BUSINESS
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THE CHANGE TO FUTURISTIC BUSINESS

MARCH 2019

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Luzius Wirth
Executive Vice
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TRANSFORMING REGIONAL AIRPORT MOVEMENTS

Using machine learning algorithms and integrating data from weather, air traffic, ground operations, Swissport can predict resource constraints before an aircraft has left the ground.

Marco Antonio Urios, Majid Al Futtaim

Adel Hamed, Telecom Egypt

Sumit Aggarwal, Emirates NBD

Abdulla Qassem, Emirates NBD

MAJID AL FUTTAIM DIGITALLY REVAMPS CARREFOUR SHOPPING USING SAP

TELECOM EGYPT TO LEVERAGE NOKIA'S WING PLATFORM TO OFFER IOT SERVICES

EMIRATES NBD TRANSFORMS TRANSACTION BANKING USING IGTB

EMIRATES NBD TRANSFORMS TREASURY TO SINGLE VIEW

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MARCH 2019

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Dear Readers,

A long time ago, business was conducted between people and depended on acumen, relationships, trust and understanding, amongst other human attributes. Technology was always a behind the scene activity, with a number of humming boxes and a few dedicated techies running the show. As the cost of computing began to decrease and the number of compute boxes increased, a hard line began to be drawn across business processes.

Those that faced the customer were given more attention and called front office, and those that were supported by the techies and their humming boxes, were classified as back office. A takeaway here – both were created for the operational convenience of the parent organisation in mind, not the organisation's customer.

A recent series of executive roundtables by BT, Business Transformation, in partnership with global robotic process solution vendor UiPath, reveals a completely new flip to the dynamics of front office and back office processes. While robotic process automation, brings in significant efficiencies by automating repeatable processes that do not require human intervention, the process of automation does throw up the question of whether the processes being automated are really the best for business.

Global business process reengineering champions like Wipro, have vast years of global experience in process change management, and can help businesses to put the customer back in the centre of operations, simultaneously rebuilding processes around the customer. If processes are automated and the processes have been reengineered focusing on customer experience, that is really when an organisation begins to make long term and significant gains in value and moves rapidly forward on its road map of transformation. Watch these pages for more about RPA.

A research survey by global data management vendor, Veritas, covering UAE finds that silos in storage management are inhibiting the roll out of transformation initiatives. More than two-thirds of respondents in the UAE at 68%, said over one hour is lost daily due to data being difficult to locate, while 30% said the time lost is less than one hour. The opportunity loss is over $2.1 million due to challenges in day-to-day data management.

In a fascinating blog, ServiceNow's Paul Hardy, stresses that if any project objective does not have specific metrics and cannot be measured and tracked then it has no business being included in any transformation initiative. Continuing, Hardy names the focusing lens as SMART: specific, measurable, attainable, relevant, time-bound. Another great read is from VMware's Richard Munro, who champions the adoption of cloud as the basic and successful ingredient for transformation.

Read on to catch these and other stimulating writings!

Arun Shankar
arun@gecmediagroup.com

CLIENT EXPERIENCE AS IMPORTANT AS BOOKKEEPING

Accounting firms need to meet expectations of clients in today's dynamic world through a number of initiatives explains Jennifer Warawa at Sage.

JENNIFER WARAWA,
Executive Vice President of Partners, Accountants and Alliances, Sage.

As technology continues to disrupt industries and reshape conventional work methodologies, the world of accounting as we know it has evolved as well. Transformation is rampant and shifting client requirements today mandate accountants to provide an expanded range of services. As the profession takes on a whole new dimension, so too must accounting firms adopt new ways of working to ensure their businesses keep one step ahead of their competitors.

As part of this priority, accounting firms must renew their focus on building strong relationships through aligning their branding with that of their clients. Doing so requires a shift in the corporate culture and mindset across all levels of the business from the top-down.

According to research from Salesforce, the world's leading customer relationship management platform, 81% of clients believe the experience a company provides is as important as its products and services.

SKILL SETS

Accounting firms seeking to make themselves indispensable to their clients will need a wider range of skill sets. A good option is to hire outside of the traditional accountant skill set and bring on board creative thinkers, strong communicators, tech innovators and project managers. The more varied the workforce and versatile its skills, the better prepared the firm is to adapt to client needs.

CLIENT JOURNEY

With changing client attitudes, there are greater expectations today in terms of services and resources than was the case just five years ago, according to the Sage 2018 Practice of Now report. Rather than simply focusing on the bottom line, firms should focus on the importance of understanding the client's journey, building trust and communicating regularly.

PERSONALISE

Today's clients want to be able to choose how quickly they can access the knowledge their accountant holds and the different types of services they receive. Through tiered set of services, accounting firms enable clients to choose the ones they want, resulting in a personalised service and a positive experience.

