

BUSINESS TRANSFORMATION

APRIL 2019

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MERCEDES-AMG PETRONAS MOTORSPORT

AGILE DATA CREATING WINNING TEAMS

Mercedes has been using Internet of Things in its Formula 1 championship cars for more than two decades.

Matt Harris
Head of IT
Mercedes AMG
Petronas Motorsport



Joseph Fayad, Time Hotels

**TIME HOTELS
TRANSFORMS CALLING
THROUGH AVAYA'S
COMMUNICATION CLOUD**



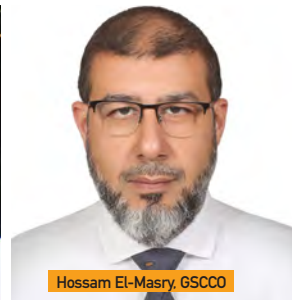
Mohamed Yousif Al Ahmedi, Ducab

**DUCAB SELECTS ORACLE
TRANSPORTATION
TO TRANSFORM
COLLABORATION**



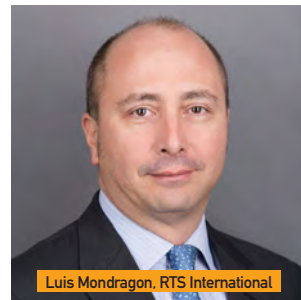
HE Helal Saeed Almarri, DWTC Authority

**AVAYA'S
TRANSFORMATION
CENTRE TO BE LOCATED
AT DWTC ONE CENTRAL**



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**SAUDI ARABIA
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Dear Readers,



The Formula 1 is an amazing saga of the confluence of human energy, innovation, and technological excellence. These attributes are pitched by ten teams against each other across 21 countries. Each of the teams are allowed to use the same level playing field as the others in terms of the basic vehicle design, materials, and technology. In other areas they are allowed to innovate and differentiate. But because all the teams are using the same level playing field and because the track courses are being run again

and again, the difference between the top teams can be as small as 0.002 seconds.

For Mercedes-AMG Petronas Motorsport, currently the world's top Formula 1 racing team, a significant digital transformation has been in the area of data and storage management. All Flash arrays now dominate the trackside datacentre as well as the factory datacentre, separated by thousands of kilometres. Aerodynamic and vehicle behaviour modelling and simulations dominate high performance computing workloads. The simulations are now so advanced and well developed, that the Mercedes-AMG Petronas Motorsport team simulates overtaking opportunities with competing teams.

Since it is a level playing field, the ten Formula 1 teams can also model pit stops, fuel levels, performance of competitors in a dynamic fashion along with their own cars. But just like any modelling and simulation exercise, the real world has so many more moving parts and random variables that deviation between simulation and the real world happens very fast. As the Formula 1 cars hit the first turn, the correlation between reality and simulation comes to an end, point out Mercedes-AMG Petronas Motorsport simulation engineers.

The Formula 1 cars are also a role model for the Internet of Things.

More than 250 sensors are installed on each Formula 1 racing car, relaying unstructured data into a mesh radio network that surrounds the kilometres of racing track. Key executives of Mercedes-AMG Petronas Motorsport point out that, while the world is rediscovering Internet of Things, they have been using IoT for more than twenty years.

We deep dive into some of the presentations made by IDC at their recent Directions 2019 briefings on regional transformation trends.

The total spending on digital transformation in the region will double between this year and 2022, showing a serious adoption trend. But when compared to the total size of the regional IT industry, the question is whether the glass is still half full or half empty.

Thoughts to consider, dear readers, as we enter the summer season.

Arun Shankar
arun@gecmmediagroup.com

DIGITAL BUSINESSES NEED TO BRIDGE THE RISK GAPS

John Wheeler at Gartner describes how to bridge gaps between enterprise risk, cybersecurity risk, digital risk for an overall view of operational risk.



JOHN A WHEELER,
Senior Director Analyst,
Gartner.

In 2019, organisational risks are turning into significant operational surprises, and the frequency will only increase as digital business requirements grow. There is no longer room for siloed risk management programmes. Instead, security leaders must focus on building integrated risk management programmes.

Risk management programmes mitigate the impact of uncertainty on business performance. By 2021, more than 50% of large enterprises will use an integrated risk management solution set to provide better decision-making capabilities, up from approximately 30% today.

WHAT IS INTEGRATED RISK MANAGEMENT?

Many organisations are good at domain-specific risk management, but struggle to harmonise the three key pillars of a successful security and risk management programme — a strong framework, a solid set of metrics and flexible, integrated systems. Integrated risk management can remedy this challenge.

Integrated risk management improves decision making and performance through an integrated view of how well an organisation manages its unique set of risks. It is a set of practices and processes supported by a risk-aware culture and enabling technologies.

Integrated risk management uses a holistic analysis of internal and external risk factors. Successful organisations design a framework that seamlessly connects risks at the strategic, operational and IT levels.

To understand the full scope of risk, organisations require a comprehensive view across all business units and risk management functions, as well as key business partners, suppliers and outsourced entities.

WHY IS INTEGRATED RISK MANAGEMENT IMPORTANT?

The integrated risk management solutions market including consulting services and implementation will grow to \$8 billion by 2021. Digital organisations are prioritising the need for risk management programmes. Security and risk management leaders

need to evolve their risk thinking to a global context. Implementing an integrated risk management solution to meet the demands of digital transformation will move their organisation forward in a safe, profitable way.

WHERE DO I START WITH INTEGRATED RISK MANAGEMENT?

Integrated risk management can be compared to a road trip: Your GPS maps the route and shows progress, while the vehicle enables you to reach your destination. Similarly, an integrated risk management framework maps an organisation's risk, metrics measure progress and systems drive an organisation to meet their goals.

Security and risk management leaders can take these four steps to develop an integrated risk management programme to bridge the gap between enterprise risk, IT cybersecurity risk and digital risk for a more overall view of operational risk:

- #1 Develop an effective framework that is unique to the organisation's risk profile.
- #2 Employ metrics to identify how risk influences the behavior and ability of individuals to achieve the organisation's goals.
- #3 Use a pace-layering methodology to design, implement and integrate risk management systems.
- #4 Grow the maturity of an organisation's risk management disciplines to mitigate future digital business risks. ■

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DRONES ARE POISED TO TRANSFORM INSPECTION SERVICES

Regional organisations are yet to realise the low and high visual inspection capabilities of drones, writes Rabih Bou Rashid at Falcon Eye Drones.



RABIH BOU RASHID,
Managing Director,
Falcon Eye Drones.

KEY TAKEAWAYS

- Organisations will take several steps to improve inspection conditions, but they will rarely consider drones as an alternative.
- Drones can inspect complex areas, such as wind turbines, radars, communication towers, infrastructure, while they are operating.
- Deployment of drones at almost any site does not take a lot of time and can be done in minutes.
- Drones can complete inspection of the asset in under 30 minutes and time element is very important when it comes to project launch.
- Speedy drone deployment capabilities can also play an instrumental role in emergency situations.

Traditional ways of asset inspections become less relevant in the modern world as they are not only costly and time-consuming but also represent a huge amount of risk for people involved. Despite being aware of these risks, organisations will try to take several steps to improve inspection conditions, but they will rarely consider drones as an alternative. Several industries already use drones and they include surveying, aerial photography, deliveries, asset inspections and more.

Drones can collect accurate inspection data in shorter periods of time without risking people's lives. Various types of applications can be used by different industry players and will vary depending on the sector, while energy, construction, real estate, oil and gas, and other similar industries can use similar applications to carry out surveys.

There are several reasons why drones can make surveying of assets more efficient and they mainly focus on reduced risks, costs, project delivery time spans, better data collection capabilities, flexibility and many more.

When it comes to safety, drones can inspect complex structures, especially such facilities as oil and gas refineries, flare stacks, and pipelines, without the need for workers to physically access hostile environments. Unmanned Aerial Vehicles are equipped with obstacle avoidance capabilities and can go where people cannot.

They are also able to collect high-resolution data or even 4K quality

videos and detect cracks, damage, misplaced wires and other defects at elevations and angles that humans cannot. This allows for the collection of more comprehensive data without exposing the inspection team to risks.

Deployment of drones at almost any site does not take a lot of time and can be done in minutes. Drones can complete inspection of the asset in under 30 minutes and time element is often very important when it comes to project launch and handover deadlines. Speedy drone deployment capabilities can also play an instrumental role in emergency situations.

While drones are easy to deploy and operate, they can also fly at high or low altitudes adding flexibility feature to the speed they offer and can satisfy a wide variety of inspection needs. Drones can take photos, capture video, take thermal images, transmit data, and conduct other operations while collecting and sharing information that would take days to collect using conventional means.

Last but not least, a drone has little to no operational downtime. When inspections are being conducted by drones there is no need in shutting down equipment or systems to avoid damage or injuries to the inspection personnel. In addition to that, drones can safely inspect complex areas, such as wind turbines, radars, communication towers, and other infrastructure, while they are operating.

GCC is taking steps today to add drones to the arsenal of its many innovations. ■



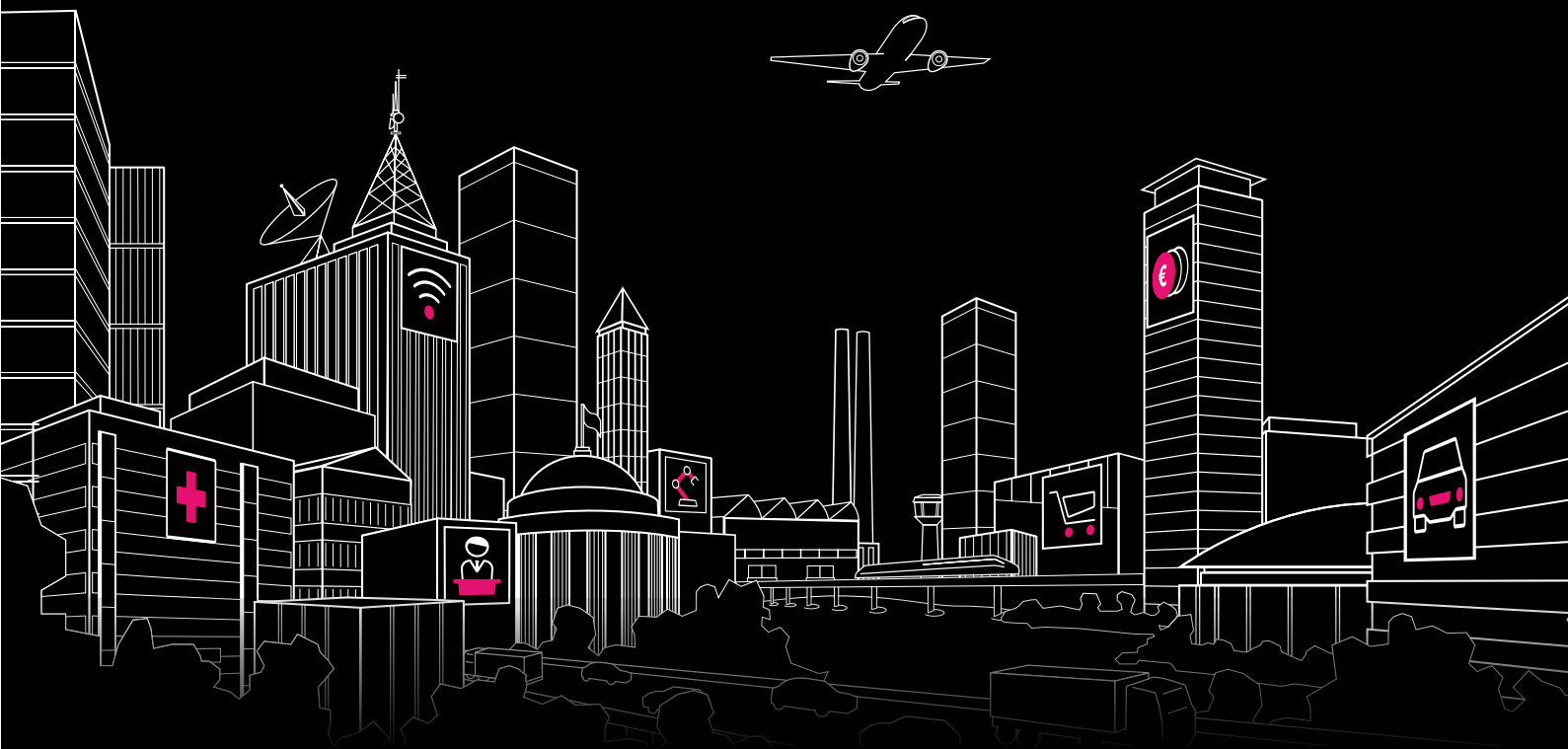
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HOW VIRTUAL AND AUGMENTED REALITY WILL IMPACT BUSINESSES

Immersive technologies are impacting industries such as manufacturing where real-life training is expensive, explains Pavel Tatarintsev from NNTC.



ALEXANDER BELYAEV,
Technical Director, NNTC

capable of capturing and identifying a car in traffic flow or an individual in a crowd, as well as their features and behavioral patterns.

One of the top artificial intelligence use cases is related to video surveillance systems with computer vision. UAE is taking active steps towards the integration of artificial intelligence into smart city solutions.

Video surveillance systems powered by biometric identification are experiencing tremendous growth, as it is a technology that can identify a person by checking multiple parameters and finding a match across hundreds of thousands of images within various security-related agencies' databases.

Such systems can serve many purposes. Financial institutions leverage biometrics for customer authentication, while retailers use it to offer personalised ads. Furthermore, there is no substitute for this technology when it comes to public safety.

Systems analyse airport passenger traffic captured by cameras that comprise travelers, people seeing somebody off, and airport employees, and process an enormous number of biometric data over a year, up to tens of millions of people.

UAE has the advantage in terms of deploying face recognition as there are cameras installed, which can be used for this purpose. But also, there are different kinds of challenges in achieving the task. First of all, the number of people in transport. There are hundreds of thousands of people every day, which means that

implemented solutions should be capable to work in these conditions.

Secondly, the infrastructure should be also huge requiring hundreds or even thousands of cameras. That makes up a challenge even for a competent solution provider to design it in an optimal way.

Thirdly, while installing the solution for security agencies, we should clearly understand not only how to deploy the system, but also how to integrate it into their internal processes, taking into account the specifics of their operations.

Also, there are a lot of smaller technical tasks to solve like dealing with the facilities that have already been constructed. For biometric identification purposes, cameras have to be mounted at a certain height and at a certain angle, not to mention the lighting settings, all being crucial for image quality and face recognition accuracy.

Sometimes even fixing cameras turns out to be a difficult task, like when standard fasteners are not good, so you have to design your own fastenings. Additionally, often there are communication tasks to deal with: networks deployment, fine-tuning and cybersecurity.

Today's technologies create systems that will allow us to automatically recognise people without the use of any paper documents, just by face and iris on a country level. Now we are entering into a stage when applications of these solutions should be identified and will help in achieving the top security and safety levels. ■

Today, in big cities, there are hardly any crowded areas left without standard video cameras and thus video surveillance systems. They help to monitor and investigate incidents, but, unfortunately, play little to no role in preventing them.

This is why for past several years we see a booming development of video analytics solutions which are



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TRANSFORMING HUMAN RESOURCE FUNCTIONS WITH AI

Human resource managers can generate benefits by leveraging artificial intelligence techniques into their daily functions explains Mansoor Sarwar at Sage.



MANSOOR SARWAR,
Technical Director, Sage
Middle East.

As competition gets tougher and complexities in workplaces continue to surge, successful businesses will need to seamlessly integrate technology and talent to transform existing ways of working. Significantly, this digital transformation within a business must span all departments and areas of operation, including Human Resources.

While the scope of digitalisation of the HR department is no doubt extensive, this process can help companies achieve everything from talent insight and recruitment to employee welfare and retention. People are the most valuable asset of any business and play a vital role in supporting their success. With the help of technology, businesses can establish an environment that optimises HR operations, goals and productivity.

Talent and technology inevitably go hand in hand. Today's uncertain economy poses formidable challenges for HR. Without leveraging insights derived from data analytics, it has become increasingly difficult for employers to target and recruit qualified human capital. In addition, competitive workforces today also continually seek upskilling, training, mentorship and opportunities to grow.

How do HR specialists track talent and employee satisfaction? As technology continues to transform the recruitment landscape as we once knew it, deploying and

using innovative tools and solutions such as Artificial Intelligence, as well as analytics and mobility via Human Capital Management suites can optimise the entire process. While there is some fear around technology, it is time that HR departments turn the abundance of tools available into services that can enable them to do their jobs better. It is time to move away from legacy systems and work in tandem with modern technology to achieve optimal results.

According to the 2018 Deloitte Global Human Capital Trends report, the implementation of automation, robotics and artificial intelligence have witnessed an upward trajectory. Approximately half of the survey's respondents claimed that their organisations are involved in automation projects with 24% using artificial intelligence and robotics to perform routine tasks, 16% doing so to augment human skills and 7% leveraging these advanced technologies to restructure their work.

