agency in Qatar and he spoke on the cyber security challenges in the age of digital transformation. The keynote was followed by presentation from Qatar country partner, QCS and was presented by Paresh Mohanty, Head of Business, Cyber Security. Ian Wood, Senior Director, Technology Practices, EMEA Veritas spoke on how leveraging an enterprise data service platform can help organisations remove data complexity.

In Nutanix's presentation, Peter Grant, Systems Engineer and Bernard Diab, Territory Manager of Nutanix spoke about how the company is enabling IT teams to build and operate highly automated private and hybrid clouds. The executives jointly engaged in discussion on the challenges and opportunities that lie ahead of them.

The winners of the Qatar edition are as below:

LEGEND

Mohammed Ishtiaq Hussain, Doha Bank; KV Kumar, Qatar Insurance Group; MF Khan, Al Mana Group; Samir Pawaskar, Ministry of Transport and Communication; Saeed Rashid Al Kaabi, Qatar Fuel Group

MASTER

Aladdin Saqer, McDonald's Qatar; Ferdinand Guarin, Qatar Plastic Products Company; Manojkumar Chandrasenan, North Oil Company; Magdy Mansour, Doha Cables; Syed Ali, Advanced Construction Technology; Faizal Babu Kavungal, Gulf Drilling International; Chander Mohan Raina, Wyndham Grand Regency Hotel; Anto Pius, Aster DM Healthcare; MG Amila Gayan, Saraya Corniche Hotel; Pasantha Randika Walpola, Amari Doha.

LEADER

Saleem Salam, American Hospital Qatar; Rahul Mistry, Kempinski Hotels and Resorts; Mohammed Feroz Khan, Cleopatra Group of Companies; Suhail Pilakkandi, Alsarh Holding Group, Qatar; Jihas Abdulkader, Al Jassim Group.

Glimpses of World CIO 200 Summit, Qatar

Glimpses of World CIO 200 Summit, Kuwait

Glimpses of World CIO 200 Summit, Bahrain

Glimpses of World CIO 200 Summit, Oman

Glimpses of World CIO 200 Summit, Egypt

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AR, supply chain, drones, IR4, sustainability dominate Dubai Airshow 2019

While mega deals were announced at the event, what was path breaking were use cases involving IoT, cloud, augmented reality, type of technologies.

One hundred new firms have made their Dubai Airshow debut in 2019, with new arrivals on the defence, ATC, maintenance and supply fields all exhibiting for the first time at the show. The number of exhibitors in attendance is up by almost 10% this year, with 1,288 companies setting out their stands, and business has been quick throughout the first four days of proceedings.

Some of the key technology announcements are listed below:

● Air BP, the international aviation fuel products and service supplier, rolled out its digital Airfield Automation technology at Emirates Flight Training Academy, located at Al Maktoum International Airport.

● Bayanat, a developer of geospatial solutions and data aggregation services, announced that it has signed an agreement with Collins Aerospace, an US-based aerospace and defense firm, to develop advanced aerospace solutions.

● Strata Manufacturing, delivered its first shipset of Empennage Ribs for the 777X, the world's largest and most efficient twin-engine jet produced by Boeing.

● UAE is set out to establish itself as a major player in the advanced technology and defence field, with EDGE, a group comprising 25 local entities working in five capability clusters, making its debut.

● DTP announced the successful deployment of DTP tNexus Message Hub system and Dassault Systèmes DELMIA Quintiq fixed resource planning application, at Dubai International Airport.

● FlyBig, an India-based airline startup, has selected Collins Aerospace's ARINC PaxLinkSM Passenger Services System to help streamline its airline and travel operations.

● EagleSHIELD from Thales, is the company's new integrated drone countermeasures solution to protect and secure sensitive sites and large-scale events in urban area.

● AFI KLM E&M, introduced a mixed-reality technology developed by Nuveon, a joint venture founded between AFI KLM E&M and NLR, the Royal Netherlands Aerospace Centre.

● Etihad Airways and Boeing announced a first-of-its-kind eco partnership, in which a specially-themed Boeing 787 Dreamliner will be used to test products, procedures and initiatives designed to reduce aircraft carbon emissions.

● Strata Manufacturing, signed a contract with Grupo Aeronáutico Zona Centro, to establish a competitive and lean supply chain network, under a five-year agreement.

● Sanad Aerotech signed a memorandum of understanding with SAP, aimed at further enhancing efficiencies across its industry-leading aircraft engine MRO process from its Abu Dhabi facility.

● Thuraya, in partnership with Airbus, conducted live screenings of a demonstrative aerial surveillance mission taking place in Germany, from an airborne Airbus H145 helicopter equipped with a communication system utilising L-band satellite network.

● Eight teams have been announced to contest the world's first electric air race, Air Race E, in the fall of 2020. The teams will make history when they line up on the grid in their custom modified electric race planes, to fly wing-tip-to-wing-tip. ■

One hundred new firms have made their Dubai Airshow debut in 2019, with total number reaching 1,288.
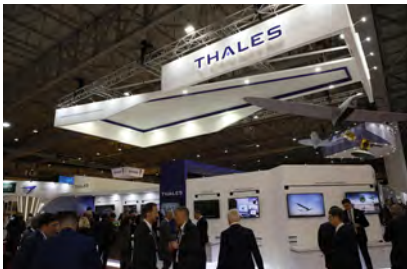
Thales demonstrates EagleSHIELD to encounter rogue drones in protected airspace.

Air BP, demonstrated its cloud based, digital Airfield Automation to help prevent misfuelling in real time.

Etihad Airways and Boeing announced an eco-partnership using a specially-themed B787 Dreamliner to reduce aircraft carbon emissions.

Strata partnered with Grupo Aeronáutico Zona Centro and Premium AEROTEC to boost metallic parts quality.

Multiple UAE defence deals were announced under EDGE around Halcon, Boeing Embraer, SAAB.

Mubadala owned Strata Manufacturing has adopted Industry 4.0 delivering shipset for Boeing 777X.

Sanad Aerotech has adopted 4IR using SAP, Honeywell's VoCollect, Atlas Copco's Smart Connect, TrackIT RFID.

With actual aviation hands-on experience at a premium, many aerospace vendors are using augmented reality as a tool for training and familiarisation.

Air France Industries, KLM Engineering & Maintenance introduced a mixed-reality technology developed by Nuveon.

Complex mechanical systems and components, such as those in the Trent 1000 engine on the Boeing 787, are accurately recreated as a hologram by Nuveon.

DTP and Dassault Systèmes are implementing resource optimisation solutions at Dubai International Airport.
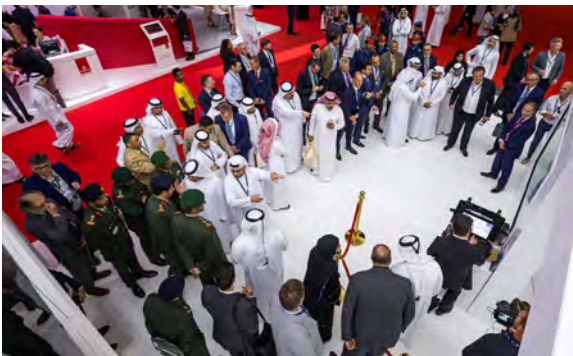
Thuraya demonstrated live screenings of an aerial surveillance mission taking place in Germany, utilising L-band satellite network.

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What best metrics can CISOs use to report to the board?

CISOs are increasingly communicating impact of vulnerabilities in cybersecurity to the Board. What are the best practices and metrics that can be used?

ALAIN SANCHEZ,
Senior CISO
Evangelist, Fortinet.

Certainly the CISO role has been significantly augmented over the last 18 months. Rallying the board to the security cause is a must. To achieve that, the CISO has to translate cyber threats into business impacts. This means being able to factor what used to be network and security indicators into business KPI's that are in line with the global company strategy.

For example, if the company strategy is to replace local agencies by mobile applications, which is a typical banking industry objective, then the Indicators of Compromise, unpatched stations, presence of rogue applications, simple passwords, need to be translated into business risks. And the CISO needs to

LEARNING POINTS

- CISO has to translate cyber threats into business impacts.
- Being able to factor what used to be network and security indicators into business KPI's.

> WHAT SECURITY STRATEGIES ARE ADEQUATE TO SUPPORT WHAT TYPE OF BUSINESS.

be at the forefront of this translation and communication mechanism that makes the board aware of business vulnerabilities, not technical vulnerabilities.