SERVICES

Firms must focus on efficiency and modernise time consuming legacy processes that hold accountants back from doing their job, such as manual data entry. The thrust should be on the quality of the work and the value derived from it, rather than just the number of hours invested in each project.

Ultimately, accounting firms should endeavour to become an integral part of their clients' businesses to foster long-term and lasting relationships, essential partners in daily operations.

CHANGE

The secret to building and maintaining strong client relationships is to prepare for frequent change. Needless to say, client requirements shift constantly in today's dynamic environment, and that is okay. What accounting firms need to remember is to check in with employees and clients on a regular basis and redefine relationships as those needs evolve. ■

HOW TO ENSURE THAT AI PROJECTS DO NOT FAIL

Chirag Dekate at Gartner explains that AI projects tend to fail and provides five basic pointers to help ensure their success in an organisation.

CHIRAG DEKATE,
Senior Director Analyst,
Gartner.

If you have noticed an uptick in product recommendations based on your Amazon purchases, or GPS services that are increasingly accurate in displaying congested traffic areas, it is because artificial intelligence is everywhere. Adoption of artificial intelligence in organisations have tripled in the past year, and artificial intelligence is a top priority for CIOs.

Yet early artificial intelligence initiatives have a high probability of failure due to misalignment with business requirements and lack of agility.

Although the potential for success is enormous, delivering business impact from artificial intelligence initiatives takes much longer than anticipated. IT leaders should plan early and use agile techniques to increase relevance and success rates.

Gartner predicts five things that CIOs should consider in the rapid evolution of artificial intelligence tools and techniques, and how they will play out in their organisation.

INFRASTRUCTURE DECISIONS

The use of artificial intelligence across enterprises is ramping up quickly. In fact, through 2023, artificial intelligence will be one of the top workloads that drive infrastructure decisions. Accelerating artificial intelligence adoption requires specific infrastructure resources that can grow and evolve alongside technology. Artificial intelligence models will need to be periodically refined by the enterprise IT team to ensure high success rates.

MANAGE COMPLEXITY

One of the top technology challenges in leveraging artificial intelligence techniques like machine learning or deep neural networks in edge and IoT environments is the complexity of data and analytics. Traditional artificial intelligence use cases that do not involve customer expectations are successful because of the tight collaboration between the business and IT functions, so securing the help of internal engineering teams is a must.

SIMPLE TECHNIQUES

Classical machine learning techniques are extremely underrated. Once you sift through the artificial intelligence hype, you will realise that many organisations are pushing to apply deep learning techniques without even understanding how they apply to their current initiatives. As such, simplicity is key, and IT leaders should take the time to learn the spectrum of options to appropriately address their business problems.

SERVERLESS COMPUTING

Containers and serverless computing will enable machine learning models to serve as independent functions and, in turn, run more cost-effectively with low overhead. A serverless programming model is particularly appealing in public cloud environments because of its quick scalability, but IT leaders should identify existing machine learning projects that can benefit from these new computing capabilities.