The survey data also revealed that 46% of the respondents were considering using artificial intelligence to automate their recruiting processes, while 51% expressed confidence in using machine learning to inform their hiring decisions.

Talent acquisition specialists can leverage technology to learn more about their employees and engage with them more effectively.

INSTEAD OF FEARING TECHNOLOGY OR USING IT TO INTIMIDATE EMPLOYEES, ORGANISATIONS NEED TO LEVERAGE ITS BENEFITS TO MAXIMISE PRODUCTIVITY.

It will aid them in creating a more contented and focused workforce. To ensure that organisations are onboarding the right candidate, hiring processes need to be made more automated and data-driven.

Through harnessing artificial intelligence solutions, recruiters can conduct text-based interviews and automated scheduling and use intelligence tools more strategically in their hiring process.

While the HCM suite offers solutions that streamline the core HR functions, it can also help organisations attract, develop, engage, retain and manage their employees. By creating a digital workplace, companies enable employees to not only be digital natives but also increase the efficiency of their operations. Automation is especially useful in eliminating repetitive, low-value tasks, freeing up employee capacity to focus on more value-added work.

Access to online learning portals created by the company for its people is another good start to empowering employees. Providing e-learning platforms, training programmes, and online courses are small steps in creating a digital workforce. Such efforts will support employees in becoming tech savvy and increase their levels of engagement with the organisation.

To stay relevant today, it is imperative that organisations are agile, flexible and create collaborative and empowering work environments. Furthermore, to truly ensure successful digital transformation, companies need

to facilitate cross-department collaboration and discussions to build synergies. The decisions made by HR essentially impact all departments and the overall business objectives.

This is where the Chief Digital Officers comes in. More than ever, CDOs need to play a vital role in enabling innovation and eliminating limitations. CDOs need to ensure that digital transformation takes place consistently across all departments to align business goals.

While technology is at the heart of digital transformation, the people involved in the process are equally, if not more important. Instead of fearing technology or using it to intimidate employees, organisations need to leverage its benefits to maximise productivity.

An ideal digital workplace should aid employees, across departments, to work productively. Businesses need to ensure that computers, mobile devices, collaboration applications, artificial intelligence, and analytics are tools that ultimately help shape immersive workspaces and develop innovative employees.

In today's digital economy, organisations with strong digital capability comparatively perform significantly better than those without. ■

KEY TAKEAWAYS

- Automation is useful in eliminating repetitive tasks, freeing up employee capacity to focus on more value-added work.
- CDOs need to ensure that digital transformation takes place consistently across all departments to align business goals.
- Talent acquisition specialists can leverage technology to learn more about employees and engage with them more effectively.



WE HELP YOU BUILD A DATA-CENTRIC STRATEGY

We're in a new world: data is now a strategic asset, and enterprises will need data-centric strategies to succeed and thrive. So it's time to re-think IT infrastructure from the bottom-up.

HOW TO AVOID ANALYSIS PARALYSIS BY USING ANALYTICS

Dashboard analytics provided by ERP and MES software can present an integrated picture of the business helping smooth decision making, explains Hesham El Komy at Epicor Software.



HESHAM EL KOMY,
Regional Vice President, Middle
East, Africa and India, Epicor
Software.

There are vast amounts of data being created, mined and managed every day—and, according to an executive summary by Cisco, global IP traffic will experience an almost threefold increase over the next five years. With broadband speeds set to double by 2021, and more data being shared, than ever before, the amount of information that now sits at our fingertips is exploding.

Today, data is accumulated from a wide variety of sources, and it is becoming increasingly difficult to manage this growing wealth of information—which includes details related to financial transactions, inventory and production processes—let alone use it.

Digitalisation also means that workers now face a daily tsunami of emails. In 2018, around 124.5 billion business emails were sent and received worldwide each day—with the average office employee receiving over 121 pieces of digital correspondence daily. Projections show that by 2021, 320 billion emails will be sent everyday—an increase that will have a detrimental effect

on the productivity and wellbeing of those receiving them.

DATA DELUGE

There is no denying that data plays a key role in the everyday decisions made by organisations and their employees. However, the sheer volume of information available today can result in data blindness and confusion, rather than clarity, when making all-important business choices—leading to analysis paralysis.

Recent research indicates that the data deluge workers experience on a daily basis is becoming overwhelming. Nearly three-quarters 74% of employees claim they are dealing with more and more data, while almost two-thirds 62% said they are often overwhelmed by the sheer volume of emails they receive. Over a third 35% went on to confess they feel stressed every day, due to information overload.

This is a challenge for workers in every area of the business—with over two-thirds 62% of CEOs, 44% of IT workers, 63% of operations staff, and 70% of finance professionals agreeing that information overload impacts them on a daily basis. With data paralysis affecting staff members at every level of the organisation, the risks this poses cannot be ignored.

Information overload not only puts workers under pressure, it can also have a damaging impact on their

TO ELIMINATE ANALYSIS PARALYSIS,
BUSINESSES NEED TO ACCESS
CONTEXTUALISED DATA AND PRESENT
THIS IN A DASHBOARD.

60% CLAIM THE AMOUNT OF DATA THEY RECEIVE DAILY CAN SOMETIMES MAKE IT HARD TO MAKE THE RIGHT CHOICES.

ability to make accurate business decisions—60% claim that the amount of data and information they receive daily can sometimes make it hard to make the right choices.

BETTER VISIBILITY

With decision-making so pivotal to driving business growth, information overload represents a worrying development. Making the wrong decision can have serious negative implications for the bottom line, especially when it comes to adapting an export strategy or initiating a new business plan without appropriately reviewing if there is any potential impact on profit margins.

Achieving full visibility of operations across the business is key for maximising the enterprise's decision-making capabilities. This includes having on-demand access to the right information, at the right time. However, according to KPMG's 2016 Global Manufacturing Outlook report, 43% of senior executives admit they had either limited or no visibility at all into their supply chain—a concerning figure.

While no one person can have direct visibility of everything that is going on in a company, business intelligence technologies and analytic software—including enterprise resource planning systems and manufacturing execution software—should be used to provide these insights. These technologies work by collecting, distilling, interpreting, editing, and presenting meaningful data in a

timely manner, and highlighting issues and areas of concern in a way that is clear and actionable.

INFORMED DECISIONS

Cutting through the everyday influx of data is an ongoing business need—and systems that can help make decision-makers choose quickly, and wisely, are more crucial than ever before. To eliminate analysis paralysis, businesses need to access contextualised data and present this in a format—in a dashboard, or as graphics or alerts—that users find easy to work with.

To simplify this process, all data needs to be stored in a centralised system that can be integrated with other devices—so that information can be accessed across the entire business, by multiple parties.

Solutions like ERP and MES make it possible to enable the integration of data across the entire product lifecycle—from design, through to engineering, manufacturing, delivery, and customer service. This gives all stakeholders, from C-level executives to those working on the manufacturing floor—access to real-time, and actionable, information and insights. Having a filtered view of all this detail will enable decisions to be based on relevant, accurate and reliable data.

There is no room for uncertainty in business when paving the way for future growth. By applying analytics to data, decision-makers can swiftly access insights that will enable them to make the right choices to improve operations across an entire business—including customer service and demand planning—and, ultimately, profits. ■

KEY TAKEAWAYS

- Sheer volume of information available can result in data blindness and confusion, rather than clarity, when making all-important business choices—leading to analysis paralysis.
- According to KPMG's 2016 Global Manufacturing Outlook report, 43% of senior executives admit they had either limited or no visibility at all into their supply chain.
- With decision-making so pivotal to driving business growth, information overload represents a worrying development.
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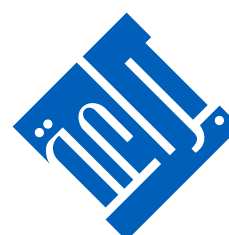
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HOW COLLABORATIVE ROBOTS WILL SOON BE PART OF LIFE

Cobots already exist in our lives in a small way but this is likely to explode as the power of automation takes over, writes Chris Pope from ServiceNow.



CHRIS POPE,
Vice President Innovation,
ServiceNow.

The renaissance we are currently experiencing in Artificial Intelligence, and all forms of Machine Learning, has given rise to widespread discussion on how business will run in the immediate future. As the impact of AI starts to be applied to real-world use cases, we will inevitably need to get used to some new terminology. One of the technology industry's new favorites is the notion of the cobot, short for collaborative-robot.

Cobots come in many forms. Some will be purely software-based helper robots that we might think of as sophisticated extensions of chatbots or virtual assistants. Some will more physically manifest themselves as robot arms, exoskeletons or some other form of intelligently programmed machinery. Some will be a super-smart mix of both.

NEW OFFICE BUDDY

You can think of cobots as your new office buddies and people—I do mean all of us are going to have to get used to working alongside intelligent machines, in close proximity, very soon.

Cobot brains are composed of software-based virtual services that form the synapses of thought—we know its processing and data analytics really that they run on. Like a Tamagotchi, they do need feeding and watering, but only in the form of

software updates, exposure to new datasets and patches for security provisioning and so on.

People who find the notion of cobots unnerving should perhaps stand back and consider the fact that machines have already been looking after us in close proximity for years. Your desktop machine, tablet and smartphone are all using AI to power the spam filter algorithms that assess every email you get for its potential threat value.

If it helps you warm up to the concept, think of cobots as just one step further than a spam filter. But instead of just protecting you from a potential virus, cobots will be able to intuitively manage your work schedule, actions and business decisions, to create a better employee experience all round.

For businesses, the promise of AI is that intelligent assistants will be embedded across all aspects of the organisation. Such agents will analyse data, discover patterns over time and then make decisions based on predictive analysis. The outcome? The application of AI on this level will make businesses not only more efficient, but also more profitable.

BEHAVIORAL RESPONSIBILITY

As shiny and fabulous as all this sounds, there is a responsibility factor to bear in mind here. As we start to feed data into cobot brains,

COBOTS WILL NEED TO APPRECIATE CULTURAL, ETHICAL, BEHAVIORAL NORMS FOR THE GLOBAL CULTURE THEY ARE APPLIED IN DEPENDING ON LOCATION.

we need to be able to reflect a consciousness of and appreciation for society's acceptable behavioral norms.

This means that cobots will need to be able to assess the risk factor in terms of the judgements they give to any individual worker based on that person's skills, background and other competencies. To do this effectively, we will need to be able to assess and measure individual workers' skills in an even more granular and mathematical way before we start to engineer more automation of this kind into our lives.

Cobots will also need to appreciate cultural, ethical and behavioral norms for the global culture that they are applied in depending on location—and this is of course a subject in and of itself.

COBOTS AND DIGITAL WORKFLOWS

As the cobots start to take over the mundane tasks in our world, we must consider how people will now coexist in the new world of automated controls that drive digital workflows and how we actually implement these devices, be they software-based, hardware-based or both—in the workplace.

Some argue that we will now need to be able to measure an individual's rank or score in terms of workplace competency. If we accept this methodology, then it could arguably help us find the engineering point at which we can apply cobot technology to an individual's role.

With a cobot as your new office buddy, we can start to think about the workplace itself from a different perspective. We are all used to open plan office seating layouts these days, but with cobots in the workplace, the software itself will be able to straddle cross-team functionality matrices that far outstrip the boundaries of the physical office itself.

RPA, IRPA, IPA

With cobot technology now developing fast, we will more clearly be able to understand our transition from RPA to IPA or IRPA. If Robotic Process Automation RPA allows us to program home heating controls, for example, based on defined patterns, then Intelligent Robotic Process Automation IRPA, or just IPA is one step further, where home heating controls start to program themselves for optimum usage and efficiency based upon observed patterns of use. Cobots have IRPA in their DNA from the get-go.

We are on the cusp of many technologies, perceived today as almost toy like, such as self-driving cars—becoming quite natural. We will think that cobots and intelligent assistants are quite standard in half a decade's time. In the same way that you went from reading a map in the car and now automatically turning the GPS on, you get to a point where you just expect a new technology to be there...and cobots will be there. ■

KEY TAKEAWAYS

- We will now need be able to measure an individual's rank or score in terms of workplace competency.
- This could help us find the engineering point at which we can apply cobot technology to an individual's role.
- We are on the cusp of many technologies, perceived today as almost toy like, such as self-driving cars, becoming quite natural.



UIPATH ROLLS OUT AUTOMATION FIRST BRIEFINGS

A recent executive roundtable by UiPath and Wipro indicates businesses should rethink processes keeping the customer in the centre, before undertaking any process of automation and change management.

On 18 March, GEC Media Group, publishers of Business Transformation, Enterprise Channels, The Titans, Cyber Sentinel, successfully concluded an executive round table discussion on robotic process automation. The theme of the roundtable was Automation First, an important go to market followed by UiPath globally. The roundtable was completed in partnership with UiPath and Wipro. The main focus across the half day discussion was about reorienting organisations to put the customer first and then to relook at both the front office and back office processes.

The first presentation was completed by UiPath's Vice President for Middle East and Africa, Karan Dixit. He pointed out that a number of factors are coming together to drive the adoption of robotic process automation or RPA. These include the ability

to map a device's display with 100% accuracy, the development of artificial intelligence and its application into a wide range of use cases, and the continuing reduction of cost arbitrage as the basis for business process outsourcing.

Since investments in legacy IT infrastructure and applications cannot be disregarded, robotic process automation is an optimal way to enhance productivity where capital investments in assets are still significant. robotic process automation perfectly emulates repetitive tasks undertaken by human workers but does so in automated manner. "robotic process automation acts as the hands and eyes of the task but not the brain," pointed out Dixit.

Robotic process automation offers significant advantages for business and IT and this includes building an open platform, the ability to



KARAN DIXIT,
Vice President for Middle
East and Africa, UiPath.

operationalise rapidly, the fact that it uses an intelligent approach based on artificial intelligence principles, the ability to scale optimally, and the significant levels of compliance and security that are inbuilt.

Businesses undertaking an robotic process automation approach need to classify their processes on the basis of how much human



ABID MUSTAPHA,
Director, Digital Transformation,
Etisalat.



AMIT SAIGAL,
Associate Vice President and Global
Head, Transformation Solutions,
Wipro.

intervention is required to compete the process end to end. Dixit points out that those processes which do not require human intervention are prime candidates to start robotic process automation and can be mapped into automation. Other processes that require human intervention can be automated using robotic process automation but can only be completed through a call for action, requiring human intervention.

Dixit also pointed out that UiPath is the fastest growing, global enterprise software company and Forester positions UiPath in its leader quadrant. UiPath has a large number of global alliance partners including Google, Microsoft, Oracle, SAP, amongst others.

The next presentation was conducted by Abid Mustapha, Etisalat Digital Transformation Director. Mustapha explained that Etisalat has set up an internal centre of excellence to drive robotic process automation. So successful



Attendees of the UiPath executive round table in Dubai.



Discussion amongst executives present at UiPath round table in Dubai.

have been the gains that Etisalat now plans to more than double the number of existing robots.

Etisalat measures the benefits of its robotic process automation implementation both with external and internal customers. As an example, around its call centre operations, gains are measured by reduction in the number of minutes required to complete a particular call, as well as reduction in the number of clicks required to navigate through multiple back-end applications.

Mustapha had a number of learning points to offer. He mentioned that businesses should not be in hurry to roboticise. It is better to relook at the processes with a business analyst before implementing robotic process automation. During the roll out, it is better to learn fast and fail fast so that changes can be made rapidly rather than a long drawn out implementation and correction process.

The final presentation was made by Amit Saigal, Associate Vice President and Global Head,

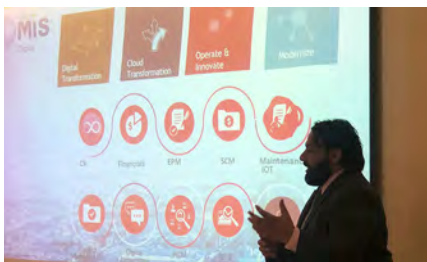
Transformation Solutions, Wipro.

A key takeaway from Saigal's presentation was that a structured process approach is critical for successful implementation and gains from robotic process automation. BOTs need to be looked as digital employees and workers, who are an extension of an organisation's existing workforce. To onboard the new digital workforce, a detailed change management process needs to be designed and implemented from the beginning to ensure that upstream and downstream processes of the organisation like IT, human resources and compliance are aligned.

"BOTS work on a happy path process," mentions Saigal, indicating that organisations should first automate select parts of their business that have well defined and repeatable processes and then gradually move to more complex processes, which require human intervention and supporting technologies like OCR, machine learning and artificial intelligence. Saigal also shared a demo of Wipro's



Karan Dixit, Vice President for Middle East and Africa, UiPath, explaining the fundamentals of RPA to executives in Riyadh.