The latter calls for a new expertise: what security strategies are adequate to support what type of business. They are not necessarily fully compatible and the board needs to be aware of its options. Until recently, the CISO was most of the time the one who stopped, or at best delayed, the deployment of innovative projects because one needed to evaluate the security impact of such things as collaboration, cloud-based applications, or mobility.

Today these trends are so pressing that instead of stopping them, the CISO needs to provide documented evidence. In this new role, the CISO creates the condition for informed board decision to be taken. It is not we cannot have this, but we have three options to do this, each one has its own risks, roadmap, and benefits. ∎

MAHER JADALLAH,
Regional Director, Middle East, Tenable.

CISOs SHOULD
REPORT WHERE THE
ORGANISATION IS
EXPOSED AND WHAT
NEEDS TO BE DONE TO
REDUCE RISK.

When speaking to business executives, CISOs need to communicate in a language that executives can relate to. That means, instead of talking about cybersecurity as vulnerabilities and the latest exploit kits, the board wants to know what the business risk is. CISOs should report where the organisation is exposed, what needs to be done to reduce risk, how effective these efforts are over time and how does that compare to peers.

By offering detailed insights in business context, the security team illustrates where weaknesses exist using quantifiable metrics, covering what data is exposed and which assets are vulnerable. This helps all parties understand where to focus resources, plus identify if further investment in technology may be needed, based on a balanced view of the business risk and its reduction,

rather than theoretical or scary statistics.

As an example, when a vulnerability like BlueKeep is published, rather than talking about the severity of the vulnerability in technical terms, CISOs should evaluate their entire infrastructure to determine and report how many systems are exposed to this vulnerability, explaining how many of these systems are critical to the business and affecting which departments, data and assets; how long it is going to take patch everything and how these are being prioritised. Quantifying the risks of an attack as it relates to the business provides an accurate picture of what is working and where greater effort needs to be placed. ◾

LEARNING POINTS
- The security team illustrates where weaknesses exist using quantifiable metrics.
- When speaking to business executives, CISOs need to communicate in a language that executives can relate to.

DR MOATAZ BIN ALI,
Vice President Trend Micro,
Middle East and North Africa.

A LOT OF THE METRICS ARE EMPLOYED BY COMPANIES REGARDLESS OF THE INDUSTRY THEY OPERATE IN.

First, a lot of times it can be a challenge to measure if a cybersecurity team or strategy is effective, simply because in cybersecurity, the ultimate KPI is the absence of data breach, which means nothing goes wrong. But you can never know if that is because you have a great cybersecurity strategy in place, or that you are not targeted, or you are lucky. Proving the negative is difficult.

Second, cybersecurity metrics are changing constantly, and different companies have their own way of defining what constitutes good cybersecurity. For the longest time, cybersecurity had always been about protection - protecting the endpoints, servers, and network. In recent years, the definition has expanded to cover detection and response - how quickly a company can detect a stealthy

LEARNING POINTS
- Some verticals are more risk-averse and have a higher threshold for lapses.
- In recent years, some industrial companies have increased their battle against cyberattacks.

threat in its environment and respond to it is now a critical metric.

Here are some in-vogue metrics companies use to measure the efficacy of their cybersecurity posture: How fast and frequently can you patch; Mean time to detection; Mean time to resolve; How prepared are you; Do your security solutions share information with each other.

A lot of the metrics mentioned above are employed by companies regardless of the industry they operate in. Certainly some verticals are more risk-averse and have a higher threshold for lapses, such as the public sector and the financial services industry. In recent years, we also observe more industrial companies increase the ante in their battle against cyberattacks.

Different verticals are at different stages of this cybersecurity journey, there is no one-size-fits-all approach. By the end of the day, these verticals are dealing with different threat actors. But we do believe that every company out there should have a comprehensive and well-thought-out cybersecurity strategy commensurate with their risk appetite. ◾

MOREY HABER,
CTO and ISO,BeyondTrust.

TEAM MEMBERS
REVIEWING THESE
REPORTS SHOULD
REALISE THE RESULTS
WILL ALWAYS FOLLOW A
SAW TOOTH PATTERN.

The practice of vulnerability management, and its corresponding counterpart, patch management, are primary defenses against threats; be these targeted, opportunistic, trusted sources, or even led by an insider in the form of friendly fraud. To that end, measuring the risk from vulnerabilities and proving that remediation and mitigation strategies are affective in suppressing a threat are critically important to an organisation.

These can all be in the form of an executive summary or other high-level reports delivered to key stakeholders including external or public facing assets, servers responsible for the internal infrastructure, crown jewels and resources with sensitive information, cloud resources in a dedicated or hybrid environment, critical vendors and vendor selection, third party vendors, amongst others.

In terms of frequency of reports, these reports should be provided in a rolling year-over-year format, showing only the last 12 months. If you consider how fast agile development has become for new operating systems and application releases, the last 12 months is realistically all that is relevant for a proper comparison.

And finally, team members reviewing these reports should realise the results will always follow a saw tooth pattern that is gradually escalating. New vulnerabilities will be fixed but there will always be some that are deferred, mitigated not patched, or added to exceptions, for a variety of reasons, that will continuously grow the total number of vulnerabilities. While this is undesirable, it is a consideration for any modern system that not everything can be patched. ∎

LEARNING POINTS

- These reports should be provided in a rolling year-over-year format.
- New vulnerabilities will be fixed but there will always be some that are deferred, mitigated, added to exceptions.

RYAN TROST,
Co-founder and CTO, ThreatQuotient.

Communicating vulnerability metrics to the Board of an organisation is a growing trend because it spotlights highly relevant security risks to an organisation. The depth of vulnerability metrics range based on the industry, organisation and technical prowess of the Board. Advanced vulnerability reports consist of an executive summary, on-going trends, supporting details and a layer of subjective conjecture as to the tactical or strategic implications if the vulnerability is exploited.

However, at the very least the vulnerability report summary should include a prioritised list of the top vulnerabilities, respective threat or risk score, whether a patch or countermeasure is available, number of exploitable hosts within the environment, and the current state of resolution.

There are vulnerability reporting nuances which are dependent on the organisation's market vertical. Some of the nuances are seasonal, whereas, others

COMMUNICATING VULNERABILITY METRICS TO THE BOARD OF AN ORGANISATION IS A GROWING TREND BECAUSE IT SPOTLIGHTS HIGHLY RELEVANT RISKS.

are based on technology restraints within that industry. For instance, in the retail market a substantial amount of their annual revenue is tied to a certain time of the year whether holiday spending or summer vacations.

Some retail organisations put such an emphasis on forecasting vulnerabilities that any modification including patches, upgrades, are prohibited in fear that a change, even one to help secure the environment, will have an adverse reaction causing an operational impact that will in turn affect their sales.

Another example is in the medical industry. Historically, medical devices are difficult to update and are generally susceptible to outdated vulnerabilities so the list of prioritised vulnerabilities might be based on patient frequency or downtime costs. In these situations, individual organisations will adjust their vulnerability reporting to the Board as needed – whether to escalate a vulnerability based on an upcoming holiday season or de-escalate a vulnerability because the piece of medical equipment is reaching its end-of-life and about to be decommissioned. ■

LEARNING POINTS
- Medical devices are difficult to update and are generally susceptible to outdated vulnerabilities.
- Vulnerability reports consist of an executive summary, conjecture as to the tactical or strategic implications if the vulnerability is exploited.

YASSER ZEINELDIN,
CEO eHosting DataFort.

TED DEMOPOULOS,
SANS Principal Instructor.

CISOs need to understand that information security is there to support the organisation, and all reporting must tie into the organisation's higher level needs. Boards need results communicated to them in business language in formats they understand or readily accept.

These absolutely include maturity models as applied to security, and well recognised frameworks, whether the ISO 27000 series, the NIST Cyber Security Framework, the Center for Internet Security Critical Controls, or others. In addition, different verticals often have their own Assurance Standards which are widely accepted and followed in that specific vertical, as well as regulatory requirements. ■

The high stakes in managing risks involved in cybersecurity is the responsibility of a CISO. While the topic is gaining traction in every business environment, Board members are now getting more involved with, as well as understanding the security implications and landscape. It is up to CISOs to create a communication channel where Board members are updated on global trends and regulations, taken through the organisations' security strategies and performance and are made aware of the business enablement's that cybersecurity brings to the table.