ADOPT AUTOMATION

As the amount of data that organisations have to manage increases, so too will the abundance of false alarms and ineffective problem prioritisation. With the shortage of digital dexterity talent in I&O to effectively adopt artificial intelligence, automation is a key solution. By 2023, 40% of I&O teams will use artificial intelligence-augmented automation in large enterprises, resulting in higher IT productivity with greater agility and scalability. ■
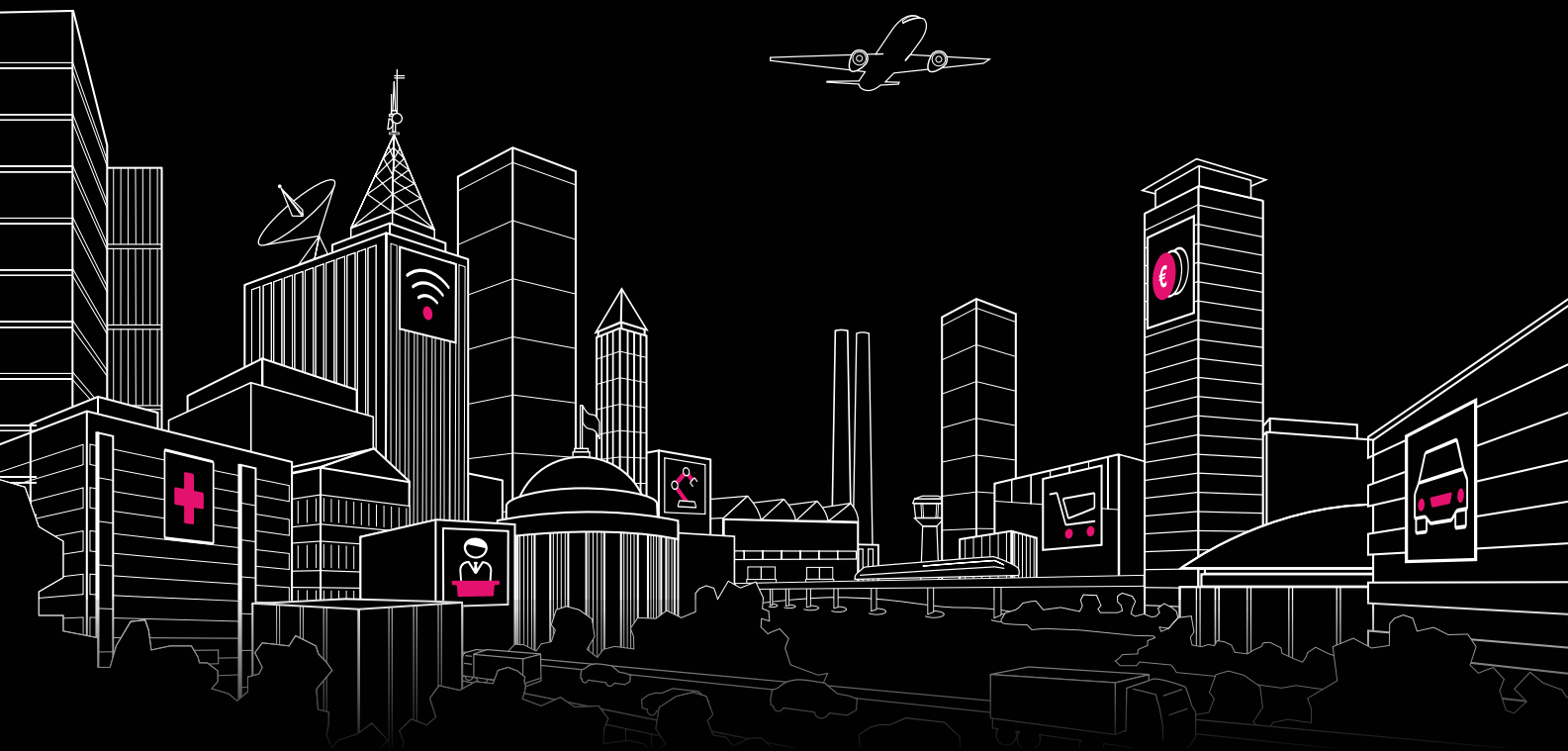
HOW VIRTUAL AND AUGMENTED REALITY WILL IMPACT BUSINESSES

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

PAVEL TATARINTSEV is Expert at NNTC.

Augmented reality and virtual reality technologies can become a big help in a variety of industries, even in those that seem to be far from 3D graphics use, like the banking sector. There are real-life case studies in the finance sector where companies have already been using 3D simulators to train employees in polite and empathic customer communications. You can hardly imagine technical design or idea approval without the use of visualisation tools.

Virtual reality mostly catches the attention of manufacturing enterprises that are undergoing digital transformation, primarily oil and gas giants and petrochemical businesses, that were the first to realise the value and benefits for production chain optimisation and personnel training.

Manufacturing companies employ virtual reality almost throughout the product lifecycle. Virtual reality streamlines the production personnel training in sophisticated technological processes and operations, with some enterprises already employing training projects powered by 3D graphics. As a rule, such training concerns situations or processes that are impossible or extremely expensive to simulate in real life. Virtual reality tools enable scenarios that call for collaboration and maximum immersion into the process.

GCC customers demonstrate stable demand for marketing virtual reality product, which is the easiest to deploy. Virtual reality and augmented reality apps are more actively used by marketing specialists for product and service promotion, for example, in retail and corporate sales. Here, virtual reality and augmented reality technologies allow salesmen to demonstrate the product, which is not available yet, as well as its advantages, and differentiate from competitors thanks to a brand-new customer experience.

Virtual reality and augmented reality tools have already proven their great efficiency when selling and marketing technically sophisticated products, including defense and industrial goods.

However, there are certain obstacles on augmented reality and virtual reality technologies' way to the B2B sector. One of the issues is that new technologies call for new advanced infrastructure, including wireless communication devices, graphical servers and other components of a technology ecosystem. This technically challenging digitalisation process is inevitable, but requires investments to be made.

The lack of virtual reality professionals is another obstacle here, with the collaboration between industry players being needed to foster specialists with brand-new qualifications.

We expect industrial virtual reality products to expand their presence in the Gulf countries step by step in line with Industry 4.0 adoption by manufacturing enterprises. Today, we witness high awareness of virtual reality and augmented reality potential among various businesses.