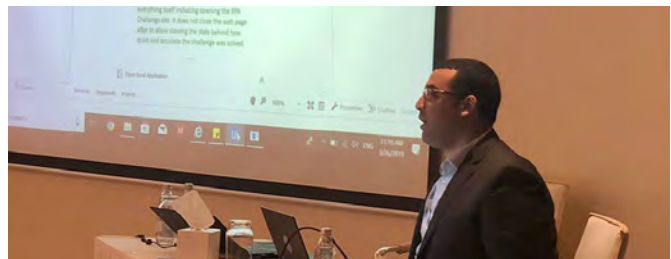
Ahmed Elazab, Digital Division Manager, MIS, explains which keystroke processes can be mimicked and automated.



Executives present raised various queries during the presentations by UiPath and MIS.



Attendees of the UiPath and MIS round table discussion in Riyadh.



Live, hands-on demonstration of robotic process automation.

Automation First in Riyadh, Saudi Arabia

On 26 March, GEC Media Group, successfully completed an executive round table discussion on robotic process automation, RPA in Riyadh. The roundtable was completed in partnership with UiPath and Saudi Arabia partner, MIS. The opening key note presentation was made by Karan Dixit, Vice President Middle East and Africa, UiPath. It was followed by a hands-on demonstration of automated processes that were appreciated by the executives at the round table briefing session. Ahmed Elazab, Digital Division Manager of Saudi Arabia based partner, MIS, pointed out that UiPath's robotic process automation provides advanced macro-like capabilities that can mimic user actions.

Holmes Document Cognitive Digitisation Solution built in collaboration with UiPath, that helps automate processes with hand-written documents.

Businesses should worry less about finding the best tool and worry more about finding the right tool, stresses Saigal, and that means a deep understanding of the process in question and its impact on the customer, whether internal or external. Another way of identifying where to start is to use a quadrant based on criticality of the business operation versus the estimated impact on cost of that operation.

Wipro brings a rich global experience of implementing 5,000+ bots across 100+ customers. Saigal shared the key learning and reasons for robotic process automation projects failure. This included lack of well-defined change management process, governance, ownership and accountability; absence of a holistic view of data about the projects in-scope; lack

of cross functional teams; mismatch of test and real-life environments during testing; failure to recognise IT's role in enabling a suitable infrastructure, amongst others. Saigal also sought to dispel some of the myths surrounding robotic process automation comparing them with actual, real life scenarios.

Similar to the challenges of any large or small project roll out, robotic process automation also requires an effective communication strategy across the organisation. Saigal pointed out that the communication strategy should inspire employees of the organisation to engage and spread the word. They should be engaged enough to collaborate and contribute. In summary, the event was good time spent for executives looking at driving transformation through the convergence of business and IT. ■

Prada Group selects Oracle Retail for transformation analytics across 634 stores



The solution helps the company analyse historical data and current market demands across its global retail network of 634 stores, better-informing business decisions and providing a unique customer experience.

The Prada Group announced a collaboration with Oracle to adopt a suite of Oracle advanced technological solutions that will support efficiency throughout all of Prada Group's core retail processes. They will also help the company analyse historical data and current market demands across its global retail network of 634 stores, better-informing business decisions and providing a unique customer experience.

With Oracle Retail Cloud Services Merchandise Financial Planning, Assortment, and Item Planning, the Prada Group will optimise its merchandising process including sales and forecasts, performance

KEY TAKEAWAYS

Strategy

- The solution will lead to more informed analysis of the Group's KPIs.
- Greater ability to set new targets and allocate more precise budgets.
- The Group will also be able to strengthen customer relations at the point of purchase.
- The solutions will provide real-time visibility into customer-related details across every touchpoint.

Ducab selects Oracle Transportation to transform collaboration with suppliers



(Left to right) Rahul Misra, Vice President Business Applications, Gulf, Oracle; and Mohamed Yousif Al Ahmedi, General Manager Procurement, Supply Chain and Planning, Ducab.

Ducab, one of Middle East's high-quality cable manufacturers, will strengthen global transportation and delivery network with Oracle Cloud Applications, accelerating Ducab's expansion into markets within and outside the UAE. The company will leverage Oracle Cloud Applications to bolster customer deliveries, introduce innovative services, and enhance collaboration with its suppliers.

With investments across state-of-the-art facilities in the UAE, Ducab is rapidly expanding its local production and support infrastructure. Essential to that expansion is having a complete and fully-integrated suite of applications that enables Ducab to stay agile and drive efficiencies in the development, design, manufacture, marketing and distribution of its products.

After evaluating different options, Ducab selected Oracle Transportation Management Cloud Service; Oracle Transportation Operational Planning Cloud Service; Oracle Freight Payment, Billing and Claims Cloud Service; Oracle Transportation Sourcing Cloud Service and Oracle Transportation Intelligence Cloud Service solutions.

Ducab products are now used by leading organisations and governments in the areas of energy, general construction, oil and gas, industrial, defence, transport, marine, mining and electrical manufacturing.

"Ensuring a high level of customer satisfaction is top priority for us at Ducab. This relentless focus is a driving force for the company's robust growth in the region and internationally," said Mohamed Yousif Al Ahmedi, General Manager Procurement, Supply Chain and Planning, Ducab. "As part of that expansion, our transportation and delivery network continue to evolve, and we are confident that Oracle Cloud Applications will help us deliver an even stronger customer experience moving forward."

"Oracle Transport Management solutions will enable Ducab to reduce freight costs, optimise service levels and automate processes to run logistics operations more efficiently. We are confident that this digital transformation will create a unique differentiation for Ducab and help offer unmatched value to its customers", said Rahul Misra, Vice President Business Applications, Gulf, Oracle.

analysis, margin, open to buy, inventory management, supply chain, and inventory allocation. Implementing this solution will lead to a more informed analysis of the Group's KPIs and a greater ability to set new targets and allocate more precise budgets.

The Group will also be able to strengthen its customer relations at the point of purchase with Oracle Retail Customer Engagement Cloud Services and Oracle Retail Xstore Point of Service. The two solutions will provide real-time visibility into all customer-related details across every touchpoint, offering a personalised shopping experience.

"By integrating Oracle's advanced digital technologies with our operations, we will be able to unlock increasing value within our business and offer further opportunities to our global customer base. Our collaboration with Oracle is part of our wider strategy focused on enhancing our Group with a strong investment in technology to boost operational efficiency and effectiveness," said Lorenzo Bertelli, Prada Group Head of Marketing and Communication.

"For luxury brands, delivering a unique and positive brand experience is paramount," said Mike Webster, Senior Vice President and General Manager, Oracle Retail. "Whether they are shopping in Milan, San Francisco or online, Prada Group's customers expect that inventory will be fresh, current and available. With Oracle, the company will be able to better understand and anticipate customer demand and optimise inventory assortments accordingly to ensure every brand connection results in a satisfied customer." ■

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Avaya's transformation excellence centre to be located at DWTC One Central

Recognising Dubai as the epicentre for innovation in region, Avaya announced that it will be building on its long-standing relationship with the Dubai World Trade Centre by opening a Customer Experience Centre at One Central, a new international Grade-A mixed-use development in the heart of the city.

Showcasing the latest advancements in artificial intelligence, biometrics, and blockchain-enabled communications and collaboration solutions, the centre will serve as a test-bed for Avaya's partners and customers, from across the globe, looking to develop world-class solutions to address the most pressing business needs and challenges.

While it has traditionally been businesses that push the incorporation of new technologies into their customer service and employee enablement workflows, there has been a paradigm shift in recent years. According to the recent Avaya SuperServe report, nearly half 48% of consumers would like organisations to use AI to improve their products and services, and 71% would like to use voice analytics or biometrics as a means of secure authentication.

As the home of GITEX, the Middle East's largest technology expo, as well as many of the region's most prominent industry-specific exhibitions, DWTC annually attracts top decision makers from the broadest spectrum of industry. Establishing its flagship centre at One Central will place Avaya at this heart of global innovation, making the facility easily accessible to any executives looking for ideas to



(Left to right) Nidal Abou-Ltaif, President Avaya International; and His Excellency Helal Saeed Almarri, Director General, Dubai World Trade Centre Authority.

transform customer journeys and employee experiences.

His Excellency Helal Saeed Almarri, Director General, Dubai World Trade Centre Authority and Dubai Department of Tourism and Commerce Marketing said, "DWTC Authority is delighted to welcome Avaya to the One Central development. Avaya is a long-standing partner of DWTC and we have first-hand experience of their commitment to technological excellence. This innovative customer experience centre is a solid new addition to the One Central ecosystem and reaffirms both, the development and Dubai's attractiveness as a dynamic urban destination of choice for businesses to accelerate their growth trajectory and expand their geographic reach."

One Central is located within the DWTC Authority free zone, offering both onshore and offshore licenses for businesses. Situated in the heart of Dubai's central business district, the commercial offering is complemented by a world-class mixed-use lifestyle and entertainment destination. Phase 1 and 2 of the development were completed ahead of schedule, encompassing a 588-rooms hotel and five Grade A commercial office buildings.

The masterplan also comprises of diverse hospitality offerings, including the Accor group's first 25Hours branded design hotel outside of Europe, and residential sites which are collectively aimed at strengthening Dubai's appeal to international businesses, corporations and investors alike. The development is fully aligned with Dubai's Smart City strategic agenda and meets the highest of technology and infrastructure standards. ■

KEY TAKEAWAYS

Strategy

- Nearly half 48% of consumers would like organisations to use AI to improve products.
- 71% respondents would like to use voice analytics or biometrics as a means of secure authentication.

People

- The facility at One Central will be accessible to anyone looking for ideas to transform customer journeys.
- One Central is located within DWTC Authority free zone, offering both onshore and offshore licenses for businesses.

Time Hotels transforms calling experience through Avaya's communication cloud

Customer service, a hallmark of the hospitality industry, has been elevated at Time Hotels with the recent upgrade of the group's communications and contact centre systems. With collaboration solutions from Avaya, guests can now expect minimised holding times while contacting hotel support, through the channel of their choice. The new Avaya platform helps make it possible for the group to automate key guest services including wake-up calls, reservation reminders, and requests for information on hotel services and local attractions.

The telephony systems overhaul is part of a wider technology upgrade at the hotel group. To simplify licensing, improve availability, and reduce hardware costs and admin intervention, the IT team intends to migrate their contact centre to the cloud with Avaya. Also, in the pipeline are plans for a mobile application for guests as a logical extension to the mobile and online check-in services already offered.

Time Hotels is on track to undertake the management of dozens of properties in the next few years. With Avaya's communications platform offering the ability to scale up to 3,000 users across 150 locations, and its contact centre solution capable of supporting up to 250 agents, the team is confident they can continue to enhance guest experiences.

Thanks to the upgrade, Time Hotels' guests can take advantage of immediate, multi-channel support via the telephone, email, fax and web chat, which is expected to have a positive impact on



JOSEPH FAYAD,
Corporate Director IT, Time Hotels.

customer satisfaction levels, and the group's reputation. In parallel, with the help of Avaya technology, employees can now utilise their own mobile phones as desktop extensions wherever they are.

As a result, staff can provide on the go customer service and respond to guest requests even while away from their desks. This has eliminated the need for the group to provide employees with corporate mobile devices, driving down operational costs.

Explaining the group's decision to upgrade its communications infrastructure, Joseph Fayad, Corporate Director IT, Time Hotels, said, "Connectivity today is a critical aspect of the hospitality industry. It is essential to have proper infrastructure to provide the reliable services our guests need. IT's role is to make the

business run more efficiently. An efficient communication system takes this role further by making the business dynamic enough to adapt to future technology evolution."

"We are looking to incorporate the application and using guest mobiles to communicate with the hotel when they are on the hotel premises. We have 100% wireless coverage in all the facilities, so the ability to use the application inside the hotels amongst employees as a mobile extension has saved us a lot of money on hardware," Fayed explained. ■

KEY TAKEAWAYS

Strategy

- The telephony systems overhaul is part of wider technology upgrade at the hotel group.
- There are plans for a mobile application for guests as logical extension to the online check-in service.
- Plans for mobile application as extension to online check-in services.

Execution

- Time Hotels has elevated Guest Services with Avaya Communications Systems and Contact Centre Upgrade.

Costs

- To simplify licensing the IT team intends to migrate contact centre to the cloud.

British Serco Group delivers Dubai Metro availability 99.9%, punctuality 99.8%



Al Tayer and Soames during the contract signing.

Roads and Transport Authority signed a contract extending operation and maintenance of the Dubai Metro with the British Serco Group until September 2021. The new contract covers the operation and maintenance of the Dubai Metro Red Line Extension Project Route 2020. This extension spans 15 km and connects 7 stations 5 elevated and 2 underground, and the test-run of the service is expected to start in February 2020.

The Dubai Metro lines currently have a network length of 75 km, which will increase to 90 km with the Red Line expansion and will have over 120 trains running at peak times. The total value of the fixed base fee for the two-year contract is around 680 million dirhams equivalent to about 140 million sterling pounds.

HE Mattar Al Tayer, Director-General and Chairman of the Board

KEY TAKEAWAYS

Strategy

- RTA's introduction of technologies contributed to achieving these indicators.
- Private businesses are able to provide high quality service and performance at lower costs through improvements and value engineering.
- RTA focusses on its core responsibilities of developing legislation and overseeing implementation and enforcement.
- Requirement to have specialised experience in undertaking critical tasks.
- Know-how in operating and maintaining sophisticated systems essential for metro operation.

of Executive Directors of the RTA, signed the Contract on behalf of RTA; and Hon Rupert Soames, Serco Group Chief Executive Officer represented Serco during the signing ceremony. Attending the ceremony were Baroness Rona Fairhead, Minister of State for Trade and Export Promotion and HE Patrick Moody, British ambassador to the UAE.

Under the contract, the Company will provide operational and maintenance services to both lines of the Dubai Metro as well as Route 2020 involving the extension of the Red Line to the site of Expo. The contract also covers all metro assets such as trains, railways and stations. It will also cater to the provision of high-class passenger transit services customised to the daily ridership demands.

The contract scope also covers operating and maintaining the fare systems of Dubai Metro and collecting the proceeds of selling and recharging Nol cards, besides recruiting and training citizens to achieve a set Emiratisation target. The RTA is keen on qualifying Emiratis and the transfer of knowledge of international expertise in the operation and maintenance of rail systems; a new field to the region.

There are many factors attributing the operation and maintenance of the Dubai Metro to be contracted to specialised world-class companies. These include the requirement to have specialised experience in undertaking critical tasks as well as the know-how in operating and maintaining sophisticated electronic, computer

Ankabut joins VMware Cloud Programme to transform delivery to 80 UAE institutions



(Left to right) Henri van der Vaeren, Vice President South Europe, Middle East and Africa, VMware; and Fahem Nuaimi, CEO.

VMware, a global innovator in enterprise software, announced a digital transformation partnership with Ankabut, UAE's Advanced National Research and Education Network, to transform learning experiences for academic institutions in the UAE, regionally, and worldwide. Ankabut's platform provides collaboration opportunities between UAE education, government, and industry sectors. Aligned with Abu Dhabi Vision 2030 and UAE Vision 2021 government transformation goals, Ankabut provides cloud connectivity, IT infrastructure and managed services for 80 UAE member institutions to drive innovative educational services such as digital student records, project collaboration and virtual reality field trips.

Ankabut also becomes a member of the VMware Cloud Provider Programme, becoming the first dedicated education service provider in the UAE. Using VMware software-defined datacentre and VMware NSX network virtualisation solutions, Ankabut can provide more secure datacentre and public cloud services that can scale up as their student population grows.

"With VMware solutions, we are able to provide an innovative service to educational institutions that is flexible whilst reducing operational costs," said Fahem Nuaimi, CEO Ankabut.

"As an integral part of their digital transformation strategies, academic institutions worldwide are choosing VMware hybrid cloud solutions to overcome scalability, availability and budget challenges," said Henri van der Vaeren, Vice President South Europe, Middle East and Africa at VMware.

and mechanical systems essential for the metro operation.

Contracting the operation and maintenance to specialised companies reduces the operational costs of the metro as private businesses are able to provide high quality service and performance at lower costs through continuous improvements and value engineering. This allows RTA to focus on its core responsibilities of developing legislation and overseeing implementation and enforcement.

Additionally, the practice of contracting the operations and maintenance of the metro is adopted in several rail systems worldwide such as London, France, Australia, Korea, and the USA metro lines among others.

"Serco has delivered operational performance levels in the Dubai Metro with a high train service availability of 99.9% and a punctuality of 99.8%, achieving a record of 204 million journeys in 2018. RTA's introduction of edge-cutting technologies of the rail operation industry also contributed to achieving these indicators," said Al Tayer.

Rupert Soames, Serco Group Chief Executive, said: "We are delighted to have agreed this extended and expanded contract to continue operating and maintaining the Dubai Metro, which is amongst the largest and most reliable rail services in the world. We look forward to working in close partnership with the RTA in support of the preparations for Expo 2020 and beyond. This contract demonstrates the high confidence that RTA has in Serco to continue with delivering world-class levels of safety, operational performance and customer service. ■

Oman Data Park to provide transformation using Dell Technologies platform



The MoU was signed by Eng Maqbool Al Wahaibi, CEO of Oman Data Park and Javier Haddad, General Manager Gulf at Dell Technologies.