Supplementing this with competitors' security performance definitely helps. In fact, what is important in the current situation is that CISOs work towards ensuring that security should have the shared responsibility in attaining business goals and objectives and given the status it deserves.

What applies globally is certainly what will work in the Middle East when it comes to presenting the facts on cybersecurity to the Board. Without getting too complicated, there are a few basic metrics like severity of cyber-risk incidents, financial impact, tier 1 institutional clients, that will enable clearer reporting to the Board. Always make sure to keep all Metrics SMART: Specific, Measurable, Accurate, Reliable and Timely.

It is a good practice to use standard Red, Yellow, Green indicators which can quickly show the board the alignment to risk, compliance and governance. Also, since most members may not have a strong technical background, keeping it simple and avoiding technical jargon is paramount. A good route to use would be to translate security objectives into business goals and outcomes which may be more relevant to Board members. Delivering the current cybersecurity posture and where it is headed is best represented by creating templates which are data-driven and have a more meaningful impact for the audience it is being presented to.

Besides, CISOs must ensure that they are always equipped with any information that may be required to tackle the score of queries from Board members. And, once a CISO has set foot in the Board room, they must capitalise the opportunity and highlight the importance of cybersecurity and create further opportunities for across the table connection continuously addressing the importance of cybersecurity. ■

LEVERAGING DATA AND ANALYTICS TO DRIVE TRANSFORMATION

The oil major consisting of 14 companies is integrating its operational data to automate operations and reach its Oil and Gas 4.0 mission statement.

Abdul Nasser Al Mughairbi, Senior Vice President Digital, ADNOC.

BY: ARUN SHANKAR

ADNOC was established in 1971 and today operates as 14 independent but integrated companies across the oil and gas value chain. It is one of the largest producers of energy products. It produces 3 million barrels of oil per day and more than 9.8 billion cubic feet of gas per day, with any excess production pumped back underground to conserve resources. More than 45+ years of global partnerships are also invested in the Group.

The plan to begin a journey into digital transformation was initiated in early 2017. "We wanted things to be done fast; wanted to be agile; wanted to remove silos and display information," reflects Abdul Nasser Al Mughairbi, Senior Vice President Digital, ADNOC. In the past businesses would be judged on how best they performed and other measures of excellence.

"It is no longer about the best; it is about the fastest. If you lose momentum, you lose value," he indicates. It was also clear that transformation in such a large enterprise as ADNOC would need to get buy-in from business, early in the project to begin the transformation journey.

ADNOC had previously worked out the equivalent of its Industry 4.0 journey. Its Oil and Gas 4.0 mission statement would help the industry evolve to become more efficient, more productive, and to generate more value. The mission statement identified artificial intelligence, blockchain, big data, as suitable to improve its operational efficiency, maximise performance, drive profitability and empower its people.

The science of predictive analytics would be leveraged to reduce maintenance costs. The ambition would be to extend the benefits across the entire value chain

ADNOC's Panorama Digital Command Centre, a real-time data visualisation centre.

DIGITAL TRANSFORMATION STRATEGY TRAP

Technology

People

Process
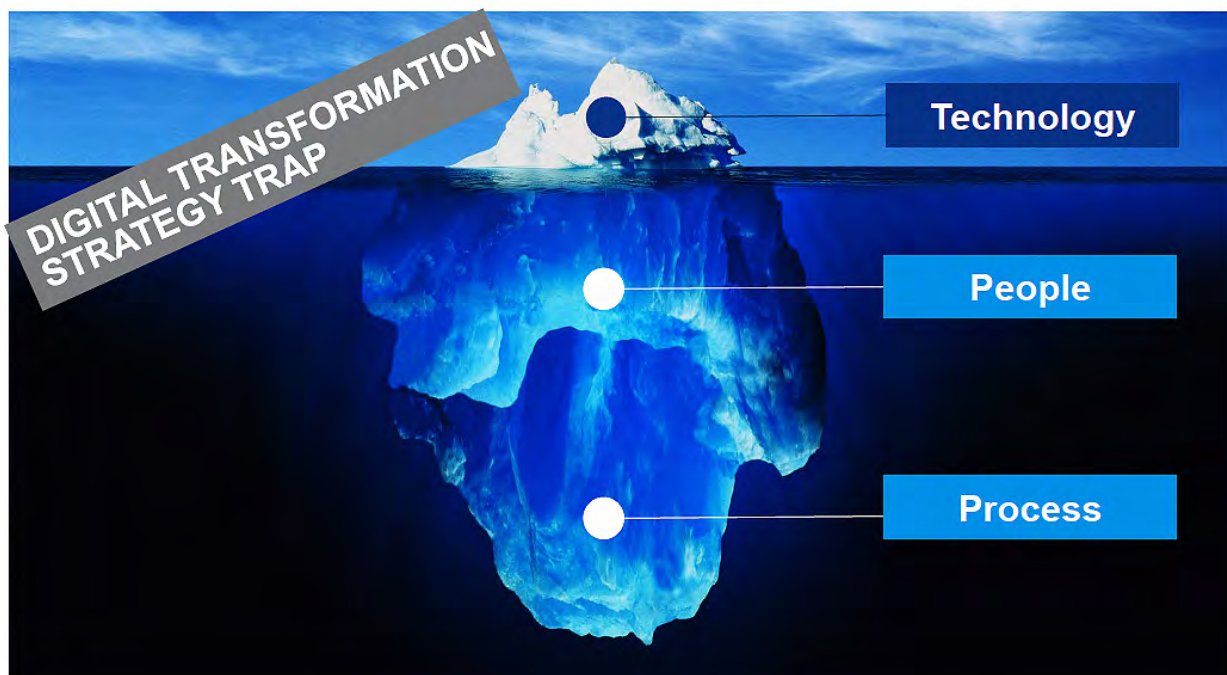
Implementing technology is the easy part. People are the hard part.

from drilling platforms to trading platforms.

As a business ADNOC had been operating for more than 45+ years, and while its historical data was vast it was scattered across the Group. Clearly big data, data analytics, blockchain, were technologies and

platforms that could leverage such vast repositories of information. However, data as the new buzzword had just started in the industry, and most expected the hype to slide away.

Al Mughairbi also needed to consolidate feedback from business

about the digital transformation opportunities that existed across the 14 operating entities of ADNOC. Close to 7,000 employees were identified and 3,000 employees were trained on digital transformation. Hundreds of opportunities for digital transformation were also identified

Moving towards Oil and Gas 4.0.
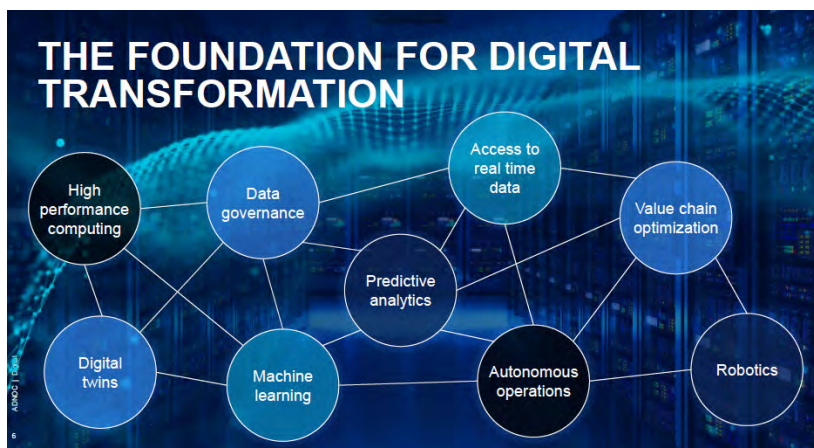
Components of the digital transformation strategy.
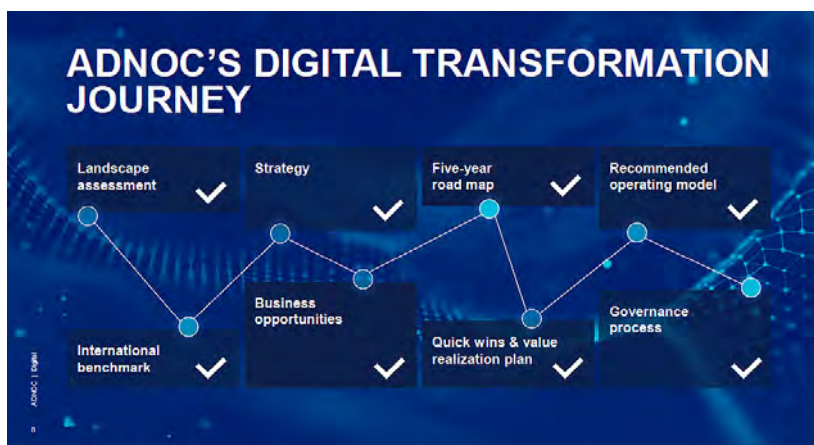
How the digital transformation strategy was built.