The GCC businesses are now considering not just local technology implementations, but also centralised deployment that will change legacy approaches and methodologies. Globally, all the above will result in a brand-new enterprise digital culture. ■

BUILDING METRICS FOR YOUR TRANSFORMATION ROLL OUT

Creating measurable business parametres for your digital transformation roll out is a critical success step, explains Paul Hardy at ServiceNow.

PAUL HARDY,
Chief Innovation Officer,
ServiceNow.

Global access to data is exploding. At the same time, our ability to categorise, classify and analyse this data is also expanding. As this new world of data unfolds, businesses are looking to create new data models and their supporting data analytics functions—to directly and positively impact growth, profit and expansion.

But let us go back to first principles for a moment. We know that artificial intelligence and machine learning when correctly applied, can improve the way organisations work and operate. But do organisations know where to start as they look to create these new data models

We and by we, I mean everybody basically needs to ask where to categorise and compartmentalise processes and functions to build new digital workflows. We need to examine which aspects of the business should be most directly exposed to artificial intelligence. We also need to know what is and is not possible in the short, medium and long term.

In other words, we need to get smart about being smarter if we are going to bring a new era of business forward. So, what does smart really mean in modern business terms I think it is time to look at artificial intelligence and digital workflows through the lens of SMART Specific, Measurable, Attainable, Relevant, Time-bound objectives.

SPECIFICITY

When we use the word specific and demand a greater level of product or service specificity, we mean it in the most granular sense possible. We cannot just say we need more paperclips, more salespeople, more office air conditioning or more field sales automobiles. We need to ask what kind of paperclip shape we need, what colour, what build strength and perhaps even what level of clippyness every clip needs to exhibit.

When you are thinking about delivering artificial intelligence and machine learning in the business you have to be really focused on what you are trying to achieve and I mean, you need to be able to tie down specific use cases for each and every paperclip.

MEASURABILITY

Getting smart with new digital workflows also requires measurability. If you cannot measure it and put it in your business plan and balance sheet a process, a service, a workflow element, anything at all then you need to step back and ask whether you should really be doing it.

The reality is that data is often captured and not ever used. It simply falls unmeasured, and unloved, into the data lake. The real cost of this is the noise that is created throughout the business because for one, wasted data goes

> IF AN AI INITIATIVE IS NOT ACHIEVABLE, THEN WHY HAS IT FORMED A PART OF YOUR CURRENT BUSINESS STRATEGY.

crashing into the lake and secondly, there is then the splashing that occurs afterwards when users do actually realise that they have to start diving into the lake to look for the data that they might actually need in order to make work experiences better.

ATTAINABILITY AND RELEVANCY

If an artificial intelligence initiative is not attainable or achievable, then why has it formed a part of your current business strategy in the first place. Nowadays we can forecast how far artificial intelligence will realistically be able to change any given business in real practical terms.

Similarly, if an artificial intelligence business initiative is not relevant to the business and not able to exist within the context of the organisation's current and immediate goals, then it forms no sensible part of any smart business plan.

TIMELINESS

Lastly, we come to timeliness. In the not so distant past, business cycles and the general approach to commercial objectives were typically annual. In this post-millennial age, firms are measuring themselves in much smaller strategic increments.

Key performance indicators and business targets used to change year-on-year. Today, they might be calibrated to change monthly, weekly or perhaps even on the basis of individual tickets activities

relating to individual jobs.

The goal for any business should be to get to the point where they can use smart digital workflows to drive greater productivity, greater quality of all services and greater experiences for all employees.

We know that an increasing proportion of organisations are already examining where they can bring artificial intelligence to bear and create new value in their business. We also know that many are already on that road and creating new applications and new experiences.

Factors that matter most now include service quality, cost reduction, speedy delivery and the need for geographical availability for all new products and services. These are all the defining trends that should be shaping the way we develop new digital workflows that leverage artificial intelligence and machine learning.

Smart is smarter if it is more productive and creates greater experiences for everybody inside and outside your organisation. It is where the smart money is, believe me. ■

KEY TAKEAWAYS

- Getting smart with new digital workflows also requires measurability.
- The reality is that data is often captured and not ever used.
- Goal for any business should be to get where they can use smart digital workflows to drive greater productivity.

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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.

DRIVING INNOVATION BY ALIGNING CLOUD AND BUSINESS

If business is driving innovation, it is imperative to include them in developing a cloud strategy writes Yasser Zeineldin at eHosting DataFort.

YASSER ZEINELDIN,
CEO eHosting DataFort.

The role of cloud as an IT and business tool is now more than a decade old. Globally, IT departments are migrating their business applications from on-premises to public cloud platforms at a continuous pace. Gartner, a global market research player, expects this rate to pick up as legacy systems reach their end of life support and migration projects get underway.