Oman Data Park, the Sultanate's IT-managed services and cloud services provider, signed a Memorandum of Understanding with Dell Technologies, initiating a landmark project to provide Professional Services as a Service to its customers. This collaboration is a step towards amplifying digital transformation initiatives across Oman with speed, efficiency and effectiveness.

The MoU was signed at COMEX Technology Show by Eng Maqbool Al Wahaibi, CEO of Oman Data Park and Javier Haddad, General Manager Gulf at Dell Technologies, further strengthening their existing seven-year-old partnership.

COMEX is one of Oman's premium ICT exhibitions, held annually under the patronage of the Information Technology Authority. It is designed to offer organisations access to futuristic tools, smart technologies and IT and communication solutions.

The three-day exhibition held in March at the Oman Convention and Exhibition Centre focuses on the role of technology and security in the sectors of Manufacturing, Transport and Logistics, Oil and Gas, Tourism, Healthcare and Education – which are key industries identified in Oman's Vision 2020.

Oman's Vision 2020 and Vision 2040 mandates a seamless transition to a knowledge-based information society with digital transformation at its core. Achieving this requires

organisations, regardless of their size, to expand their business capabilities and deliver more value to their customers in an agile and secure way. In order to translate this objective into reality, Oman Data Park aims to assist organisations with their advancement of software technologies as a part of their digital transformation to provide more advanced products and services to their customers.

To this end, Oman Data Park will collaborate with Dell Technologies to help facilitate provision of PSaaS to their customers. Dell Technologies will address the diverse needs of this project by providing Oman Data Park with strategic expertise, training and proven practical capabilities in this area of interest.

Dell Technologies' consulting and support services are developed to help achieve the desired business outcomes by offering choice, flexibility, scale, speed and purpose. Continuing their longstanding partnership, Oman Data Park and Dell Technologies will help enable organisations in the Sultanate take a quantum leap forward in enabling digital transformation.

Oman Data Park is the first managed services Provider in Oman with a vision to transform the future, where ICT services will be available on demand. Oman Data Park currently runs three datacentres located in Wattaya, Rusayl KOM, and Duqm. These three centres are interconnected to provide resilience, interconnectivity of data and business continuity.

Oman Data Park serves around 500 corporates ranging from large, mid-tier to small companies. Oman Data Park's three Tier 3 datacentres provide a diverse set of services such as Co-location, Managed Security, cloud and Disaster Recovery services. ■

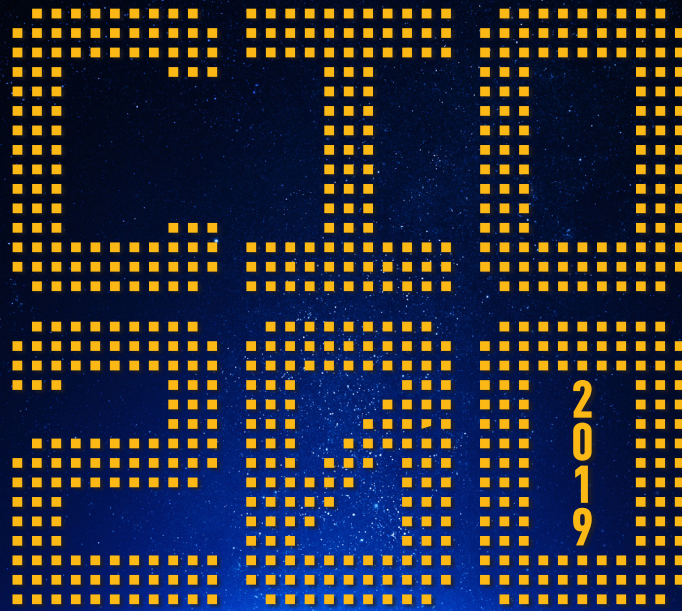
KEY TAKEAWAYS

Strategy

- Oman Data Park will collaborate with Dell Technologies to help facilitate provision of PSaaS to their customers.
- Oman Data Park will help enable organisations in Oman in enabling digital transformation.

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Saudi Arabia port operator scales with Nutanix to manage 50% traffic growth

As the organisation responsible for management of three major port container and bulk terminals in Saudi Arabia, Gulf Stevedoring Contracting Company is fully committed to supporting the government's Saudi Vision 2030 agenda for economic diversification. Scalable, reliable and easy to manage IT systems are recognised as key to delivering this agenda, which meant the company would have to both virtualise existing workloads and replace its end-of-life physical infrastructure with more flexible and scalable hyper-converged solution to cope with predicted increases in customer demand.

In order for port management specialist, Gulf Stevedoring Contracting Company, to meet its commitment to the ambitious Saudi Vision 2030 agenda for economic diversification, it needed to make big changes to its IT. Virtualisation was a real



HOSSAM EL-MASRY,
Information Technology Manager at GSCCO.

priority as was replacement of the legacy 3-tier server plus storage hardware in its datacentre.

With three port terminals operations to manage, the company was also keen to migrate to a solution that would integrate management of all physical and virtual resources through a single interface as well as provide tools to enhance the resiliency of its IT infrastructure.

Following a comprehensive evaluation of hyper-converged solutions from a number of vendors, the team at GSCCO decided on Nutanix Enterprise Cloud with implementation in two phases. The first involved installation of a primary Enterprise Cloud cluster in the GSCCO datacentre, followed by virtualisation of as many server workloads as possible, then subsequent decommissioning of the legacy hardware once the new software and client workloads were fully operational.

The second phase required building of disaster recovery facility at the company's Jeddah Islamic Port location equipped with a second Enterprise Cloud cluster to be used for snapshot replication, backup and disaster recovery using tools included as standard in the Nutanix software stack.

The full installation was completed in late 2016, since then the company has put the promised scalability to the test by adding additional nodes to cope with

KEY TAKEAWAYS

Strategy

- Agile and scalable IT infrastructure to keep pace with 50% growth in container port traffic.
- The company is evaluating use of public cloud services, process automation, support for Internet of Things.

Execution

- Availability and failover using built-in snapshot and replication tools across Enterprise Cloud clusters.
- Scale operations to two separate datacentres.



With three port terminals operations to manage, Gulf Stevedoring Contracting Company was keen to migrate to a solution that would integrate management of physical and virtual resources through a single interface as well as provide tools to enhance the resiliency of its IT infrastructure.

growing IT demands in each of the following years. With the previous infrastructure this would have required weeks of planning to cope with the disruption and possible downtime that would have ensued. With the Nutanix Enterprise, it was a trouble-free exercise.

As part of the migration to the Nutanix Enterprise Cloud, El-Masry and his team have virtualised all of the GCSO workloads leaving just a handful of legacy systems with specific hardware dependencies. This has led to a significant increase in performance and greater capacity. It has also allowed the port operator to reduce rack occupancy by a full 1.5 racks, in turn, leading to a significant reduction in associated power and cooling overheads.

The support team, too, has benefited by being able to manage the two sites and all physical and virtual resources from one Nutanix Prism console. Moreover, the support team no longer need specialist storage management skills and are able to spend more time supporting users and planning for further developments.

In the short term it is business

as usual with El-Masry and his team focused on further expanding the Enterprise Cloud deployment to cope with continued growth. Looking to the future the company is evaluating possible use of public cloud services, process automation and support for the Internet of Things and is doing so confident in the knowledge that the Nutanix Enterprise Cloud is uniquely equipped to enable them to take advantage of these and other new technologies and do so at minimal risk and expense.

“We wanted a solution that would deliver linear scalability to handle predicted rapid growth in container traffic,” explained Hossam El-Masry, Information Technology Manager at GSCCO. “We were also looking for greater resiliency and the ability to upgrade and manage the infrastructure without any downtime or impact in any way on the level of service provided to staff and customers at the ports we manage.”

“With zero downtime even during major capacity upgrades, migration to Nutanix Enterprise Cloud has revolutionised our IT infrastructure, making it quicker,

more reliable and much easier to both scale and manage. We could not have handled the recent growth in container traffic without it.”

“Not only have we saved on capital IT spending, we have also achieved a saving of around 15% in terms of OpEx. We have also been able to bring new developments online earlier than planned including recent major upgrades to our Navis N4 Terminal Operating System and EmPower employee performance management systems needed to cope with the extra container traffic expected going forward.”

“The Enterprise Cloud delivered fully on its promise of cloud-like scalability, enabling us to add additional nodes in hours rather than days or even weeks with the old hardware, and with no downtime. We now also have a much more resilient infrastructure, allowing us to keep the ports running at all times with no disruption in service during maintenance and rapid failover to our recovery site to enable us to keep the ports working should we suffer a power outage or other problem.” ■

RTS International transforms global transactions using Infor Nexus supply chain

Infor, a global vendor in industry cloud software, announced that RTS International is financing more than \$1 billion in global trade annually through the Infor Nexus supply chain platform. RTS International specialises in pre- and post-export financing models for apparel and footwear businesses in Africa and Middle East, amongst others.

RTS International has provided financing through Infor Nexus since 2010, serving more than 100 buyer communities. The digital platform automates trade documents and processes between a buyer, its suppliers and RTS International to enable visibility, transparency and touchless approvals and settlements that benefit all three parties. The Infor Nexus global services team helps ensure that suppliers are swiftly onboarded.

Infor Nexus's electronic document management and digitisation tools automate approval processes and increase days of available funding, allowing finance of shorter-term maturities that are not possible in a traditional paper environment. Visibility into live transactions, historical performance data, receivable flows, order balances and upcoming ship-date volumes enables RTS International to provide financing to suppliers in emerging regions, leveraging the credit strength of their buyers. Smaller suppliers, which typically would not qualify, obtain access to funding within days of a completed order, at competitive rates.

RTS International can provide suppliers with credit evaluation services to help assess the financial stability of the buyer and avert disruptions in the flow of cash.



LUIS MONDRAGON,
Vice President, RTS International.

Infor Nexus leverages data to help suppliers auto-create fulfillment documents to drive compliance and mitigate discrepancies, penalties and chargebacks, fostering a healthier financing environment. The process allows the supplier to concentrate on developing sales instead of having to manage multiple processes to get paid.

Once the seller ships its products, it finalises its fulfillment documents on the Infor Nexus network. The documents are compared to the terms on the purchase order, and a payment decision is made by the buyer, often while the goods are still at origin. It takes two to three days after turning over the goods to the freight forwarder, to release export proceeds.

By eliminating paper from global trade processes and workflows, buyers, suppliers and finance providers such as RTS International can improve documentary compliance and leverage a multi-enterprise infrastructure to enable new opportunities for collaboration and services. RTS International was an early adopter of digital trade financing technology and has leveraged it as a catalyst for business growth.

"Plugging into Infor Nexus's digital platform has enabled us to become a strategic partner to our customers, while enabling us to increase revenue and reduce risk and costs," said Luis Mondragon, Vice President, RTS International. ■

KEY TAKEAWAYS

Strategy

- Infor Nexus' digital platform automates trade between buyer, suppliers and RTS International to enable approvals and settlements.

Execution

- Infor Nexus global services helps ensure suppliers are swiftly onboarded.
- Infor Nexus leverages data to help suppliers auto-create fulfillment to drive compliance and mitigate discrepancies.

Cash

- RTS International is financing \$+1 billion in global trade annually through Infor Nexus supply chain platform.

STC Solutions partners with Trend Micro to deliver transformative security



(Left to right) Jehad ALTwaiki, Vice President for Business Solutions, Saudi Telecom Company Solutions; and Muayad Simbawa, Director for Enterprise Business, Trend Micro.

Under the MoU, Saudi Telecom Company Solutions will now work with Trend Micro as the latter's Managed Services Provider Partner in Saudi Arabia, Bahrain and Kuwait. The agreement will allow Saudi Telecom Company Solutions to utilise the security vendor's products as part of their cloud offering.

This will also enable Saudi Telecom Company Solutions to provide its customers with relevant Trend Micro products and the

accompanying services that come with each of these products. Services such as implementation and first level support will also be carried out through Saudi Telecom Company Solutions.

The agreement will see Saudi Telecom Company Solutions strengthening its position amongst the region's leading organisations enabling digital transformation in support of government and private sector goals. Furthermore, Saudi

Telecom Company Solutions will gain access to Trend Micro's customer base and be able to offer them their specialised services.

Trend Micro is keen to gain access to Saudi Telecom Company Solutions customers, amongst them government ministries and strategic companies. This cooperation will also boost the company's local capabilities to offer Managed Services Provider as part of license acquisitions.

"Our strength is in the huge collective experience and knowledge gained in providing integrated communications services across our market base. By collaborating with a global cybersecurity leader like Trend Micro, our customers are assured of next-generation ICT security and pioneering digital defense solutions. Equally important is that Saudi Telecom Company Solutions gains insight from a wider and deeper pool of experts, therefore allowing us in the organisation to expand further the expertise we have developed through the years," commented Fahad AlJutaily, Vice President, Cybersecurity Services at Saudi Telecom Company Solutions.

"Saudi Telecom Company Solutions is offering a state-of-the-art cloud services, and by having Trend Micro as part of this offering, we are even more confident of achieving top-level customer satisfaction, which in the end will translate to a successful realisation of a true cloud secured service offering."

"The region's shift towards digital transformation is an important step towards a transformative, sustainable growth," said Dr Moataz bin Ali, Vice President for Trend Micro Middle East and North Africa. "We are delighted to work with Saudi Telecom Company Solutions, to bring significant value for Saudi Arabia, Bahrain and Kuwait society and help both the public and private sectors increase their resilience against cyber-attacks and keep a wider security conversation going." ■

KEY TAKEAWAYS

Strategy

- Trend Micro is keen to gain access to STC Solutions customers.
- This will boost the capabilities to offer Managed Services as part of license acquisitions.
- STC Solutions will strengthen its position enabling digital transformation in support of goals.
- STC Solutions will gain access to Trend Micro's customer base and be able to offer them specialised services.

Egypt's steel manufacturer Al Ezz Dekheila adopts Siemens cloud analytics



In a step towards digitalising the future of Egyptian industry, Siemens announced it has signed a contract with Al Ezz Dekheila Steel Company, Alexandria to deploy the company's digital industrial solutions across EZDK's diverse steel production assets. Under the agreement, Siemens will provide EZDK with Siemens' Drive Train Analytics system along with medium voltage motors, marking the first deployment of Drive Train Analytics in the Middle East.

To maintain its leading competitive position as one of the largest steel producers in the Middle East region, EZDK is working to leverage the opportunities offered by digitalisation and innovations in data analytics and automation, to strengthen the company's position and pave the way for developing new technologies and products.

The amount of data available for metal production has increased exponentially in recent years. Today, steel manufacturers strive to

reduce operating risk and improve reliability at the lowest sustainable cost, by predicting and preventing asset failures

Siemens Drive Train Analytics is a comprehensive solution that helps solve these challenges by providing condition monitoring, predictive maintenance, root cause analysis and inspection. The data-driven solutions also facilitate the

development of asset strategies that maximise reliability and availability, minimise risk and cost and dramatically reduce unplanned downtime by predicting equipment issues before they occur.

As a cloud-based solution, Drive Train Analytics uses continuously improving algorithms designed to help equipment operators have full transparency of their assets to increase reliability and availability, minimise costs and reduce operational risk, as well as decrease spending on unnecessary and unplanned maintenance.

In addition, Drive Train Analytics is designed to be connected to Siemens' cloud-based, open operating system for the Internet of Things IoT, MindSphere. MindSphere connects physical products, plants, systems and machines to the digital world, harnessing the wealth of data generated by the IoT with advanced analytics.

Sayed Ibrahim, Direct Reduction Division Director of EZDK, said: "Egypt is looking into the deployment of new technology and digitalising the industrial landscape in the country. We are committed to the development of the Egyptian metal sector, as a major pillar of the Egyptian economy. Our contract with Siemens is an important step and we look forward to working together to develop and utilise the latest digital solutions for our industry."

"As the Middle East continues to develop a strengthened industrial sector, digitalisation is the differentiator which will ensure competitiveness in a global marketplace," said Uwe Troeger, Senior Executive Vice President of Digital Factory and Industries and Drives Divisions, Siemens. "Digitalised industry can innovate faster, produce more for less and at a higher quality." ■

KEY TAKEAWAYS

Strategy

- EZDK is working to leverage the opportunities offered by digitalisation in data analytics and automation.
- The amount of data available for metal production has increased exponentially in recent years.



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MERCEDES-AMG PETRONAS MOTORSPORT

IOT, ANALYTICS, SIMULATION, CREATING WINNING TEAMS

Pure Storage data platforms are helping the Formula 1 racing team of Mercedes-AMG Petronas Motorsport to simulate, transfer, and react faster and better trackside.



BY: ARUN SHANKAR

The FIA Formula 1 World Championship is like nothing else in the sporting world. It is a demanding technical and human challenge, with high-performance management and teamwork. During the course of its calendar, which spans 21 countries from March to November, racing teams compete to be crowned world champions. At Mercedes-AMG Petronas Motorsport, a team of nearly 1,500 people work across two technology campuses, designing and

manufacturing the racing cars and hybrid power units.