DATA GOVERNANCE WOULD BE THE FOUNDATION, AND BUSINESS WOULD SUPPORT THIS INITIATIVE.

during these trainings.

Al Mughairbi's team faced fundamental questions about their position in the bigger picture as they began their transformation and change management exercise. What is our role; how can we fit into business; where do we fit in the current business; who owns us; what value have you created; how do you make money after you spend. These were some of the fundamental questions that needed to be addressed with business and across the organisation.

"And that is the hardest part," reflects Al Mughairbi. "Technology is easy, people are the hard part."

Departments get used to working separately. People get used to working and reporting in their vertical silos. By bringing in digital transformation that means they have to change, where they have to invest their time, money and personal interest.

Al Mughairbi's digital transformation team focused on the data and visualisation layers to drive their road map for leveraging analytics and advanced analytics across the group for the next ten years. "Unless you can generate value it is just another cost. We need to generate value from data."

CHALLENGES FOR OIL AND GAS INDUSTRY

ANDREW SMART,
Managing Director, Global Energy Industry
Lead, Accenture.

There are four principal reasons for the challenges and disruptions being faced by the global oil and gas industry. The primary reason is the disruption caused by over supply triggered by the onboarding of North American Shale gas. According to Andrew Smart, Managing Director, Global Energy Industry Lead, Accenture, "In the rearview mirrors, supply has been the massive disruption. The Shale disruption is enormous and has changed the game completely. In terms of the balance of product flow, the balance of the industry, even the geopolitics around the industry. That has been a major change and has changed the world order."

This disruption has triggered the volatility in established supply chains and global trading. And the players who are trading are investing in commercial optimization and using technology extensively. Other than established wholesale global traders, national oil companies and vertical integration players have also entered the fray. "If you look down through the supply chain, I think there is immense significant volatility," remarks Smart.

This volatility in the global supply chain is impacting all other industries reliant on oil and gas as a commodity, including power, transportation, manufacturing segments. In other words, the business to business ecosystem is also being impacted by the uncertainty of supply and pricing across the oil and gas industries' supply chain. The last factor in the disruption of the oil and gas industry, which ironically is also the slowest, is the disruption caused by consumer movement towards green energy, sustainability, and carbon free standards.

Another significant challenge the industry faces is the organizational approach towards data. Historically, due to the presence of strong vertical silos across the supply chain and the industry, business managers were only responsible for the data that mattered to them, There has never been a concept of an organization wide, integration of data, in the oil and gas industry, and data is lost as it jumps across silos. Moreover, there has never been a fundamental belief and trust in the value of data.

"The most powerful concepts and the value available are about end-to-end than about the individual. Let us call it functional improvement. And we have not had end-to-end ownership for data. So, people look after data that is important to them. Maybe they are not such good custodians of end-to-end. Often it is at the interfaces where data erodes most significantly," elaborates Smart. While technology can enable this transformation, it is also about changing mindsets in the oil and gas industry.

To drive digital transformation across the group, the team took up four directions, with leaders reporting into Al Mughairbi, including: value chain optimisation, innovation, digital projects, and data science.

In order to create ADNOC's digital transformation strategy and journey based on artificial intelligence and analytics, workshops were organised. "While we have been doing analytics and testing since 2004, we needed a strategy and alignment across ADNOC and a value realisation plan," says Al Mughairbi. The workshops used data, focused on landscape assessment, used international benchmarks, evaluated and ranked business opportunities.

ADNOC's digital transformation strategy removes things where not necessary and increases collaboration between human and machine. "We were doing all these things way back in the nineties and that is when technologies started changing," says Al Mughairbi.

Going forward, Al Mughairbi established that data governance would be the foundation, and that business would support this initiative. The only hitch it would take time, but they would get there. Four independent vendors partnered in this transformation exercise that began to deliver results six months after initiation.

Today, ADNOC's Panorama Digital Command Centre is a beginning and representation of the world class standard that the oil major and Al Mughairbi's team can deliver. It is a real-time data visualisation centre that empowers the ADNOC team to gain insights, unlock efficiencies, and identify pathways to optimise performance.

Every plant inside ADNOC is built with the best technology, are automated, and use advanced process controls. "We live in UAE, and we would rather over-design and over-protect than under protect," states Al Mughairbi, emphasizing the Group's final value creation around sustainability. ◼

MANAS SAHOO,
Chief Digital Innovation Coach, Energy Industry,
SAP Europe Middle East Africa

OIL AND GAS
Bridging silos, reimagining processes

Over the past several years, the Middle East's adoption of improved drilling technologies, usage of data for operational excellence and leveraging IT OT integration has significantly benefited both efficiency and production, especially in the face of oil price turmoil. The potential benefits of going digital are clear—increased productivity, safer operations, and cost savings.

In the energy production segment, challenges include adding sensors to decades-old wells and making sense of the stored production data. As analytics, AI and machine learning, computing power, and data science continue to converge, upstream companies can enable innovations to drive a competitive advantage.

One recent industry survey says that 70% of oil and gas leaders will invest more in digitisation over the next 3-5 years. Middle East oil and gas firms have an opportunity to hire and train their Millennial workforce with digital technology skills. Digital innovations can enhance supply chains, improve asset maintenance and safety.

While leveraging technologies such as Industrial Internet of Things and data analytics, SAP solutions provide the ability to build digital twins of physical assets, to predict equipment failure or pipeline corrosion, observe the related operational data geospatial, sensor, launch remediation, and manage a change process to eliminate the reoccurrence of the problem.

SAP Performance Benchmarking shows that more connected workers could lead to 15% more productivity by 2023. 87% of the oil and gas companies in the Forbes Global 2000 are SAP customers and they produce more than 78 million barrels of oil each day.

The energy landscape is changing given the needs of consumers and social organisations accentuated by government influences. There is a wave towards decarbonisation resulting in high growth for renewables while coal is increasing being substituted by gas.

This energy transition brings new dynamism to energy supply and demand. The industry faces slowing growth in emerging markets coupled with restrictions on trade and difficult geo-political environment especially in the Middle East.

Internally within organisations, energy companies need to bridge the silos and get real-time visibility and transparency across their enterprise. They need to leverage the wealth of data they have and develop capabilities to bring operational insights to empower decision makers. And they need to reimagine their processes and improve performance.

All these are putting pressure on margins and companies are having to redefine the way they look at their business and transform. Companies are increasingly relying on digital transformation leveraging Industrial Revolution 4.0 technologies to bring the next wave of efficiency gains and create new business models.

As the industry goes through IR 4.0 and digital transformation, they have three clear domains to focus on. They need to have a stable core operating platform that enables simplified day-to-day operations smartly, they need to have an innovation platform that enables them to pilot new reimagined processes and business models and they need to manage their end customer experience. ■

KEY TAKEAWAYS
- SAP Performance Benchmarking shows that more connected workers could lead to 15% more productivity by 2023.
- 87% of the oil and gas companies in the Forbes Global 2000 are SAP customers and they produce more than 78 million barrels of oil each day.
- One recent industry survey says that 70% of oil and gas leaders will invest more in digitisation over the next 3-5 years.

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- ⚙ **CUSTOMER EXPERIENCE MANAGEMENT**
- 📊 **BI & ANALYTICS**
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MARTIN YEOMANS,
Executive Vice President
EMEA, AVEVA.

OIL AND GAS
Managing data across projects boosts transformation

The global merger of AVEVA and Schneider Electric has helped both organisation bring their products together, offering a more integrated suite of solutions for the industrial markets

The lifecycle of engineering projects has multiple distinct phases. In the beginning is the build–up phase that covers engineering design, material management, construction management, handover, and ground field operations. This is usually around five years.

This is followed by the operations phase that includes control systems, monitoring and control, predictive analytics, asset management, data transfer. This is usually for a period of around 25 years. During this time the engineering project needs to be monitored, modified, maintained, and optimised as well.

By coming together, AVEVA and Schneider Electric have spread their strengths and capital operating models across the full lifecycle span

of engineering projects. If you have a customer who is buying the complete stack, then the top application and data layer, would be managed by AVEVA and the rest would be by Schneider Electric.