However, on the flip side, many enterprise CIOs have still to announce and formulate a well-defined cloud strategy for their internal IT and business end users. If well thought out and articulated, a cloud strategy can become a blueprint for the roll out of revamped and forward looking, digital processes, job roles and change in organisational structure.

Here is a checklist of pointers on how CIOs can build their cloud strategies:

LIST THE EXPECTED BUSINESS OUTCOMES

The starting point for any cloud strategy is to get a complete picture of the desired business outcomes over a short and medium term. At this stage it is important to focus on the benefits from the point of view of the business end users rather than IT end users. A successful cloud strategy sets up a culture of self-service across the organisation, adding in new business end users into the organisation's connected network, thereby fostering a culture of self-driven innovation.

IS YOUR CLOUD AND DIGITAL STRATEGY ALIGNED?

The biggest obstacle for a successful cloud strategy is to develop it without aligning with the digital innovation strategy of the organisation. The organisation's cloud platform enables the rest of the digital experience and digital work processes to be built upon it. Lack of alignment of the two strategies in terms of requirements of scalability, application workloads, reliability, geographic responsiveness will lead to the failure of the digital innovation strategy and lack of any business return from the cloud roll out strategy.

IS BUSINESS MORE AGILE THAN IT?

Who is driving innovation in the organisation? If it is the business that is moving faster than IT, then key business decision makers need to be involved during the formulation of the organisational cloud strategy.

A CLOUD STRATEGY THAT DOES NOT PLAN FOR BUSINESS FACING APPLICATION WORKLOADS WILL HAVE NO RETURNS FROM BUSINESS.

PRIME PURPOSE OF A CLOUD STRATEGY IS BUSINESS INNOVATION, AGILITY, IMPROVEMENT IN IT OPERATIONS AND COST.

By bringing business decision makers at an early stage into the development of the cloud strategy, it is more likely that the investments required for the cloud roll out can be justified against the investments required for the digital business innovation.

PLAN OUT YOUR CRITICAL AND SUPPORTING WORKLOADS

A cloud strategy is not meant to be an IT showcase of sorts. The prime purpose is business innovation, business agility, and significant improvement in IT operations and cost. A cloud strategy that does not include and plan for business facing application workloads will have no returns from business. It may be promptly shelved as yet another IT operational initiative that can wait for better times or forwarded to business pending further discussion on a rainy and dull day.

CLOUD IMPLEMENTATION IS NOT STRATEGY

A cloud strategy document that goes deep dive into the process of technology, platform, and supplier selection is going down the wrong side of the road. An implementation document cannot substitute for a strategic document that describes the business goals and the longer-term innovation benefits for the organisation. IT cannot follow a wild west approach, where all pending IT objectives and innovation goals are piggybacked onto the cloud roll out

project. This will lead to huge project and architecture overruns, associated with capital debt, and return on investment failures.

INTERNAL IT AND BUSINESS AUDIT

Like any IT project initiative, it is necessary to capture the states of the IT and business organisation before and after the start of the roll out. The internal audit should be able to determine answers to the following questions from various end users: what are the benefits you are seeking from cloud; why is the organisation implementing a cloud framework; what is the decision-making criteria for application workloads; what is the readiness of the application portfolio; as an IT and business end-user are you ready to use the cloud?

DO YOU NEED AN EXTERNAL SUPPLIER?

Lastly, the launch of a successful cloud strategy requires a trusted partner to ensure that the vision gets converted into reality. Cloud has various models of consumption and configuration and this is also driven by internal requirements and policies. Legacy data needs to be migrated and configured on whichever cloud platform is selected for implementation. Multiple cloud platforms may also need to be introduced into the organisation. Increasingly cloud brokers and managed service providers are playing an important role, at least in the early and middle stages of a cloud roll out.

By following some of these measures, CIOs may be able to formulate an effective cloud strategy. This will act as a bridge between IT and business and kick starts the organisation into digital innovation. ◾

KEY TAKEAWAYS

- Many enterprise CIOs have still to announce a well-defined cloud strategy for their internal IT and business end users.
- A cloud implementation document cannot substitute for a strategic document that describes business goals and innovation benefits.
- IT cannot follow a wild west approach, where pending IT objectives and innovation goals are piggybacked onto the cloud roll out project.
- A cloud strategy is not meant to be an IT showcase of sorts.

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CHALLENGING AMAZON.COM WITH A CUSTOMER SINGLE VIEW

Digital tools exists today for online retailers to challenge the customer experience provided by Amazon.com explains Sanjit Gill at Collinson.

SANJIT GILL, General Manager Middle East, Collinson.