Mercedes-AMG Petronas Motorsport is the Formula One Team of Mercedes-Benz, competing at the Formula 1 Championship. It is now one of the most successful teams in recent F1 history. Team members, both trackside and at the factory, have access to critical data used to continuously improve race car performance.

“The Mercedes-AMG Petronas Motorsport team races two cars a year and the unique conditions of each Grand Prix circuit requires that the cars be modified for each race. Some companies have a new-product cycle of two or three years. For us, we put a new product out on the track every two weeks, elaborates Matt Harris, Head of IT, Mercedes-AMG Petronas Motorsport.

Harris has overall responsibility for running IT across the business of Formula 1 racing for the Mercedes-AMG Petronas Motorsport team. “Typically, it may just be a three-person team, with two on the track and one at the factory, working the same hours,” he points out. “Those three are running the race weekend for us. My responsibility is to make sure we have the resources, people, process, technology.”

The team demands peak performance from every member to continue its record-setting ways. Some of the ongoing challenges include finding new means to efficiently collect, manage and share ever-increasing amounts of data used to improve racecar design and performance. Multi-disciplinary design and engineering requirements stress the team’s IT infrastructure in pursuit of incremental improvements to race car performance. The 21-country championship demands an IT infrastructure that is portable, robust, and yet able to deliver top-notch compute performance.

Technology is an important contributor to maintaining the record-setting pace, and its impact is felt in all operations – from design

and prototyping, manufacturing and testing, all the way to trackside during a Formula 1 race. The team has invested in computer-aided design and manufacturing, visualisation, and driver-in-the-loop simulation at its headquarters in Brackley, UK.

Everyone on the team has a singular focus: improving the performance of the two cars they put on the track every two weeks during the F1 season. Incremental improvement is the goal. Shaving even a fraction of a second off the time it takes a car to complete a lap can mean the difference between winning and losing.

According to Harris, two Mercedes-AMG Petronas Motorsport Formula 1 cars, generate 0.5TB during the race weekend, for around 8 hours. While the drivers may be in conversation with their pit stop team members, Harris stresses that every decision that is made on the track is based on data.

“Whatever they tell us, we have to make sure we find it actually within the data telemetry we have from the car. To make sure what they have said we have understood. Then we take a decision to make a change to the car, reengineer the car, get more information. That is an iterative learning experience at the track.”

Technology vendors, Pure Storage and TIBCO, are the official team partners of Mercedes-AMG Petronas Motorsport. Working with TIBCO, Mercedes-AMG Petronas Motorsport has built a platform with TIBCO Spotfire and TIBCO StreamBase software, which offers an insight-driven presentation of the competition at all stages of the car’s lifecycle – design, set-up, during a race.

From this, the team can gain insights from TIBCO’s enhanced visualisations and can collaborate with TIBCO data scientists on advanced analytics, helping the team to make decisions required to beat competition. Other vendor applications in use by Mercedes-AMG Petronas Motorsport, across



MATT HARRIS,
Head of IT, Mercedes-
AMG Petronas Motorsport.

the Formula 1 championship are SAP for business intelligence; SQL Server and Oracle databases; Virtualisation with VMware vSphere; SharePoint for content management; CATIA for CAD.

Harris points out that Mercedes-AMG Petronas Motorsport has started using machine learning available from TIBCO as part of its race strategy. The solution now uses intelligent learning to suggest to engineers when is the best time to overtake, and recharge for energy.

STORAGE CREATES BREAKTHROUGH

For every business, its data is the most critical asset. Efficient storage and analysis of data, leads directly to competitive advantage in practically every industry in the world.

Mercedes-AMG Petronas Motorsport adopted Pure Storage FlashArray and Pure Storage FlashBlade technologies to manage the data requirements during the championship.

The 70TB FlashArray sits trackside, collecting data from 250+ sensors on the two cars as they whiz around the track. Meanwhile the massive 1.2PB FlashBlade sits at the research facility to assist with the design of future cars.

To push the performance envelope of its IT infrastructure, the team chose all-flash arrays from Pure Storage which have delivered speed, reliability, availability, and

significant savings in operating costs. Since buying its first Flash-Array from Pure Storage in 2015, the team has ported almost all of its technology portfolio over to Pure Storage assets, including Microsoft SQL Server, Oracle databases, CATIA CAD-CAM, SAP, VMware servers, SharePoint and collaboration tools. The ability to run so many different applications on one storage system is a big benefit.

Says Harris, "Now we have all of our applications on Pure Storage and they all get the same high level of performance. We have eliminated complexity and we have eliminated possible points of failure. We now have a single storage infrastructure shared across all platforms, with resiliency-built in."

"We supply the data going into all those sort of things," says Alex McMullan, International CTO, Pure Storage. "We are seeing more and more data-driven decisions become part of the day to day for racing teams." He points out that the drivers and the teams love to see the charts and benchmarks being generated. The drivers can see clearly where they were slower or faster than their team mates, which gives them a better way of racing.

The adoption of Pure Storage solutions has helped the Mercedes-AMG Petronas Motorsport realise that more numbers and more data make the team better – exemplified by the Mercedes-AMG Petronas Motorsport byline – Driven by Data. "Data is the most important thing in terms of the car creation and the racing strategy," adds McMullan.

"Since all track decisions are made on the basis of data, access to it has to be fast and reliable," stresses Harris. Between 1 to 60 people may be accessing and viewing data trackside and between 1 to 800 people may be accessing and viewing data at the factory. "So, we need to have no contention or no lack of performance

TECHNOLOGY IS AN IMPORTANT CONTRIBUTOR TO MAINTAINING THE RECORD-SETTING PACE, AND ITS IMPACT IS FELT IN ALL OPERATIONS.



ALEX MCMULLAN,
International CTO,
Pure Storage.

USING TIBCO
THE TEAM
CAN CREATE
A NUMBER OF
SIMULATIONS
RANGING
FROM HOW
COMPETITION
WILL BE
PERFORMING,
TO MORE
OPERATIONAL
MEASURES.

around access to that data,” he says.

PERFORMANCE OF APPLICATIONS

The impact of Pure Storage solutions has also been felt in the collection of data from the cars during a race. Each car is fitted with more than 250+ physical sensors. The data gathered during a race is carefully scrutinised by team members across multiple design functions to generate possible insights that could help improve performance, both for the next race and over the long term.

“Everybody is talking about the Internet of Things today. But we have been doing Internet of Things for the last 20 years, through trackside collection of data,” points out Harris.

Mercedes-AMG Petronas Motorsport cars, have sensors fitted all over the chassis to measure airflow and temperature variables as the cars race around the track. The data generated from these sensors is fed into a black box fitted and standardized in all Formula 1 racing cars. As the cars race around the track, the data from the sensors, as well as additional audio, video, image data is transmitted by the box in each car to an array of radio aerials distributed around the track.

“All of the teams use a standard data collection mechanism, that goes in everybody’s car, does not matter which team you are, and that is what transmits the data,” says McMullan. The data received from the track side radio aerials is consolidated centrally and each team gets a network port in their garage, which receives the data feed from the black box. Inside each garage, the feed is integrated into an Advanced Telemetry Linked Acquisition System, ATLAS.

“From there they do their own thing with it but that is the source from each of the cars. That is an F1 regulation, they all have to use the same black box so no team gets an advantage,” he explains.

There is a huge amount of data generated between the factory and the track, which is processed all the time. It currently averages 20TB per day, up significantly from two years ago, when it was 9TB for the entire season. Amongst the most data-intensive applications used by Mercedes-AMG Petronas Motorsport is computational fluid dynamics CFD, an essential tool in the design and test process. It is used to simulate the performance of a part or a design element of the car under race conditions. CFD applications require massive processing power, and can take up to 20 hours to run.

Harris points out that the 3D slicing of data available in TIBCO allows accurate decision making, faster and easier. Using TIBCO, the Mercedes-AMG Petronas Motorsport team can create a number of simulations ranging from how competition will be performing, to more operational measures of the number of pitstops, engine degradation, fuel levels.

How the vehicle will perform before the first corner based on track temperature, conditions of tires, weather, fuel levels, starting configurations and so on. TIBCO can even provide algorithms over possible overtaking strategies. All ten teams have access to the same information and hence can create the same simulations for themselves.

“After the first corner, majority of those simulations would have been discounted. Everything is different from what the simulations were. There are many different variations that can change the performance of the car, not just necessarily from things within our control,” says Harris.

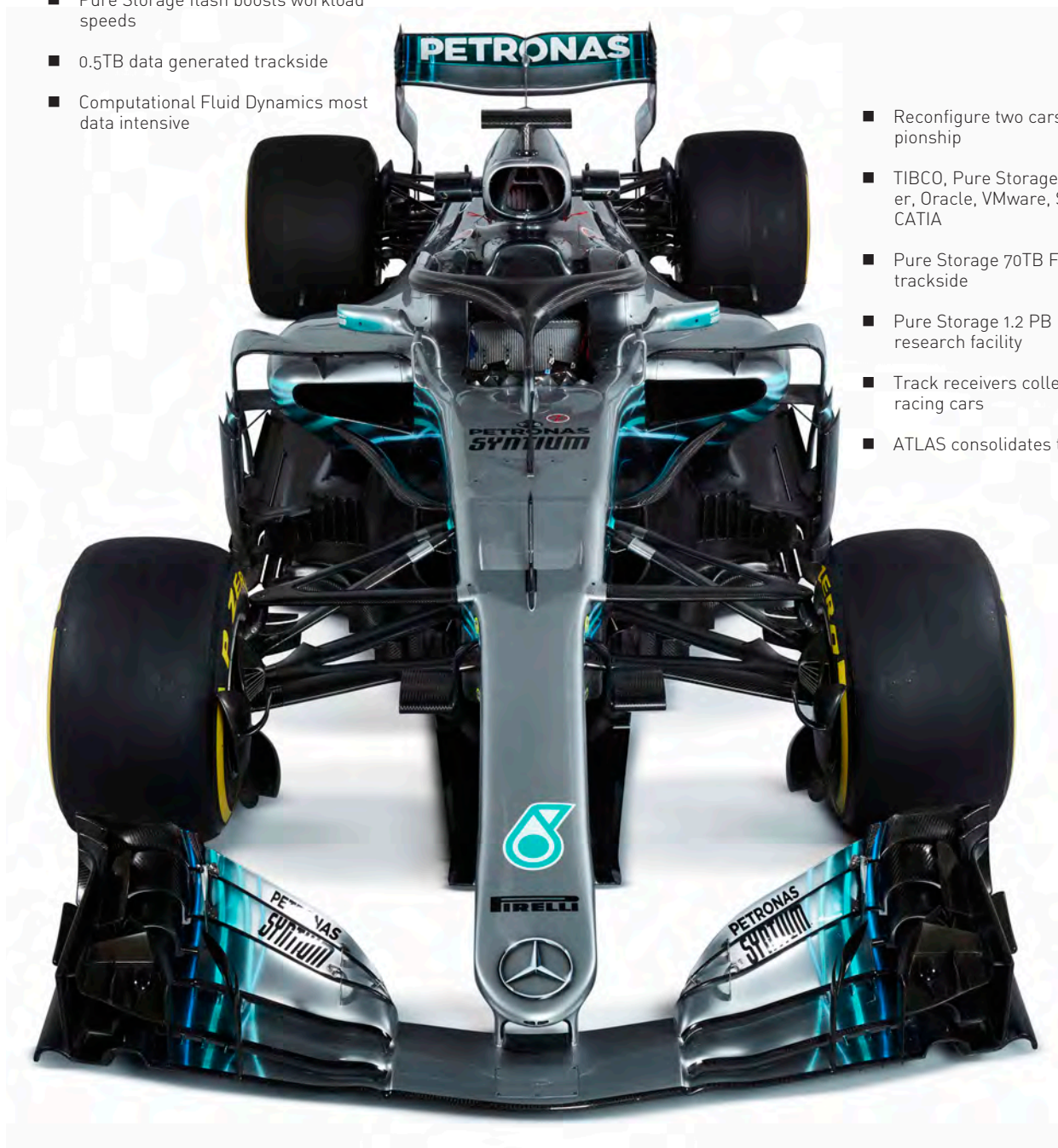
Initial testing has shown, moving these applications onto Pure Storage has reduced processing time by up to 15%. This means more jobs a week just by changing storage. The opportunity to run more design

MERCEDES-AMG PETRONAS MOTORSPORT

Innovation inside Formula 1 cars

- 3D slicing of data using TIBCO
- Simulation uses track-side variables
- Black box transmits data from car
- 250+ sensors fitted in racing car
- Pure Storage flash boosts workload speeds
- 0.5TB data generated trackside
- Computational Fluid Dynamics most data intensive

- Reconfigure two cars for every championship
- TIBCO, Pure Storage, SAP, SQL Server, Oracle, VMware, SharePoint, CATIA
- Pure Storage 70TB FlashArray sits trackside
- Pure Storage 1.2 PB FlashBlade sits research facility
- Track receivers collect data from racing cars
- ATLAS consolidates telemetry data



MERCEDES-AMG PETRONAS MOTORSPORT HAS STARTED USING MACHINE LEARNING AVAILABLE FROM TIBCO AS PART OF ITS RACE STRATEGY.

simulations in the same amount of time greatly enhances the ability to improve the car's performance.

The impact of Pure Storage on the team's operations extends beyond the 40,000sq ft campus where design and manufacturing operations are carried out. IT equipment must be shipped to each race. By moving to Flash-Arrays from Pure Storage, the size and weight of storage equipment needed at the track has been sharply decreased.

ROBUSTNESS AND RELIABILITY

The reliability of Pure Storage arrays is highly prized by the team, as IT equipment at the track must be able to accommodate a wide range of weather conditions. It must withstand multiple assembly and disassembly procedures during the course of the season. The small footprint of the Pure Storage arrays has meant a 68% reduction in datacenter rack space, resulting in a savings in operating costs.

Says McMullan, "We have arrays here which are part of the racing team and they travel with the team. They are in cardboard box, and they go in the airplane and the truck. They go from race to race to race. Pretty much all of Mercedes data now, here at the race track and at the factory, is stored on Pure Storage. We have different types of devices for different workloads."

For high-end computational and analytical applications, the workloads are handled by the Pure Storage, file and object

system, FlashBlade. For track-side workloads, the Pure Storage appliance being used is FlashArray, which is the block storage product. This manages all the traditional datacentre workloads, but is completely mobile and on a different continent, every weekend.

"It is challenging for the team, in terms of spare parts, support, understanding where the device will be, and when it will get switched off so we do not get alerts. These are all kinds of traditional complexities that normal CIOs do not have to deal with," comments McMullan.

Just how confident is the Mercedes-AMG Petronas Motorsport team with the Pure Storage Blade and Array appliances, that they pack and ship with them to every championship race?

Says Harris, "Mercedes is letting hundreds of people walk through their datacentres in front of half a billion people on TV, every weekend. That is pretty brave! They are demonstrating to the rest of the world that you can operate technology in a pretty hostile environment. At some of the other race tracks the power is not so stable, and there is lots of dust and humidity, it is a challenging operation. Now you can say to any enterprise if it works there it can work anywhere."

Is Pure Storage taking the learnings from the Formula 1 Championships and applying them to other, more market like uses cases? McMullan points out that the demands of the Formula 1 racing teams are similar to investment banking and the space industry. "We see a lot of common processes, common challenges and common software tools across those three. Simulation, is very strong in financial trading, space and in motor sport racing. We can bring those learnings to enterprises, with focus on data security, high-performance, quality, uptime." ■

KEY TAKEAWAYS

- While the drivers may be in conversation with their pit stop team members, Harris stresses that every decision that is made on the track is based on data.
- We have different types of devices for different workloads.
- Between 1 to 60 people may be accessing and viewing data track-side
- Between 1 to 800 people may be accessing and viewing data at the factory.

BUILDING A CROSS INDUSTRY BLOCKCHAIN OF PARTNERS

A blockchain community requires contributors from economies, industries, institutions with incentive model explains Apla's Muhammed Arafath.



MUHAMMED ARAFATH,
Executive Director at Apla

As the Executive Director of Apla, the job role of Muhammed Arafath is to shape business vision as well as develop smart technology strategy to achieve Apla's global business objectives. Arafath is focused on analysing opportunities,

anticipating trends and creating solutions that help clients overcome their main pain points and streamline their operations. One of the key business objectives is to expand market reach by growing key business partner accounts and technology partnerships to expand the scope of the platform.

Apla Blockchain is a protocol for governance and digital infrastructure. Apla's mission is to deliver the most secure and advanced blockchain protocol for customers, namely governments and businesses. Apla's go to market is to establish an extensive, seamless network of partners to build the next generation digital infrastructure protocol and deliver business cases that are transformative and enriching.

Apla is a blockchain infrastructure protocol, building the next generation digital infrastructure for governments, industries and the collaborative and sharing economy. The requirement is to build a truly enterprise-grade public blockchain network that is secure, standardised and regulated with access to the banking system.