The challenge in an engineering project, is that across the entire lifecycle span of the project, there are point of data over, where each one is a value lead. If the data is not successfully handed over and integrated, then it is not possible to completely optimise operating and capital costs of the engineering project.

One of the key strengths of AVEVA is its understanding of how to build up a data representation of an engineering or industrial asset. It does not matter from which industry the asset has been created. Once the data representation of the asset has been built up, AVEVA solutions can help to monitor, optimise and further predict its functional behavior.

If the asset model has been built

fromthe beginning using AVEVA tools and solutions, then AVEVA can influence its functioning comprehensively using its Unified Operations Centre solution, for example. If, however, AVEVA has been brought in late into the engineering project, then there may be some areas that it cannot influence across the functioning of the asset.

AVEVA tools tend to operate in a layer above a vendor's platform. However, providing an open architecture and being vendor agnostic is fundamental to AVEVA's performance and results. By nature of its strengths, AVEVA customers come from multiple process and discrete industries including oil and gas, power, food and beverage, consumer product goods, chemicals, amongst others.

As an example, AVEVA Engage provides access to asset information improving the speed, accuracy and reliability of decision making throughout the asset life cycle. Designed from its inception for touch on Windows, AVEVA Engage combines 3D visualisation with a connected view of project and asset information, delivering an effective decision support capability for capital projects and operations. ∎

KEY TAKEAWAYS

- AVEVA and Schneider Electric have spread strengths and capital operating models across the lifecycle of engineering projects.
- If the asset model has been built from the beginning using AVEVA tools then AVEVA can influence its functioning.
- AVEVA customers come from process and discrete industries including oil and gas, power, food, consumer, chemicals.

Cloud Data

Backup for what's next

MASOUD HASSANI,
Chief Executive Officer,
Rhyton Solutions.

OIL AND GAS

Simplifying, automating, integrating, complexity of business

Rhyton Solutions puts together software, artificial intelligence, and data science to facilitate agility in the oil and gas business. The vendor provides intelligent information systems to achieve digital transformation. It brings together people, data, and systems into one place for a digitally-connected business and gathers all organisational activities, processes, competencies, and models it into one platform.

The combination of solutions and experience help organisations harness the power of digital technology without the immense complexity associated with digital transformation.

PROJECT INTEGRATION
Rhyton's solutions automate business processes to help save time, human resource and improve the accuracy of monitoring and control. Rhyton's project-based ERP solution, is an integrated system that helps to manage details of a project from the starting point of feasibility study up to the delivery of the project. In each module, namely engineering, procurement and construction of an EPC project, there are many items to be cared about.

When it comes to big projects like oil and gas projects, these important factors are numerous enough to make integrated systems necessary, to have an up to date access to all data and have all deciding elements under control using customisable dashboards.

When managed manually, there may be some small items missing, and those less important items would lead to a really remarkable schedule creep, budget over flow, and even a big change in resources which would be inevitable if you have not thought about the risks before. With Rhyton's project-based ERP, there is a completely automated platform using all the data entered or calculated and a united vision on all important factors of the project.

Rhyton's project-based ERP solution has been implemented in more than 1,000 projects in the Middle East, most of which are in oil and gas industry and others in petrochemical plants and power plants. End users of Rhyton's project-based ERP are mainly stakeholders of oil and gas fields, petrochemical plants and power plants who are dealing with big projects in each of the EPC modules.

MACHINE LEARNING
Rhyton Intelligent EHS is a product that uses artificial intelligence technology to prevent the occurrence of accidents in the oil and gas industry. This product detects unsafe and complex conditions by processing CCTV images and provides timely information to the exposed person to prevent adverse events.

The system automatically generates the reports needed by HSE managers and authorities using machine vision technology to provide the safety team of oil and gas sites with more convenient and accurate information on employee safety.

Rhyton's AI based EHS is a new product following a four-year experience in deep learning and machine learning. Stakeholders of such projects are worried about safety and want to decrease the risk of accidents. ∎

KEY TAKEAWAYS
- Rhyton's project-based ERP solution has been implemented in more than 1,000 projects in the Middle East.
- End users of Rhyton's project-based ERP are mainly stakeholders of oil and gas fields, petrochemical plants and power plants.
- End users of Rhyton Intelligent EHS are worried about safety and want to decrease the risk of accidents.

Fully automated warehouse management system from Dematic.

Mihin Shah,
Chief Supply Chain Officer,
Landmark Group.

Rahul Jagtiani, Group Director Digital, Landmark Group; Sultan Ahmed bin Sulayem, Chairman of the Ports, Customs and Free Zone Corporation, and Jebel Ali Free Zone Authority; Chairwoman and CEO of Landmark Group, Renuka Jagtiani.

HOW LANDMARK, ORACLE, DEMATIC ARE TRANSFORMING WAREHOUSING AND DISTRIBUTION

The real game changer in Landmark's Mega Distribution Centre, is integration of Oracle cloud applications with Dematic automation systems.

BY: ARUN SHANKAR

Landmark Group has opened its fully-automated Mega Distribution Centre at Jafza in Dubai, which it claims is the largest of its kind in the GCC. With distribution being the backbone of retail, the Landmark Group has invested over AED 1 billion with a strategy to strengthen its supply chain capabilities and build a facility that can serve as a logistics and distribution hub for the region.

The Mega Distribution Centre is expected to play an integral role in enhancing Dubai's position as a hub for global logistics and trade. The first-of-its-kind facility in the region was officially inaugurated by Sultan Ahmed bin Sulayem, Chairman of the Ports, Customs and Free Zone Corporation, and the Jebel Ali Free Zone Authority, in November.

Founded in 1973 in Bahrain, the Landmark Group has successfully grown into one of the largest and most successful retail organisations in the Middle East and India. An international, diversified retail and hospitality conglomerate that encourages entrepreneurship to

consistently deliver exceptional value, the Group operates over 2,300 outlets encompassing over 30 million square feet across the Middle East, North Africa and the Indian sub-continent.

BUSINESS AND IT

Landmark Group has been committed to the success of omni-channel. The investment in the Mega Distribution Centre, one of the largest automated distribution centres in the Middle East, meant to service both UAE and Saudi Arabian operations, represents a huge step in that direction.

"Bearing in mind the Group's omni-channel ambitions, the massive growth in rich content and the plethora of data points we get from, or push to our stores and online, meant that we needed to think differently about our infrastructure," explains Mohamed El Fanichi, Chief Information Officer, Landmark Group. "Convenience and customer experience are at the core of what we do," he adds.

For El Fanichi, moving the organisation to cloud was the

first step - no longer a choice but a strategic imperative. Being an Oracle customer, El Fanichi needed to migrate from an on-premises environment to Oracle Cloud suite. "Oracle Cloud and Oracle as an organisation were there to support our migration journey to the cloud from the beginning," he says.

With this enabler in place, the Landmark Group went through a significant transformation journey by adopting a Cloud First strategy.

In December 2018, Landmark Group, who previously partnered with Accenture, went live with Oracle Retail suite on Oracle Cloud Infrastructure, as its pre-production stage, followed by production Go-Live in April 2019. Overall, the Landmark Group migration involved 500+ servers, 12,000-work days and impacted 12,000 employees in 12 countries across Middle East, Africa and India.