The rise of digital-native retail brands offering highly competitively priced products with rapid home delivery services continues to increase pressure on the wider retail sector. Amazon, for example, with its low overheads and streamlined distribution service, has expanded into markets globally at the expense of many traditional bricks-and-mortar retailers. This has led to many labelling it the retail killer. The reality, however, is somewhat more nuanced.

But what consumers want, and arguably have always wanted, is the lowest price for their desired item. While not rocket science, it is only since global e-commerce gained serious momentum in the past five to ten years that it became cost-effective for retailers to service consumers in this way.

Owned by Amazon, Souq.com is the largest e-commerce platform in the Arab world. Its success is more a reflection of the changing retail industry, rather than the story of a successful anomaly brand.

Although Souq.com, as Amazon's arm into the Middle East region, continues to stay on top of the competition, year-on-year, prominent player noon.com begins to rise to a regional champion when it comes to digital e-commerce. A year ago, it launched its operations in Saudi Arabia and the UAE to delight shoppers with the best e-commerce has to offer. As a customer-focused, Arabic-first e-commerce platform, the past year has seen noon grow to become a household name for online shopping in the region.

What should be learned from all of these e-commerce players' success is that, to compete in today's retail environment, a brand's marketing and customer communication must be exemplary to persuade customers to shop with them and not with market leaders by default. Research commissioned with Censuswide found that over three quarters 78% of UAE consumers would be unhappy if retail brands, they were loyal to had poor communication around the latest promotions and discounts.

Only by offering the same, or an even better level of customer centricity as the frontrunners, can struggling or less well-established retailers win the affections of customers. Otherwise, why would they not shop with a competitor offering a better service? Ultimately, brands must have an understanding of how to treat their customers properly and this starts with data.

Still, 55% of UAE consumers said that they receive promotions and offers that are not relevant to them. Brands have a duty of service

> NOT USING AVAILABLE DATA EFFECTIVELY CAN LEAVE CUSTOMERS FEELING UNCHERISHED.

KEY TAKEAWAYS

- Validation of the Amazon blueprint of leveraging smart data at every available opportunity.
- Consumers shop through a mixture of in-store and online providing data at every touchpoint in their purchasing journey.
- If used effectively a single view can tell you who your customers are and what they want.
- Research found that 81% of UAE consumers feel frustrated when promotions are not aligned in-store and online.

to offer better, more personalised communication experiences with the customer data they accrue, otherwise they risk people opting out of consent and losing their initial attention, and perhaps in the long term, their loyalty.

Consumers shop through a mixture of in-store and online, providing data at every touchpoint in their browsing and purchasing journey. This data is there for retailers to respond to, providing it is collated into a single customer view. If used effectively, this single view can tell you who your customers are and what they want. If brands choose to ignore this data, however, they stand to lose out.

Our research found that 81% of UAE consumers feel frustrated when promotions are not aligned in-store and online. Not using available data effectively can leave customers feeling uncherished and as though their custom isn't a priority.

This is further validation of the Amazon blueprint of leveraging smart data at every available opportunity to give the best possible customer experience. Retailers that prioritise short-term sales that offer quick revenue boosts over a long-term customer-centric strategy will lose loyal customers who disengage with inconsistent marketing and communication from what was once a favoured brand.

The evolving world of loyalty means brands must continuously adapt and look for ways to meet their customers' needs. One particular aspect worth considering is a paid-for subscription programme,

which can support the loyalty and ancillary revenue objectives of an organisation. It has proven to be a successful tactic in both the retail and travel sectors and in fact, some of the earliest programmes within the travel space were based on customers paying a membership fee.

Amazon's Prime service demonstrates how it can work successfully for retail brands, having built benefits and rewards onto the initial delivery offering. With the idea of instant gratification at the core, Amazon is able to engage a range of consumers, helping to build a broader customer base.

In a similar vein, the subscription economy, which allows consumers to pay for items or services on a monthly basis, is becoming increasingly popular. Brands have the opportunity to leverage this to give customers a more personalised experience, which they can keep building on as they learn more about the individual.

The example set by Amazon has taught brands around the world the value of assessing what customers want, then establishing how to offer it better than the competition. In this highly personalised retail landscape, those brands that hope to rely on the strength of their product or word-of-mouth reviews will eventually fall by the wayside, as competitors actively entice new and existing customers. ◾

Complexity in digital transformation driving regional spending in security

Digital transformation, the primary buzzword in the Middle East region, is driving adoption of supporting technologies such as cognitive systems, virtual and augmented reality, robotics, and IoT. However, increasing complexity as well as larger than normal, complex and persistent threats, is driving spending in cyber security. IDC forecasts that spending on IT security in the Middle East, Turkey, and Africa is set to cross the $2.7 billion mark this year, growing 10.2% on 2018.