Apla's core activities are building e-government blockchain application infrastructure, digitising assets, building

regulated public network with a decentralised exchange, building private blockchain network for industry consortia and private organisations, delivering stable coins and regulated tokens on our platform. Progression is fast paced in the blockchain industry; therefore, it is important to be innovative and future-focused.

To attain this, there needs to be a structure for collaboration, where contributors participate from economies, industries and institutions. To sustain this, there needs to be an incentive structure and an execution model that sees through delivery life-cycle. At the core of Apla blockchain is complete digital transformation, wherein a blockchain platform changes the dynamics of the current scale and norm of operations, interactions and transactions.

Digital and business transformation are two separate but interlinked streams. Digital transformation is a journey and encompasses using the best operational practices supported by using the best digital practices. Business transformation is objective oriented and very subjective to an organisation. An organisation needs to continuously evaluate both the disciplines to stay relevant.

In the present-day business

DIGITAL AND BUSINESS TRANSFORMATION ARE TWO SEPARATE BUT INTERLINKED STREAMS.

KEY TAKEAWAYS

- Digital transformation encompasses using the best operational practices supported by the best digital practices.
- Business transformation is objective oriented and very subjective to an organisation.
- Role of a business head is unique as they stand at the top of the pyramid and other members take cues from them.
- Technology heads need to keep the organisation's vision in mind while building the digital processes.
- In the present-day innovative technologies are deciding the fate of companies.

environment, innovative technologies are deciding the fate of companies, who cannot settle for just incremental improvements, they must periodically undergo performance transformations to be sustainable and profitable.

Business heads are tasked with ensuring the success of digital and business transformation initiatives. They need to communicate its significance, build a strong team of leaders, shape the desired change, and get personally involved. The transformation should be made meaningful for stakeholders in order for them to go extraordinary lengths and create a powerful story that will reinforce their commitment.

Business heads need to consider and share with others the answers to such questions as – why are we changing; how will we get there; and how does this relate to me. The transformation should be planned and targeted.

For a dream transformation project to be rolled out, the requirements are:

- leadership team that sets goals and directions
- Stakeholders are aligned, supportive and believe in the transformation initiative
- Collaboration and user adoption

Everyone has a role to play in a performance transformation.

The role of a business head is unique as they stand at the top of the pyramid and all the other members of the organisation take cues from them. One who gives only lip service to transformation will find everyone else doing the same. Those who fail to model the desired mind-sets and behaviour or who opt out of vital initiatives, risk seeing the transformation lose focus. And once the story is out, the uphill task becomes one of constant reinforcement.

Employees have so many things going on in the operations of their daily business that they do not always take the time to stop, think, and internalise. It is best to find three or four strategic concepts that sum up the right direction for the company and then to repeat them throughout the organisation.

Technology heads are responsible for any organisation's digital transformation. They should use the latest technologies and deliver IT innovations that will keep the entire business process agile. They should actively identify organisational challenges, innovate solutions and lead in getting ideas implemented. They should inspire the C-suite to join in the mission to motivate other employees to embrace it and create an internal digital culture.

Technology heads need to keep the organisation's vision in mind while building the digital processes, they should follow a standardised core set of technologies which can evolve around the business to accelerate digital transformation and keep the organisation, its employees, its partners and customers connected. They must also strive to understand how rapidly consumer behaviour and expectations change, in order for companies to flourish. ■

TRANSFORMING ORGANISATION EMPLOYEES INTO TALENT

Hierarchical decision making may no longer be possible in future with real-time data, making it essential to look at skills, says Murat Bicak at PMI.



MURAT BICAK,
Senior Vice President Strategy,
Project Management Institute.

Transformation of a business is no longer a one-off type of a situation. It does not start and stop; it is not a done and forget type of scenario. It has become a necessity for every organisation today. "Transformation has become essentially the state of every business. We are now in a transformative stage where we are in constant transformation. We have entered that stage" says Murat Bicak, Senior Vice President Strategy, Project Management Institute.

Another reflection of Bicak is the term artificial intelligence. He feels that the word – artificial, does not match the reality of the application and should be better replaced by the word – augmented. Human beings are using certain technologies to make themselves more intelligent, and it is used in a sense of assistance. It should be removed from any association of fear.

Technology is penetrating every industry. All changes to a business or an industry or an ecosystem of suppliers are being impacted as a continuous process of change. This is similar to a project that has a predictable path with milestones. Change evolves as it progresses similar to a project and reaches a definite state, usually with the release

of a new product or service, that has been transformed. However, since transformation today is in a mode of continuous change, the new product or service, moves back into a project phase to be transformed as we move forward in time.

Every change that the product or service goes through is a project of its own. "So, we see evolution of product manager that looks like project manager. Or a project manager becoming a product manager," says Bicak. "Every one of these changes that we are seeing around us is delivered through a project because projects deliver change. And it is not possible to expect that projects themselves will not be impacted by technology. So, technology is all over the projects right now."

As human beings we are comfortable with what we know. We are not comfortable with what we do not know. By default, we tend to live in the past and we are more comfortable working with the ways of working in the past. Since organisations are an aggregate of human beings, all with their own perceptions, organisations tend to follow the same pattern.

"A lot of organisations struggle with that and they protect their past," points out Bicak.

EVERY CHANGE THAT THE PRODUCT OR SERVICE GOES THROUGH IS A PROJECT OF ITS OWN.

“What they need to realise, is that while success has been brought by the past, how do we protect our future. That gives us transformation,” he reiterates.

Organisational change management becomes extremely critical, because now we have to be first convinced that change is a requirement and the whys of that need to be clear and owned. A key reason for the resistance to change is that the reasons for transformation need to be accepted and owned by the teams. If the individual teams are not part of the conversation, transformation and change will never be owned and accepted. The challenge starts once transformation is announced as part of someone else’s idea.

Since people and human beings are part of the change management, the focus needs to change from employees to talent. The process of transformation and change is happening so fast and distributed that a formal hierarchical decision-making process cannot be as it used to be. Projects and the process of change management, will get to the decision-making point, much faster than in the past.

Teams are being flooded by data and often decision making needs to be done in real time, since data is always changing. The difference between talent and employees is

that the first one is immersed in skills, whereas the second one is immersed in a job description. While job descriptions are already partly obsolete by the time they are issued, talent can be future proofed.

“So now we are talking about teams that are adaptable, teams that can make decisions, with the process sometimes taking a secondary stage,” points out Bicak. “This is not different for individuals in different organisations. Future proofing these teams with talent requires skills to be constantly upgraded and reskilled.”

However, Bicak points to a significant disconnect at this stage. While heads of business agree there is clarity on the nature of future skills training, and employees also are in agreement about the same skills training, very few have any specific programme to retrain employees over the next years. Hence there is a disconnect since future skills are not necessarily being taught in organisations. The question Bicak asks is, “As an employee, how am I going to get reskilled?”

Another way to future protect an organisation is by creating a vision statement similar to the transformational statements issued by GCC governments like UAE and Saudi Arabia. A vision statement sets a future goal for the organisation or the country, which may need the convergence of multiple technologies and multiple talent skills, probably not even available at the time of announcement.

At this stage, “You do not have to say how you are going to do it. The how is going to be figured out,” says Bicak. This put both the project and the leaders behind the vision statement in a strategic role. ■

KEY TAKEAWAYS

- Since people are part of the change management, the focus needs to change from employees to talent.
- Reasons for transformation need to be accepted and owned by the teams.
- Changes to a business are being impacted as a continuous process of change.
- This is similar to a project that has a predictable path with milestones.
- Change evolves as it progresses similar to a project and reaches a definite state.
- Every change that the product or service goes through is a project of its own.

WHAT IS DRIVING BUSINESS TRANSFORMATION ACROSS THE REGION

IDC's recent Directions 2019 briefing, explained how dynamics of the regional IT industry is being influenced by innovation accelerators, embedded within the third platform of technologies.

The mainframe era of computing, first built up more than six decades ago, transformed itself into the client server architecture of computing in the nineties. This was highly influenced by the Internet, operating systems, office productivity, business applications and compute processing innovations. Further, growth in

broad band connectivity, cloud computing, and mobile devices has created the third platform of technologies.

The third platform itself has been continuously evolving and has never remained static since it first appeared in the beginning of this decade. It has been developing various flavors and is being influenced

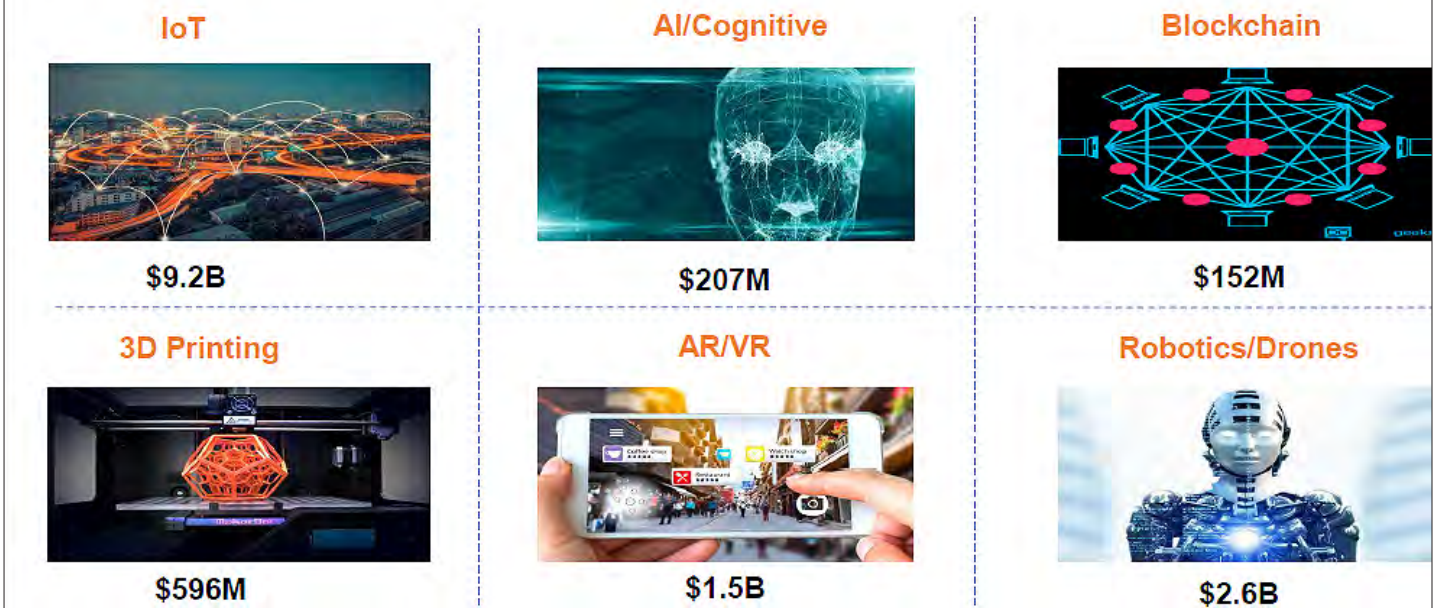
by the convergence of multiple technologies and innovation accelerators. The innovation accelerators are multiplying the pace of transformation based on the overlap of use cases and specific market segments. A look at some of the broad digital and business transformation trends across Middle East, Turkey, and Africa.



IDC's third platform of technologies, that are driving digital and business transformation, are moving from early experimentation, through multiplied innovation, into autonomous systems by 2022.

Courtesy IDC Directions 2019, presented in January 2019.

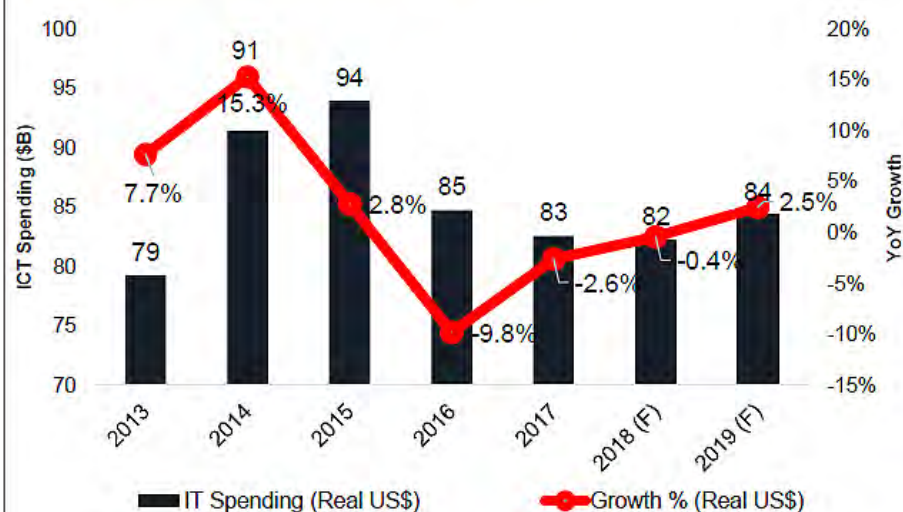
Innovation Accelerators (IA) Already Mainstream



There are six principal innovation accelerators driving the growth of digital and business transformation across Middle East, Turkey and Africa.

META IT Spending Outlook 2019

Modest but Transformative Growth



Innovation Accelerators (AI, IoT, Blockchain etc.) move to the center of the corporate agenda



Digital innovation becomes an enabler for business rationalization

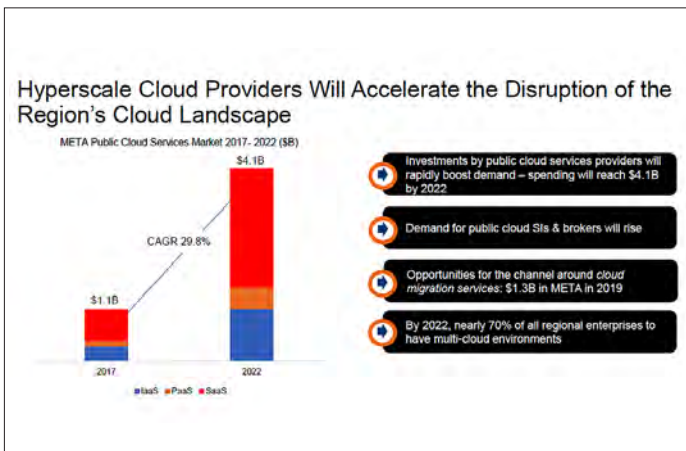


Capability to deliver digital solutions (cloud, platforms, data, security, skills) become DX differentiators

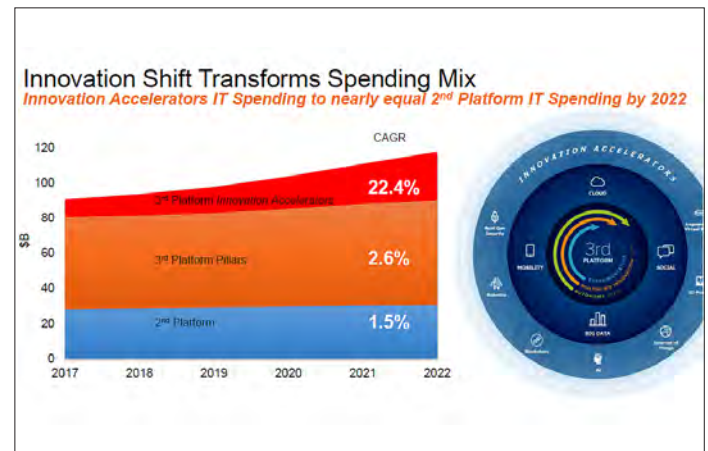
Growth in IT will be driven by increased spending to drive digital and business transformation initiatives across Middle East, Turkey and Africa.

Courtesy IDC Directions 2019, presented in January 2019.

MARKET OUTLOOK



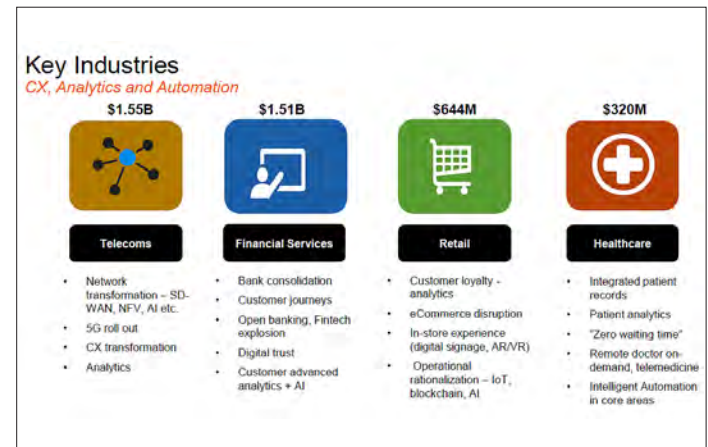
Spending on public cloud will increase in the period till 2022 at close to 30% CAGR, also driving the adoption of various forms of public cloud.