It took less than 12 months for Landmark Group, to move 80% of the Oracle business solutions from an on-premises datacentre to global cloud platforms. The move has brought scalability to the business,
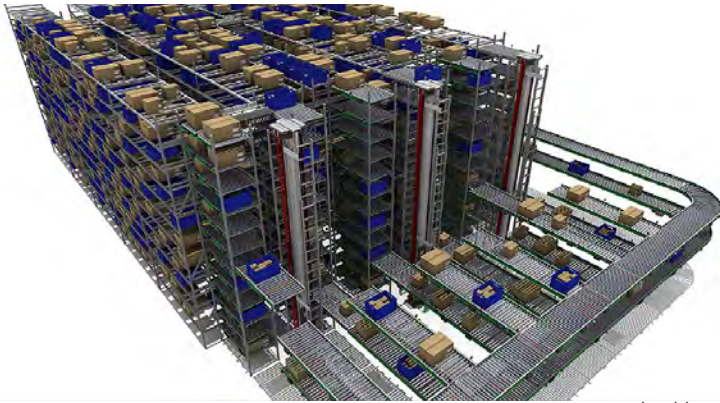
Any Mega Distribution Centre is set up with the following logical workflow segmentation: Inbound Handling, Convey and Transport, Storage and Buffering, Case Picking, Piece Picking, Outbound Handling.
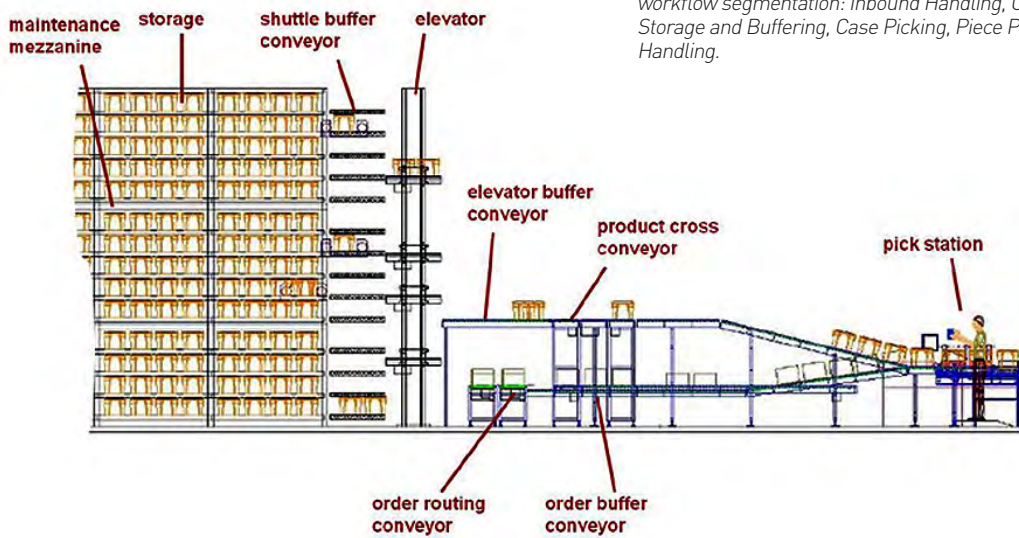
SNAPSHOT OF AUTOMATION

- The inbound receiving area has 10 automated and 3 manual Docks with a capacity to receive 74,000+ cartons per day. It can handle 230 x 20ft equivalent containers per day.

- To ship out goods, there are 36 Docks of which 10 docks are dedicated for garments on hanger. Outbound movement capacity is 90,000+ cartons and 250,000 GOH per day.

- To automate pallet storage and retrieval there is a 43M high rack building with cladding. It has over 36,000 pallet positions that are fed and emptied by 4 x 41M high tower cranes, in an automated fashion with manual intervention.

- The heart of the Mega Distribution Centre is serviced by a high-speed shuttle system, that uses 746 shuttles across 575,000 storage positions, across 33 levels, using 44 lifts and 28 workstations.

- The facility can manage 144,000 garments on hangar per day through 3 steam tunnel finishers, with a total of 2 million garments.

- Another high-speed shuttle system has 370,000 storage positions, 533 shuttles, across 24 levels, and 50 lifts.

- The Mega Distribution Centre is EHS certified and plans to meet 50% of its energy through an 8.2 MWP rooftop solar system, the single largest in the region.

- The automated conveyor systems cover 50Km in length.

- Cartons are automatically sorted at the rate of 10,000 cartons per hour.

MOHAMED EL FANICHI,
Chief Information Officer,
Landmark Group.

and efficient shuttle system for automated handling of cartons and totes, with an Inter-Aisle Transfer Technology.

Built with a storage capacity of upto 2.2 million cartons and 2 million GOH, the new distribution centre has 10 automated and 3 manual docks to receive over 74,000 cartons per day. The Outbound area features 36 docks, of which 10 are dedicated for GOH, and can handle upto 90,000 cartons and 250,000 GOH every day. Boom conveyors in the facility also ensure faster off-loading of containers. All handled across 33 levels with 1,300 robotic multi-shuttles, 94 lifts and 28 workstations.

According to Mihin Shah, Chief Supply Chain Officer, Landmark Group, the purpose of the automation is to be able to target the sub 48-hour order and delivery market, amongst others. With such short turnaround times, human intervention and manual processing of orders cannot ensure that delivery times are met and the business can scale successfully. End to end automation of the entire distribution centre is critical.

The project was first conceptualised in 2015 and since then has progressed from the drawing board to today's launch four years after. Majority of the mechanical automation systems and warehouse management system have been set up by Dematic, which took close to two years to complete, including setup, calibration, testing and initial runs.

Another initiative has been to spin off the management and operations of the Mega Distribution Centre as a separate entity under the name of Omega Logistics. The capacity of the Mega Distribution Centre is so huge, that Landmark's distribution operations takes up around one third of its built-in capacity. The remaining capacity can be commercially offered.

Omega Logistics' area of floor operation is so huge that multiple Airbus A380 aircraft can be parked side by side in the ground area, covered and uncovered. And in terms of sustainability, the Mega Distribution Centre is EHS certified and plans to meet 50% of its energy requirements through an 8.2 MWP rooftop solar system, the single largest in the region.

REAL DIFFERENTIATOR

The Mega Distribution Centre stands as a testimony to Landmark Group's investment for the future. The facility has been built with a focus on digital innovation, using robotics and automation that redefines the future of supply chain in the region. In a fast-paced retail world where need for speed, flexibility and agility in the market is higher than ever before, this facility has been designed to meet changing market needs, increase productivity and cater to the business of tomorrow.

However, for Landmark Group and Omega Logistics, while setting up the automated mechanical operations of this scale and performance was a first timer in the region, the biggest challenge and the real game changer was in the software integration of the multiple enabling application platforms. Landmark Group is an Oracle Business Application end user and has also been using its custom built, warehouse management system in the past.

Both Landmark's Oracle applications, running from Oracle Cloud Infrastructure, and its custom warehouse management system needed to be integrated with the Dematic workflow and warehouse management system, before operations could begin in a meaningful manner. And this was the real differentiator, according to Landmark's Shah, something that gets glossed over and missed in the sheer scale of engineering and automation, that has been rolled out. ■

performance improvement, and 20% reduction in costs.

Since then, 950 stores from Landmark Group are processing daily transactions using Oracle Cloud Infrastructure, following the complete decommissioning of the on-premises platform. Says El Fanichi, "It takes a lot to be ready for cloud. It takes a mindset to change, an understanding of what you have, and a detailed discovery exercise to assess the readiness."

FIRST IN GCC

Landmark Group's Mega Distribution Centre is designed to process 300 million units per year, inter-changeably handling pallets, cartons, pieces and garments-on-hanger, GOH. At the heart of Mega Distribution Centre is a super-fast

HOW AUGMENTED REALITY IS HELPING LAW ENFORCEMENT AND SAFETY

A multivendor solution including Vuzix, Visual Labs, Intel and NNTC, is bringing the power of real time, facial recognition, and mobility to the field.

DMITRY DOSHANIY,
Head of NNTC.

NNTC is a UAE based company, working in the field of emerging technologies. NNTC is significantly focused on computer vision for different use cases like public safety and industrial safety. The vendor has developed a unique vision solution designed for law enforcement on patrol and is integrated with smart glasses. An officer just wears the glasses and the built-in camera looks at people. If there is match with the database of suspects, it gives an alert and law enforcement can take action about it.

Says Dmitry Doshaniy, Head of NNTC, "This is a normal 2D technology, which works with a video stream created by a generic camera. The software looks for faces in the video stream. As soon as it identifies the face, it is converted to a number like a hash number which is compared to similar numbers stored in the database."

The user can have various lists: white list, black list of wanted people, missing people, access denied, access allowed, and if there is a match with one of these lists, then an alert is displayed in the smart glasses, as well as in the control center.

The wireless device and the wearable server are part of the solution. The glasses have Wi-fi, which is connected to the mobile wearable server. The database and most of the application software is running on it. The video stream from the glasses is processed, the faces are cut out, and then matched to the database. And then if there is a match the result is sent back and displayed in the built-in screen of the glasses

The camera that is built inside the glasses generates a video stream, which is sent for processing. The software looks at each individual frame and checks if there are objects like human faces in the frame. If there are objects, it picks them up and saves them as pictures. The pictures are converted into numbers and these numbers are compared to other numeric representations of people from the database of the watch lists.