IDC attributes this growth to the fact that security incidents are becoming far more complex and persistent, with a new breed of stealthy attackers using vulnerabilities in systems and even the Internet of Things IoT to bring down services.

Globally, the challenges of privacy have grabbed the attention of Boards of Directors as regions look to implement privacy regulation and compliance standards similar to GDPR. Privacy is the new buzz word and the potential impact is very real. The result is that demand to comply with such standards will continue to buoy security spending for the

MEGHA KUMAR, Research Director for Software, IDC META.

foreseeable future. Banking will be the industry making the largest investment in security solutions, followed by discrete manufacturing and federal government.

Running alongside 3rd Platform solutions like cloud, mobile,

social, and big data analytics, these innovation–accelerating technologies are creating a complex ecosystem that is beset by new IT security challenges. In this new era, security must become more pervasive. Organisations can no longer settle for standard solutions; they must move forward by embracing a proactive approach to the issues of defense, protection, mitigation, compliance, trust, and risk.

Worldwide spending on security–related hardware, software, and services is forecast to reach $133.7 billion in 2022. Although spending growth is expected to gradually slow over the 2017–2022 forecast period, the market will still deliver a compound annual growth rate of 9.9%. As a result, security spending in 2022 will be 45% greater than the $92.1 billion forecast for 2018.

"Digital transformation is becoming increasingly mainstream across the region, with emerging technologies such as cognitive systems, virtual and augmented reality, robotics, and IoT gaining traction, says Megha Kumar, IDC's Research Director for Software in the META region. "In this new era, security must become more pervasive. Organisations can no longer settle for standard solutions; they must move forward by embracing a proactive approach to the issues of defense, protection, mitigation, compliance, trust, and risk."

Globally, the challenges of privacy have grabbed the attention of Boards of Directors as regions look to implement privacy regulation and compliance standards similar to

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KEY TAKEAWAYS

Strategy
- Security must become more pervasive.
- Innovation technologies are creating a complex ecosystem beset by security challenges.
- Organisations can no longer settle for standard solutions and must move forward by embracing a proactive approach.
- Challenges of privacy have grabbed the attention of global Boards of Directors as regions look to implement privacy regulation.

IDC Prediction

Complexity Will Drive Spending On Security In META To Cross $2.9B in 2019

Innovation technologies are creating a complex ecosystem beset by security challenges.

3rd platform and multiplied innovation will drive security complexity & growth

New Endpoints & Vulnerabilities

Insights Driven Security

Security Major AI Use Case

Organisations can no longer settle for standard solutions; they must move forward by embracing a proactive approach to the issues of defense, protection, mitigation, compliance, trust, and risk.

Demand for advanced managed security services will rise
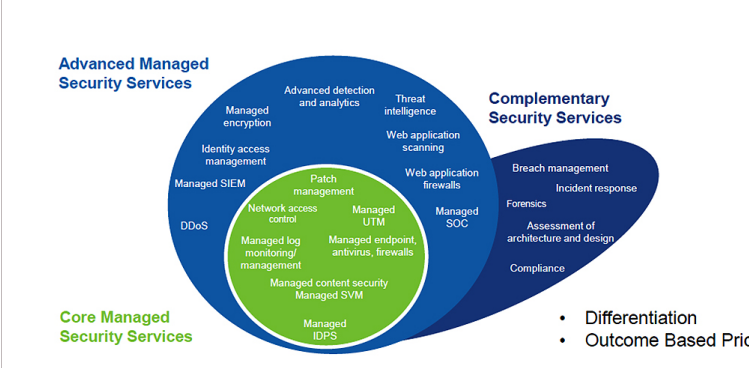
Security remains an investment priority in every industry as companies seek to protect themselves from large scale cyber-attacks and to meet expanding regulatory requirements.

GDPR. Privacy is the new buzz word and the potential impact is very real. The result is that demand to comply with such standards will continue to buoy security spending for the foreseeable future. Banking will be the industry making the largest investment in security solutions, followed by discrete manufacturing and federal government.

Security-related services will be both the largest, $40.2 billion in 2018, and the fastest growing, 11.9% CAGR category of worldwide security spending. Managed security services will be the largest segment within the services category, delivering nearly 50% of the category total in 2022. Integration services and consulting services will be responsible for most of the remainder. Security software is the second-largest category with spending expected to total $34.4 billion in 2018.

Security remains an investment priority in every industry as companies seek to protect themselves from large scale cyber-attacks and to meet expanding regulatory requirements. While security services are an important part of this investment strategy, companies are also investing in the infrastructure and applications needed to meet the challenges of a steadily evolving threat environment.