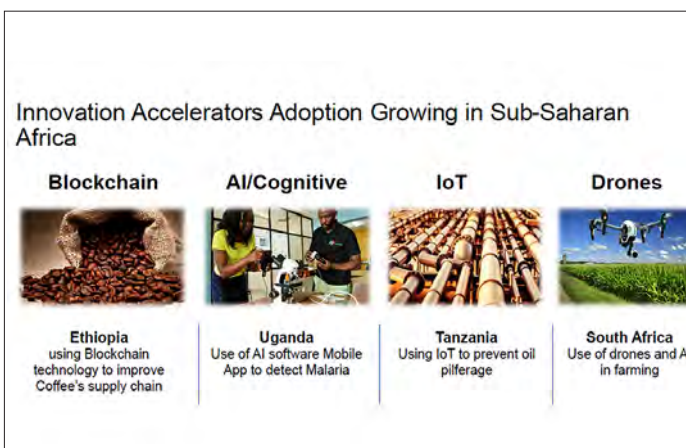
Spending on innovation accelerators will equal traditional IT spending by the year 2022, driven by the growth rate of +22%.



Sectors that are taking the lead in transformation include smart citizen services, government integration and automation, public safety and intelligent transportation.



Telecom, financial services, retail, and healthcare market segments are taking the lead in driving transformation of customer experience, analytics, and automation.



There is growing adoption of innovation accelerators across Sub-Saharan Africa including blockchain, artificial intelligence, IoT, drones.



Across Turkey, the early adopters of transformation include communications, financial services, public sector, manufacturing, retail and wholesale, market segments.

Courtesy IDC Directions 2019, presented in January 2019.

Gartner's Top 10 **Strategic** Technology Trends for 2019

Intelligent

#1



Autonomous Things

#4



Augmented Analytics

#7



AI-Driven Development

Digital

#2



Digital Twins

#5



Empowered Edge

#8



Immersive Technologies

Mesh

#3



Blockchain

#6



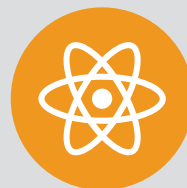
Smart Spaces

#9



Ethics & Privacy

#10



Quantum Computing

Join us at Gartner Symposium/ITxpo 2019 to learn about Gartner's technology trends, if they will work for you and how to implement them.

Gartner Symposium/ITxpo 2019

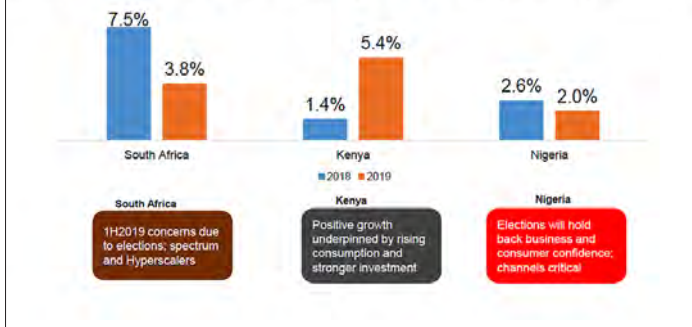
Dubai, UAE / 4 - 6 March

gartner.com/me/symposium / #GartnerSYM



MARKET OUTLOOK

Sub-Saharan Africa ICT Spending Outlook: Key Country Markets



Across Sub-Saharan Africa, Kenya is exhibiting increasing growth driven by investment and consumption.

CIO's 2018 Personal Agenda

In three years, what type of CIO will your CEO define you as?



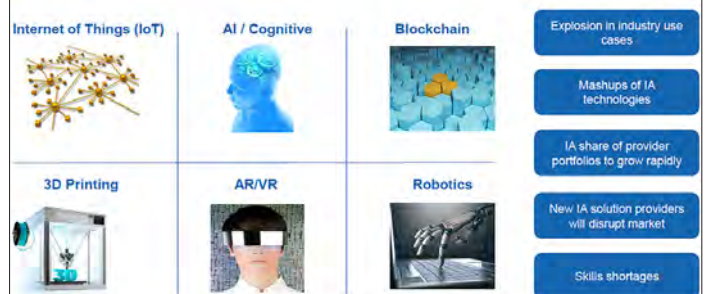
Majority of CIOs believe their CEOs will redefine their roles in three years to drive innovation, revenue and new products.

Developing into a Digital Transformation (DX) Partner for your Customers

Transformative area	Traditional Partner	3 rd Platform Partner	DX Partner
Technology	2 nd Platform	3 rd Platform	Innovation accelerators
Sales model	Project	Recurring revenue	Value based – Recurring revenue
Target customer	Broad- IT	Focused – Business & IT	By goal – Business & IT
Specialization	Horizontal	By industry or function	By use case
Solution development	Vendor solutions	Vendor enabled	Multi vendor, highly reusable
Lifecycle management	Limited	Customer satisfaction	Create advocates
Marketing	Traditional	Digital marketing	Referral digital marketing
Ecosystem	Independent	Partner to Partner	Multi vendor, Distributor, P2P

Transformation is also changing the roles of channel partners towards value, recurring revenues, reusability, use cases, multi-vendor type of offerings.

DX Expansion will Drive Innovation Accelerators Growth in META



Digital transformation is driving wide spread adoption of innovation accelerators in Middle East, Turkey and Africa.

Top Verticals and Use Cases for IoT in META (2022)



The top vertical markets adopting IoT across Middle East, Turkey and Africa are manufacturing, wholesale and retail, transportation, and government.

Courtesy IDC Directions 2019, presented in January 2019.

5G will be Transformative for IoT giving rise to Several New Use Cases



Launch of 5G connectivity will drive multiple smart use cases across Middle East, Turkey and Africa.



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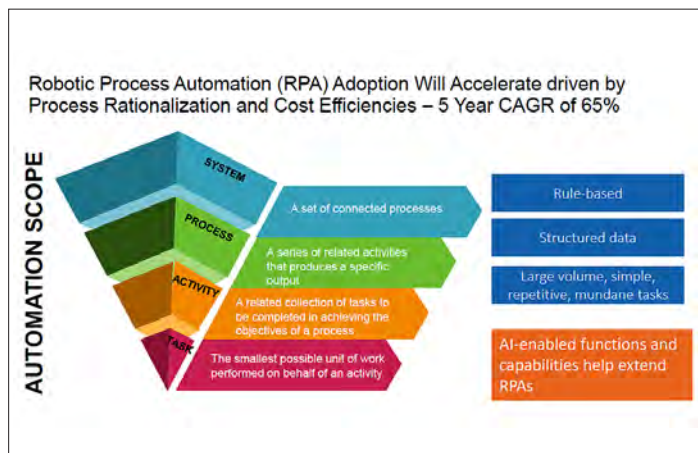
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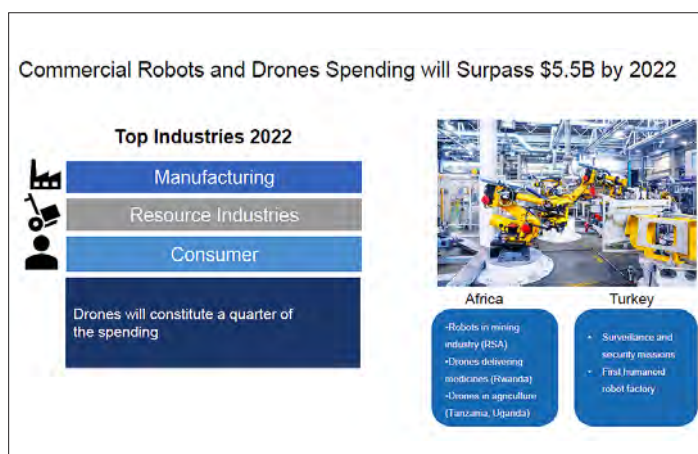
MARKET OUTLOOK



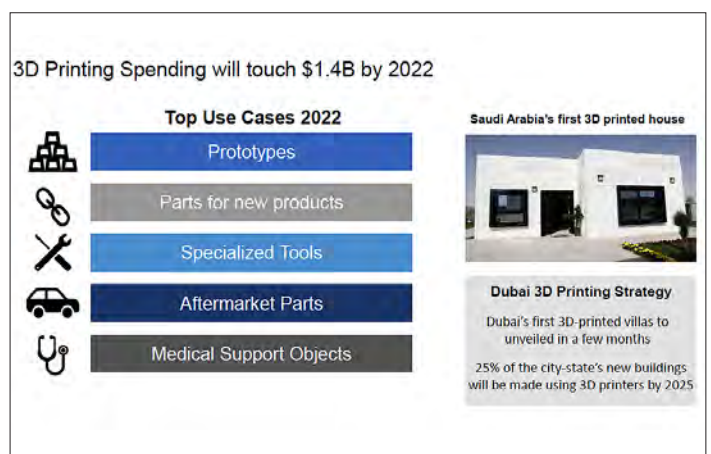
Back office automation of manual key stroke operations will see fastest growth of 65% for next five years.



By 2022, key uses case for augmented reality will be industrial maintenance and training and retail, amongst others.



By 2022, the use of commercial robots and drones will be wide spread in Turkey and Africa.



By 2022, the key use cases for 3D printing will be prototypes, replacement spare parts, specialised tools, and medical objects.



VERITASTM

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Today, companies are digitally transforming at an ever-more-rapid pace. Keeping up requires absolute confidence in information and a solution that facilitates new ways to re-invent processes and engage customers. Companies need a reliable way to sort through these immense changes and mountains of data to reach clarity.

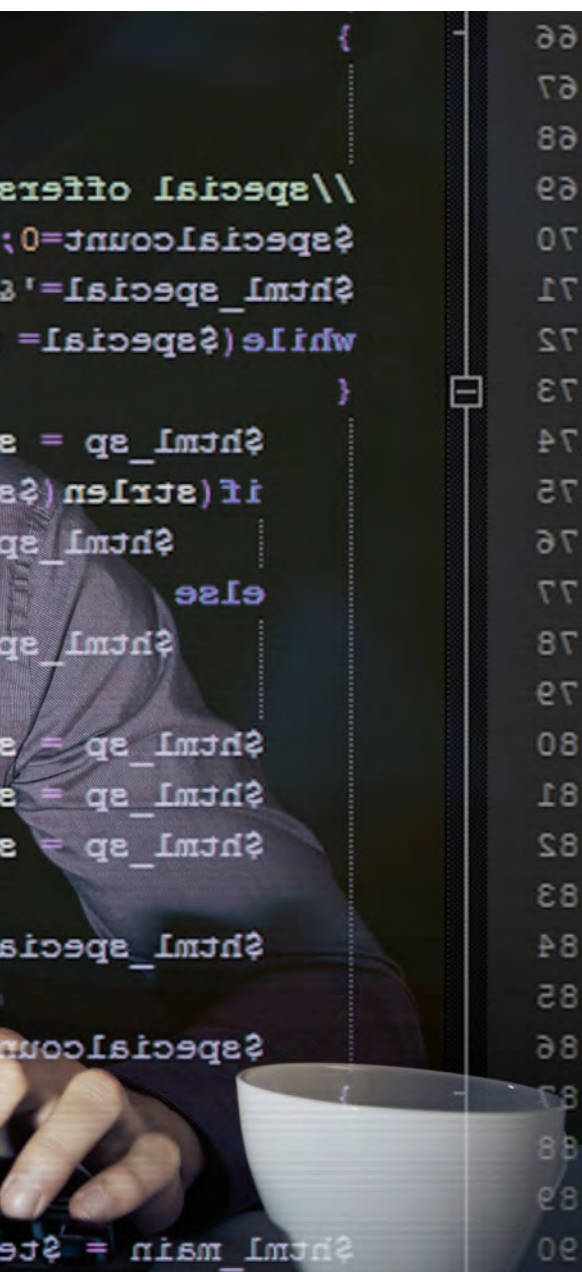
Reveal the truth in information.





MANAGING HUMAN BEHAVIOR KEY TO ROBOTIC SUCCESS

According to recent Forrester survey, the success of robotic automation requires engaged employees who are able to see benefits in their job role rather than breeding apprehension about employment.



When the first Industrial Revolution began, it automated the work that was performed by manual laborers, with an emphasis on labor. Today, automation is not only expanding in this blue-collar workforce, but the automation revolution is also taking hold in white-collar fields like, finance, legal, HR, and technology.

Robotic process automation is also being leveraged in specific functions at the departmental level. While robotic process automation is growing quickly,

organisations must take a broader view of automation efforts because technology applied in a vacuum will not drive meaningful or impactful change.

Instead, a holistic approach that addresses a wider context including people, process, and technology is necessary. This, crucially, begins by developing an iterative change management approach. Regardless of the scale of implementation, employees often fear disruption, job loss, and impact to their overall performance, which is why it is critical for organisations to be clear on the process and intent — even if there are no concrete answers — to ensure that changes happening on the floor makes sense to the workforce.

Succeeding in any digital transformation initiative requires engaged employees. With firms across geographies and industries now focused on harnessing robotic process automation, and capturing its well-documented benefits, businesses recognise the need to keep employees at the core of their change efforts.

Deploying robotic process automation is a multifaceted task that must not be taken lightly. Employee experience is a top priority, and the introduction of robotic process automation has been both a boon and, in some cases, a potential bane to the workforce.

SURVEY FINDINGS

In Forrester's survey, 66% said robotic process automation restructures existing work, enabling employees to have more human interactions, and 60% said robotic process automation helps employees focus on more meaningful, strategic tasks. However, poorly managed robotic process automation efforts will exacerbate existing fears in the workforce, spreading discontent and dissatisfaction, which will ultimately hit the bottom line.

With robotic process automation

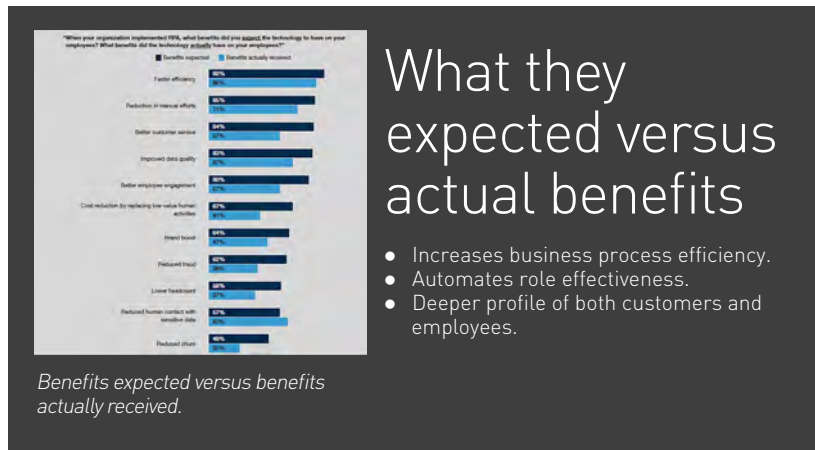
adoption accelerating, firms must take a broader view of automation efforts, keeping employees at the core as much as customers.

Operating model issues and psychological barriers hold back the potential of robotic process automation. Firms are struggling to scale their robotic process automation solutions due in part to the lack of trained personnel and resources to support and use robotic process automation technology.

Almost half 43% of firms said that they struggle to understand the different deployment options available to them. Additionally, leaders must overcome the psychological impact of robotic process automation on their workforce. Well-designed change management programmes, communication and collaboration, between the business and workers, are therefore crucial.

The benefits of robotic process automation reported by firms include increased efficiency 86%, deeper insights into customers 67%, improved customer service 57%, and improved employee engagement 57%. Keeping employees engaged and happy must go hand-in-hand with deploying robotic process automation to improve customer outcomes; firms must be employee-centric as well as customer-centric in their approach to truly capitalise on the advantages offered by robotic process automation.

Ensuring the success of digital transformation initiatives requires ensuring the success of one key success factor: engaged employees. Employees often struggle to perform effectively under the weight of mundane and repetitive work — organisations are not attuned to this workload and it shows. Employees are influenced by their consumer experiences and want similar experiences in their work and job



roles.

With the rise of automation tools, many fear a dystopian view that automation solutions, like robotic process automation, will replace jobs causing human workers to be of diminishing importance. While digital transformation efforts sometimes involve redundancies and power shifts, employees tend to overestimate the threat because essentially, automation targets repetitive parts of jobs that typically are not satisfying in any case.

Forrester conducted interviews with senior decision-makers and heard a consistent theme. Employee experience is a top priority, and the introduction of robotic process automation has been both a boon and a potential bane to the workforce. Robotic process automation has removed some of the menial, administrative tasks on employees who can instead focus on tasks where a human touch is essential, like having face-to-face meetings with a customer or onboarding new employees.

SUCCESS FACTORS

Millions of jobs involve managing assets like trains, tractors, and buildings, but sensor data, combined with machine learning, provides a

smarter alternative. The US Bureau of Labor Statistics shows 2.5% labor productivity gains since 2006, since then it has been growing at only 0.2%. Technologies will improve human effectiveness; they will be the key to increasing productivity. To achieve scale and keep pace, businesses will need to embrace technologies such as robotic process automation.