According to NNTC's Doshaniy, "This particular part is not very complex because we use standard protocols." The glasses are connected through Wi-fi to the wearable server. There is an application running here, using the Android operating system in the Vuzix glasses. This is an application built by NNTC, that serves as a user interface to see alerts in the application allowing the end user to take actions.

Doshaniy points to other challenges. "I would say the biggest challenge is packaging the solution in a wearable form factor."

The recognition has to happen instantly, so NNTC cannot rely on the 3G-4G networks. It is for this reason that the complete processing and access to the database sits locally on the officer's belt, continuously finding the right components. NNTC did also have to involve Intel in finding the solution. "It was challenging," says Doshaniy.

The end to end solution provided by NNTC uses multiple vendor partners. While the smart glasses are provided by Vuzix, the algorithm for number crunching used in facial recognition is from Visual Labs. The mobile server is a custom-built product from Intel, while the application and database are proprietary from NNTC.

The range of the glasses is the same as any Wi-Fi network. The server can be mounted on a patrol bike or inside a vehicle, while the camera is mounted as a body cam or as wearable glasses.

In urban locations, there are tens of thousands of cameras at work collecting data. While there can be a large number of cameras available, getting real-time, onsite information from them, on-the fly, is often challenging for law enforcement. However, if facial recognition and alerts are not enabled, then law and order will not receive any benefits from this large-scale investment.

"If the city does not have advanced technology, there is still a crime problem. What do you do? Do you wait for ten years? We offer a solution to this problem. You equip the mobile patrol officers with wearable facial recognition technology," explains Doshaniy.

In its regional go-to-market activities, NNTC relies on local partners who have competency in surveillance and physical security. "Naturally law enforcement and public safety agencies would not buy from everyone. So, they need a trusted partner and good technology. We do the technology part but we also need somebody who is capable to deliver," points out Doshaniy. Channel partners would also add value to the solution from NNTC and do the actual implementation.

With regard to the legal restrictions around the use of facial recognition using smart glasses, Doshaniy explains that it all depends on the use case of the solution, in the particular country. Other than the technology, there are other issues around the data being generated and data being accessed using the mobile server. By default, the localisation

iFalcon Face Control Mobile

This is an autonomous face recognition system, that uses artificial intelligence, and is integrated with wearable smart glasses. The bodycam or smart glasses screen crowds to match faces against a database of violators, missing people or suspects. Once there is a match, the solution retrieves relevant information from the database and instantly sends an alert to the smart glasses. iFalcon Face Control Mobile brings face recognition capabilities, even without the network of CCTV cameras that cover every inch of a city.

iFalcon runs on an algorithm, which is in the top three, according to global ratings such as the Face Recognition Vendor Test compiled by the US National Institute of Standards and Technology and Labelled Faces in the Wild. The smart glasses or bodycam detect faces with a built-in camera and transmits information to a wearable portable computer over wireless channel

of data, transmission of data, and sharing of data follow the GDPR regulations.

According to Joachim Aertebjerg, Director Technical Solution Sales EMEA, Intel, the vendor is supporting NNTC in its project to develop solutions for industrial safety and crowd control. It is based on a visual image that is projected inside the smart glass and uses computation from a variable PC using Intel processors with new memory technologies.

One such new technology, persistent memory, allows faster data processing, can manage large volumes of data and works well for databases, typically those containing look up images for face recognition.

Persistent memory from Intel is available in the data center and it is increasingly coming in laptops and will also find its way into variable computers. While Intel is predominantly a hardware vendor, its software tools are made available to the ecosystem including partners like NNTC, so that they can build their applications on top of the latest hardware.

"Applications are becoming increasingly abstracted from the hardware, and programming language are also at a higher level than they were in the past. The more optimisation you get for the entire solution stack down to the hardware the better the performance. In a variable solution where you have power constraints and therefore also computation hardware constraints, you do not want headset to be too clunky. You really need smart programming and that is where local software development comes into play," says Intel's Aertebjerg.

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HOW THE CIO AND CFO CAN JOINTLY LEAD TRANSFORMATION

An effective way for organisations to proceed along the path of digital transformation is for the CIO and CFO to align, indicates Mansoor Sarwar at Sage.

MANSOOR SARWAR,
Regional Technical Director,
Sage Middle East.

As part of the digital transformations, that are sweeping through industries on the back of the headwinds of the fourth industrial revolution, chief financial officers must now seek enterprise technology solutions that can provide fast and easy access to real-time financial data, which they can use to make better-informed decisions.

As well as ensuring compliance, these tools must give them better access to financial and operational data, with automated alerts and perhaps capabilities such as scenario planning.

With some 86% of organisations in the region either currently engaged in a DX initiative or about to start one, according to the IDC Middle East CIO Survey 2019, there is an obvious place to start in the seeking of new technological solutions: a closer bond and working relationship between CFOs and chief information officers CIO.

The encouraging news for us in the region is that CFOs in Gulf Cooperation Council, GCC countries are awake to the possibilities of digital transformation and are open to working with their information technology IT teams and CIO to unlock the value of digital technology.

It is through partnering with CIOs and by deploying fit-for-purpose business solutions that the CFO can help the organisation grow and thrive during a time when technology and consumer expectations are changing at high speed.

Today, the job of a CFO is to create better financial strategies that align with the needs of the business. They must in effect become strategic partners, empowered with the real-time analytics and insight that digital transformation can bring.

The cloud is a great enabler, allowing CFOs access to real-time data anywhere and anytime. With enterprise cloud solutions now reaching maturity, businesses are turning away from legacy Enterprise Resource Planning systems to more flexible and cost-effective solutions powered by the cloud, hybrid version or even on-premise.

It will be interesting to see how the need for this tighter working relationship between CFO and CIO depends on the sector in which a company operates. For instance, based on the data collated from the 2019 IDC CIO Summit Survey, while governments in the region have been at the forefront of DX for several years, the number of DX projects in the private sector are now multiplying.

In the manufacturing, agriculture, retail and wholesale, and logistics and distribution sectors, digital transformations are witnessing a momentous upswell and having a direct impact on how private sector organisations are deploying the byproducts of the fourth industrial revolution to achieve two imperatives: redefining customer experience and enabling operational efficiency.

In the manufacturing space, company heads are using real-time data in combination with historical data to anticipate when a machine is likely to require maintenance. Within logistics, embedded intelligence

WHILE GOVERNMENTS IN THE REGION HAVE BEEN AT THE FOREFRONT OF DX FOR SEVERAL YEARS, THE NUMBER OF DX PROJECTS IN THE PRIVATE SECTOR ARE NOW MULTIPLYING.

KEY TAKEAWAYS

- 43% organisations in the region will allocate resources to digital innovation, compared with 39% last year.

- Organisations in the region are under pressure to improve operational efficiency and enhance customer engagement.

- Financial, and end-user pressure leads back to the same conclusion – tight-knit collaboration between CFO and CIO.

- By combining forces that both executive positions command, companies will begin to see greater impact delivered to bottom lines.

- The challenges CFOs face include regulations, inefficient planning, communicating with the organisation.

extends beyond the factory floor and into the supply chain and logistics domains, where AI and advanced analytics are being utilised to optimise supply chains in real time. Meanwhile, in the retail environment, DX is altering how services are provided to customers and how customers do their shopping.

All the above combine to mean that more budgetary resources are expected to be earmarked for digital innovation initiatives across the private sector in the years ahead. Further, the IDC Middle East CIO Survey 2019 revealed that 43% of organisations in the region will allocate resources to digital innovation, compared with 39% last year, implying that numerous organisations in the region are under increasing pressure to improve operational efficiency and enhance customer engagement.

This financial, and end-user pressure leads back to the same conclusion – tight-knit collaboration between CFO and CIO. By combining the forces that both executive positions command, namely budget management, operational efficacy and technological development and deployment, companies will begin to see greater impact delivered to their bottom lines, and ultimately for the private sector organisations, happier customers.

The major challenges CFOs face before we arrive at such a utopian vision of organisational efficacy include staying on top of regulations as 27% of respondents

to the IDC's Middle East Line of Business Survey 2019 indicated, dealing with inefficient and error-prone planning, budgeting, and forecasting processes 24% said, and communicating with the broader organisation, 22%.

It should go without saying that these challenges have become increasingly more technical as the effects of the fourth industrial revolution have made themselves known to organisations in the region. And it is therefore logical and sequential that the involvement and optimisation of the CIO's skills should be brought to bear on the crucial work CFOs have to carry out today. ■

Nissan announces Ariya, its new intelligent electric cross-over

In naming its all-new, near-production electric crossover concept, Nissan looked to the past to find a word that represents the company's future direction: Ariya. Created as a vision of Nissan's electrified future, the Ariya name traces back to ancient times, evoking images of respect and admiration.

As the new icon of Nissan Intelligent Mobility, this concept deserved to bear a memorable nameplate. After much deliberation, Nissan selected Ariya, a name that is both forward thinking yet reflective of the past. In the context of the new Nissan Ariya Concept, the name represents strength of purpose and the vehicle's mission to provide a more confident, more exciting and more connected driving experience.

Breitling honours Fursan Al Emarat aerobatics team

Breitling announced release of a Limited-Edition Avenger model in partnership with UAE aerobatics demonstration team Fursan Al Emarat. The Avenger Chronograph 43 Fursan Al Emarat Limited Edition, was unveiled at the 2019 Dubai Airshow, where Breitling was the Official Timing Sponsor. The model, which displays the Fursan Al Emarat logo on the dial, is produced in a series of 250 pieces and will be available across the Middle East in early 2020.

Land Rover's New Defender stars in 007 movie

No Time to Die is the first movie to feature the New Defender, Land Rover's toughest and most capable vehicle. The New Defender has been tested by the 007 expert stunt team in the most extreme off-road conditions. The New Defender provides ground clearance of 291mm and off-road geometry, giving the Defender 110 approach, breakover and departure angles of 38, 28 and 40 degrees respectively. Its maximum wading depth of 900mm is supported by a new Wade programme in the Terrain Response 2 system, so drivers can ford deep water with complete confidence. Land Rover's design team worked closely with Special Effects and Action Vehicles Supervisor on the specification of the Defenders in the film. Based on the Defender X model in Santorini Black, with darkened skid pans, 20in dark finish wheels and professional off-road tyres, they were the first Defenders to be built at Jaguar Land Rover's new production facility in Nitra, Slovakia.

JLL sponsors annual Triathlon Series

JLL, a real estate investment and advisory firm, announced continued support for the annual three-race-triathlon series, in line with the government's vision of becoming the world's most active city. Hosted on the outskirts of Dubai in the grounds of Jebel Ali Resorts and Hotels, the first race will be held on 7 December 2019, followed by 15 February 2020 and 19 March 2020. New for this season are dedicated categories for UAE Nationals being offered in conjunction with the newly formed UAE Triathlon Federation.
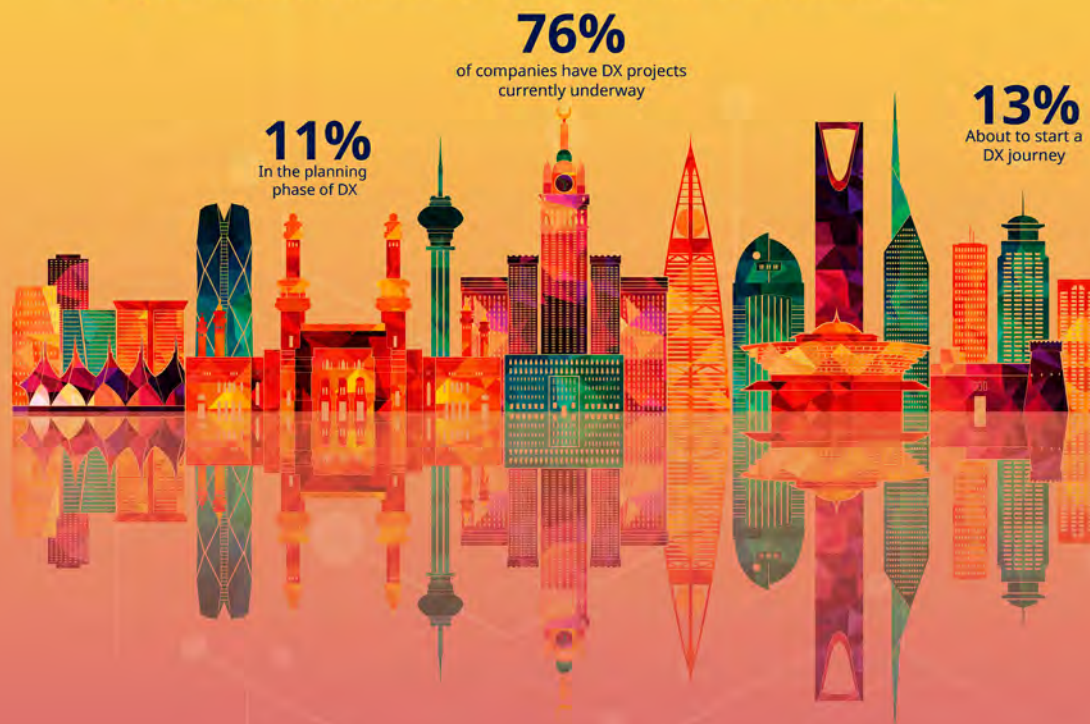
Think for the peak, Jebel Jais competition

Ras Al Khaimah Tourism Development authority received a positive response to the launch of its exciting product concept competition Think for the Peak. The competition drew in applications from university students to entrepreneurs of start-up incubator organisations across the UAE, inclusive of sketches, illustrations, photographs, paintings, write ups and graphic design.

CIO and CFO collaboration is critical to DX success

Business as we know it, is rapidly evolving
Digital Transformation (DX) Progress in the Middle East

76%
of companies have DX projects currently underway

11%
In the planning phase of DX

13%
About to start a DX journey
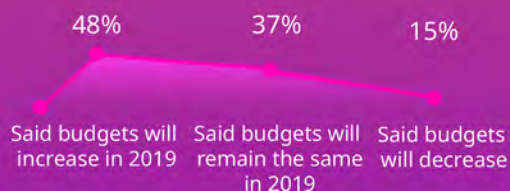
Top Business Priorities behind DX
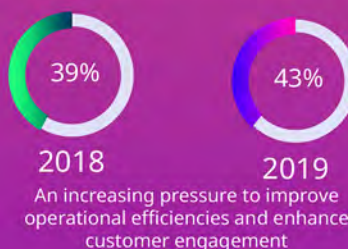
Customer Experience

Improving operational efficiency, reducing costs and streamlining processes

Budgets are increasing and shifting towards innovation projects

ICT Budget Expectations
(in last 12 months)

48% Said budgets will increase in 2019

37% Said budgets will remain the same in 2019

15% Said budgets will decrease

Average proportion of ICT budgets allocated to innovation

39% 2018

43% 2019

An increasing pressure to improve operational efficiencies and enhance customer engagement

Source: CIO and CFO Collaboration, Embrace Change at Speed, by IDC and Sage.

The Role of a CFO in Digital Transformation

- Funding and Influencing of Technology-Led Digital Innovations
- The Championing of Organization-Wide DX
- Leading the Transformation of the Finance Function
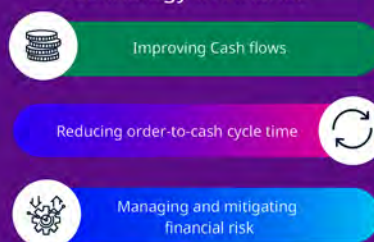
CFOs are involved in funding decisions for technology projects across the business, henceare crucial in building a culture of innovation and driving digital transformation.

Top Technologies that will impact CFOs

01 AI & Machine Learning (including Robotic Process Automation)

02 Cloud Computing

03 Blockchain
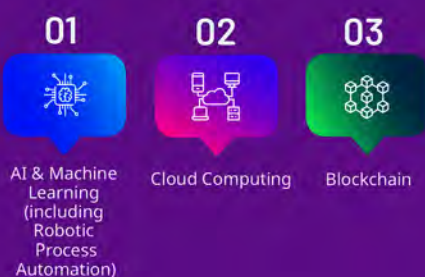
Top Business Impacts of Technology in Finance

- Improving Cash flows
- Reducing order-to-cash cycle time
- Managing and mitigating financial risk

1 Staying on top of regulations and compliance

2 Effectively communicating both business ideas and financial metrics is difficult

3 Planning, budgeting, and forecasting process is inefficient and error proneations and compliance

4 Talent development

...and what they want to achieve

1 Operational performance

2 Attracting and retaining customers

3 Reducing costs and streamlining processes

4 More prescriptive /predictive analytic insights

By working closely together, CIOs and CFOs can ensure the success of the broader DX project.

Source: CIO and CFO Collaboration, Embrace Change at Speed, by IDC and Sage.