Organisations need to change their operating models to maximise value by not only exploring how robotic process automation affects their operating model, but also consider the psychological implications of implementing a solution of this nature. Why? Emotional resistance can kill a robotic automation initiative if employees feel at risk, or fear working side by side with robots.

Even though robotic process automation has proven to support a wide-spectrum of business applications and use cases, firms are facing numerous challenges. Due to the lack of trained personnel and resources to support and use robotic process automation technology, almost half 43% of firms said they struggle to understand the different deployment options available to them. In other words, firms are struggling to scale their robotic process automation

solutions.

Workers who are used to the certainty of which tasks they do on a day-to-day basis, in other words, menial tasks, will no longer need to focus on them as the focus will shift and new opportunities will be unlocked. These new tasks will inevitably be things that workers can do better than robots and machines.

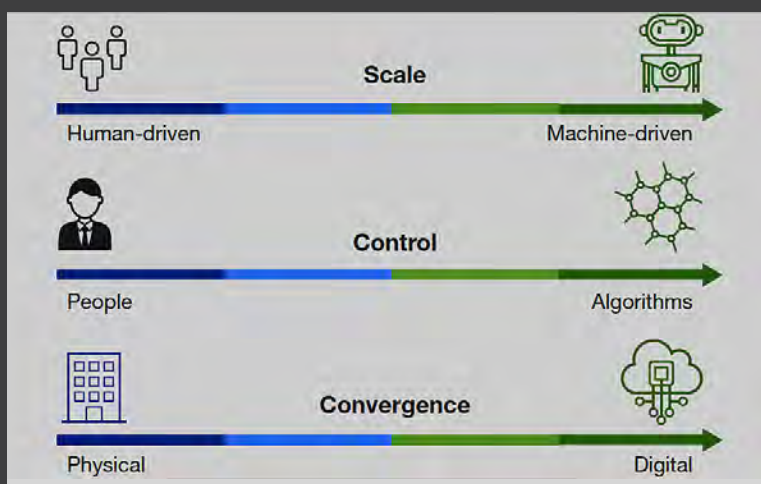
The Forrester report states that robot monitoring, data scientists, automation specialists, and content curators are just a few of the many new human role opportunities being created. Forrester forecasts 14.9 million new job roles will be created in the US alone by 2027.

Over the next few years, robotic process automation will continue to add more capabilities, and it will reduce manpower. And although it will replace jobs, if companies are willing, they will create strategic jobs for those jobs being replaced by robotic process automation.

In Forrester's survey, 82% emphasised change management as a challenge, especially when it comes to cultural issues. In other words, efforts to improve employee experience and tackling the change management aspects of automation will increase in importance. These efforts will have more impact if organisations focus on daily journeys rather than on the employee life cycle.

HAPPY WORKFORCE

Psychological research proves that people are happiest at work when they are most productive, and further, when they are happy, employees are more willing to try harder to win, serve, and retain customers. In order for leaders to maximise the positive psychological impact of robotic process automation, implementation, communication, and collaboration



Transformation of work and automation.

Key Recommendations

- Improve operational efficiency and employee experience at the same time.
- Create a center of excellence.
- Manage psychological implications from the beginning.
- Use a human-centric change management process.

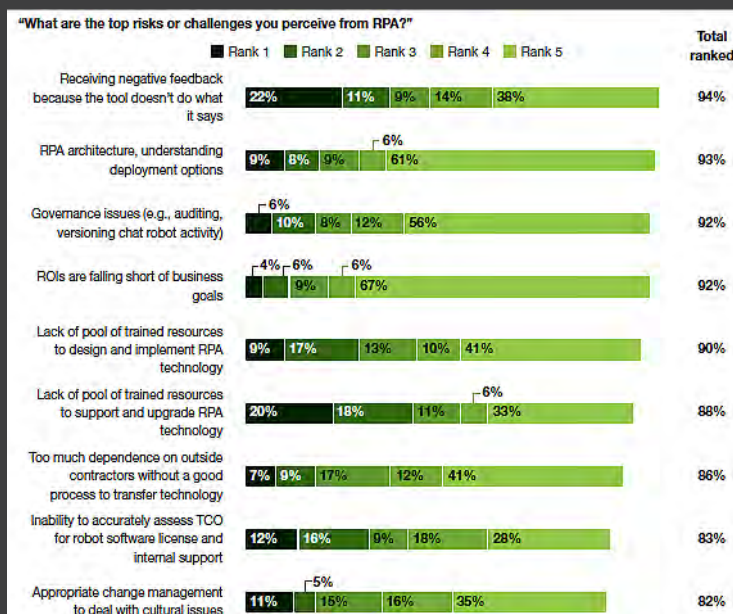
between the business and its workers is an absolute requirement.

While the fear of losing their jobs could become a reality for some workers, automation will also spur on the growth of many new jobs including some entirely new job categories. Yet, the largest transformation will be for those human workers that will be working side by side with robots.

Failing to effectively engage with your employees at both a developmental level and at a communications level will result in a disjointed robotic process automation initiative that is unable to meet the wider demands of digital transformation. Only by coordinating the robotic process automation programme effectively can organisations transform their workforce by enabling a better workforce experience.

The motivation of employees, the constructive ambition needed to operate new machines and be part of a new ecosystem, requires communication from both business and IT leaders. The benefits of robotic process automation include reducing manual errors, increasing efficiency, being able to augment human hours by operating 24x7, better employee engagement, and reduction of fraud, to name a few. Just like how the nail gun was a great automation tool for builders, it still requires humans to know where to place the nails.

And just like a nail gun is one of the many tools in the builder's toolbox, robotic process automation is similarly one of the many tools that organisations should enlist and implement in order to meet their digital transformation efforts. Organisations that have achieved scale in automation are those with a clear vision, strategy, and approach that includes both business and IT leaders. ■



Top risks and challenges.

About the survey

Forrester gathered data from a survey conducted in August 2018 with 100 decision-makers at manager level or above from operations groups, shared services, finance and accounting, HR, and other core business lines to evaluate the effectiveness of robotic process automation on employee engagement and experience. Forrester found that firms are increasingly concentrating on employee experience, as they tackle the changes being wrought by automation and robotic process automation, and operating model issues and psychological barriers that could hold back robotic process automation efforts. Ultimately, ensuring that employees are engaged and happy enables organisations to capitalise on the transformative potential of robotic process automation.

Excerpted from: The impact of RPA on employee experience by Forrester Consulting and UiPath.

HOW DIGITAL TECHNOLOGIES ARE TRANSFORMING LOGISTICS

IoT, AI, machine learning, blockchain, are converging to generate huge efficiencies in the global logistics industry, writes Atif Rafiq at Qafila.



ATIF RAFIQ,
Co-founder of Qafila

The digital revolution has brought change to industries of all kinds, and global logistics is no exception. With increased expectations from consumers for faster, more efficient management and transport of goods, logistics companies have turned to technology as a competitive differentiator and as

a way to exceed challenging service level goals.

Whether in the form of connectivity, predictive analytics, faster processing speeds or smarter hardware and equipment, virtually every link in the supply chain can digitally connect to the other links at each point in the process. Logistics organisations are realising with increasing urgency that they cannot afford to slow down for the delays created by siloed systems and teams.

There are several major technologies currently making an impact on the ability of logistics providers to achieve better business outcomes across the entire supply chain.

INTERNET OF THINGS

Internet of Things is the ability for devices or objects to share data and connect to the Internet. Anything from automobiles to refrigerators can be manufactured to have built-in connectivity and the ability to communicate with other devices to send, store and utilise data.

Logistics organisations all over the world are recognising an opportunity to use IoT to their advantage through intelligently connected supply networks and systems. IoT-enabled processes reduce the risk of accidents and inefficiency in tasks that pose a greater chance of human error. IoT also pairs connectivity

with machine learning to fuel faster, smarter processes and a fluid supply chain.

The result is lower operational costs and higher revenue. How? Through the implementation of repeatable, scalable processes that require very little human intervention and that can be further streamlined over time.

Instead of viewing digitisation as a competition of robots versus humans, modern logistics organisations are recognising the need to protect themselves against labor shortages and keeping up with the demand for increasingly rapid order fulfillment; while simultaneously attracting new talent with specialised skills.

BLOCKCHAIN

Blockchain is one of the newest technologies to hit the digitisation strategy. To define it in simple terms, blockchain is a distributed database containing blocks of information, which is transferred via a secure timestamp that cannot be altered. In other words, a blockchain allows a multitude of people or systems to enter data or records, which can only be updated or amended by an approved source. It is built to ensure the highest degree of accuracy and security possible.

For that reason, blockchain is an ideal technology for logistics

KEY TAKEAWAYS

- Without artificial intelligence, organisations rely heavily on historical data, which must be analysed and dissected.
- Artificial intelligence manages big data in quantities beyond the scope of human capability to identify efficiencies.
- Digitisation is empowering global logistics companies to view big data as an asset instead of just another complicated piece.
- It has never been easier for logistics teams to drive intelligent decisions with real-time data instead of historical information.
- In today's competitive logistics market, efficiency is a competitive weapon.
- Modern logistics organisations are recognising the need to protect themselves against labor shortages.

organisations who must adhere to rigorous certifications and standards. The traditional bottlenecks of third-party compliance checks are eliminated since all information is hosted in a public ledger, digitised, and protected from the risk of security breach or fraud.

As organisations adopt blockchain, they will naturally become more efficient, thanks to real-time tracking updates and the replacement of hardcopy documents with a smaller, more secure digital footprint that is far easier to manage.

ARTIFICIAL INTELLIGENCE, MACHINE LEARNING

Although machine learning and artificial intelligence are often used as interchangeable terms, they differ slightly. Artificial intelligence is the overarching idea of machines completing tasks or processes in an intelligent or human-like way. Machine learning is the concept of giving machines direct access to data and allowing them to create efficient processes and solutions on their own, through the use of data analytics and algorithms.

While the concept of artificial intelligence has been around for several years, it is only recently that organisations have begun to put it to practical use. As artificial intelligence becomes more accessible and affordable, logistics organisations are using it to harness big data, increase operational efficiency and lower cost.

As with technologies like IoT, artificial intelligence reduces the need for human touch in many day-to-day delivery and warehousing processes. By using predictive analytics, which gets smarter over time as more data is collected, artificial intelligence works in tandem with machine learning to mitigate risk and prevent the mismanagement of resources.

Many traditional logistics

organisations are not suffering from a lack of data. The opposite is true. They collect massive quantities of data at each point in the supply chain but are unsure how to put it to good use. Artificial intelligence and machine learning collect both structured and unstructured data, weigh it against trends and patterns in the organisation and anticipate business needs in time to make an impact.

Without artificial intelligence, organisations rely heavily on historical data, which must then be analysed and dissected. By the time a potential risk or problem is recognised, it is too late to change course. Artificial intelligence manages big data in quantities beyond the scope of human capability to identify efficiencies and solve problems before they can negatively impact operations.

DIGITISATION WILL CONTINUE

Digitisation is empowering global logistics companies to view big data as an asset instead of just another complicated piece of the business to manage. It has never been easier for logistics teams to drive intelligent decisions with real-time data instead of stale, historical information that may already be irrelevant before it is even analysed.

In today's competitive logistics market, efficiency is a competitive weapon. The supply chain operates in real-time and data analytics must follow suit. By employing new strategies to digitally connect all points of the supply chain and supercharge processes with intelligent data, digitised global logistics companies will continue to drive down costs and maximise efficiency. ■

CREATING A DIGITAL WORKPLACE: RECIPE FOR SUCCESS

BOOZ ALLEN HAMILTON'S 2019 MENA CYBER THREAT OUTLOOK REPORT IDENTIFIES TOP CYBER THREATS FACING PEOPLE AND ORGANIZATIONS



AI-GENERATED 'DEEPFAKES'

'Deepfake' is AI-generated video content that creates believable but fake videos that can be used to spread false and misleading information, thus discrediting or damaging the reputation of brands and organizations.



DISINFORMATION ON SOCIAL MEDIA

The widespread and growing popularity of social media applications in the region is creating a fertile environment for disinformation, which can be used to manipulate public opinion and damage the reputation of brands and companies.



IOT-GENERATED RISKS

As MENA countries construct "smart cities" with interconnected infrastructure, the growing Internet-of-Things (IoT) environment has created a rush to bring IoT devices to the market; any openings in IoT networks are increasing their vulnerability to cyber intrusions.



ECOMMERCE THREATS ON THE RISE

Dark web criminal activity is prevalent in the MENA region and a growing list of attacks demonstrate cybercriminals' sophistication and an interest in targeting and breaching organizations by exploiting insecure databases and poorly maintained payment management systems and data repositories.

**ADVERSARIES FORCE
DEFENDERS OUT OF THEIR
COMFORT ZONES AND CATCH
ORGANIZATIONS
FLAT-FOOTED, USING THE
UNEXPECTED TO THEIR
ADVANTAGE.**

**DEFENDERS NEED TO BE THE
SAME. ORGANIZATIONS CAN
USE FORWARD-FOCUSED
THINKING TO PREPARE FOR
UNCERTAINTY AND THINK
CREATIVELY ABOUT THEIR
SECURITY POSTURE.**

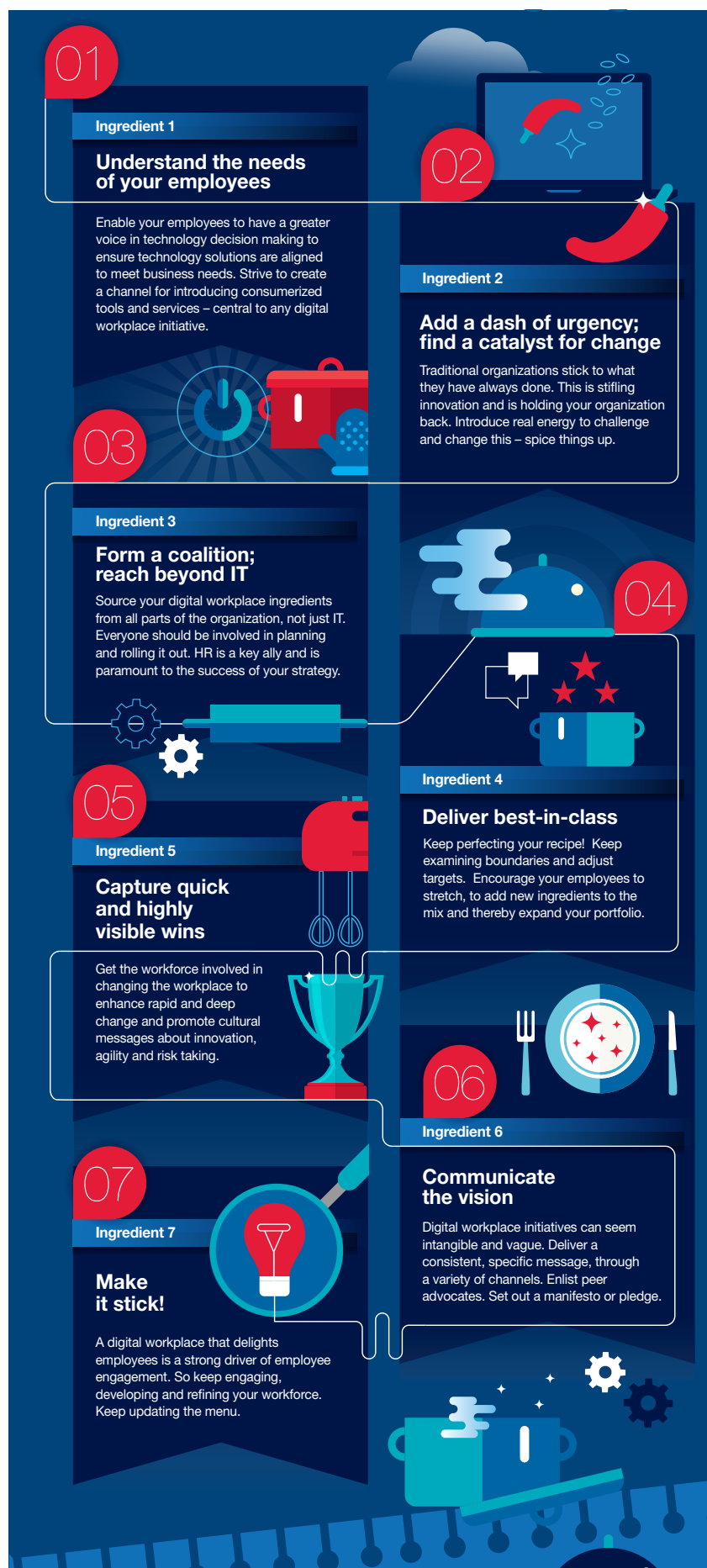


VULNERABLE CRITICAL INFRASTRUCTURE

Attacks against critical infrastructure entities can cause physical, social, and economic damage, and must be prevented. Organizations with poorly secured infrastructure and multi-level segmentation for information will be increasingly vulnerable in 2019.

Courtesy Gartner.

2019 MENA CYBER THREAT OUTLOOK REPORT



Courtesy Booz Allen Hamilton.

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