The United States will be largest geographic market for security solutions with total spending of $39.3 billion this year. The United Kingdom will be the second largest geographic market in 2018 at $6.1 billion followed by China $5.6 billion, Japan $5.1 billion, and Germany $4.6 billion. The leading industries for security spending in the US will be discrete manufacturing and the federal government.

In the UK, banking and discrete manufacturing will deliver the largest security spending while telecommunications and banking will be the leading industries in China. China will see the strongest spending growth with a five-year CAGR of 26.6%. Malaysia and Singapore will be the second and third fastest growing regions with CAGRs of 21.1% and 18.2%, respectively. ■

UiPath partners with ITIDA to boost robotic automation skills in Egypt

The collaboration introduces UiPath Academic Alliance programme to Egyptian ICT industry to bridge skills gap.

UiPath, an enterprise Robotic Process Automation software company, announced it has signed a Letter of Intent with Egypt's Information Technology Industry Development Agency to help build the country's national capabilities in RPA. His Excellency Dr Amr Talaat, Minister of Communications and Information Technology, witnessed the signing of the partnership between Maha Rashad, Acting CEO of ITIDA, and Karan Dixit, Vice President of Sales, UiPath Middle East and Africa.

The strategic collaboration introduces the UiPath Academic Alliance programme to the Egyptian ICT industry to help bridge the skills gap and build a skilled workforce in emerging and disruptive technologies. The programme will be supervised by an executive team appointed by UiPath and calibrated to meet the growing demands of the economy.

At launch, this collaborative project will include 20 trainees, gradually increasing to 80 or more as the programme advances, on a quarterly basis. Following the completion of this training, UiPath will provide the programme graduates with job placements with either local or international partners, based on the demand. In subsequent stages, the programme will be made accessible across the ICT industry in Egypt through workshops facilitated by ITIDA.

With an aim to promoting RPA as a critical STEM skill, the UiPath Academic Alliance programme empowers young students and experienced professionals to accelerate and thrive in the workplace of the future by accessing the company's unparalleled RPA knowledge ecosystem. The UiPath Academic Alliance represents UiPath's purpose to serve more than one million students and one thousand schools globally in the next three years.

The Information Technology Industry Development Agency is the executive arm of the Egyptian Ministry of Communications and Information Technology for spearheading the development of IT in Egypt.

UiPath is leading the Automation First era, championing one robot for every person, delivering free and open training and collaboration and enabling robots to learn new skills through AI and machine learning. Led by a commitment to bring digital era skills to more than a million people, the company's enterprise Robotic Process Automation platform has already automated millions of repetitive, mind-numbing tasks for business and government organisations all over the world, improving productivity, customer experience and employee job satisfaction.

UiPath is backed by over $400 million in funding from Accel, CapitalG, Credo Ventures, Earlybird's Digital East Fund, IVP, Kleiner Perkins, Madrona Venture Group, Meritech Capital, Seedcamp and Sequoia.

At the signing, Karan Dixit said: "This collaboration with ITIDA affirms our commitment to help the next generation workforce enable this change, and support the country as it moves closer to achieving their digital agenda. It is also reaffirming our great confidence in the wealth of skills and talent that is available in Egypt, to accelerate the Digital Transformation that companies globally are in the midst of." ∎

KEY TAKEAWAYS

Strategy
- UiPath is leading the Automation First era championing one robot for every person.
- Robotic Process Automation has automated millions of repetitive tasks for organisations.

People
- The collaboration introduces UiPath Academic Alliance programme to Egyptian ICT industry to bridge skills gap.

Dimension Data releases IT skills for transformation through managed services

Dimension Data, a global technology integrator and managed services provider for hybrid IT, announced launch of its next-generation global managed services to help clients simplify the management and operation of their technology. Dimension Data's Managed Services Platform now offers near real-time insight and reporting, managing over 9,000 IP networks and supporting over 13 million users across the globe.

Meeting increasing client demands, the platform liberates IT and operations teams to focus on more strategic, value-add tasks such as improving the customer experience, maximising cost efficiencies, and exploring emerging technologies.

Adapting to the elevated needs of the digital world has left IT teams relying on complex IT estates to meet rapidly shifting consumer demands. These often disparate, multi-vendor setups with public, private, and hybrid cloud aspects all need to be constantly maintained and managed.

This means there is often a reliance on already stretched IT teams with a lack of resources, which is hampering the efforts of many B2B IT support operations attempting to digitally transform. It also prompts security concerns, as businesses fear they do not possess the adequate in-house skills resources to defend against incoming threats.

Dimension Data's approach to managed services builds on its proven track record of managing and integrating multi-vendor

BILL PADFIELD, Group COO of Transformation and Services, Dimension Data.

solutions by bringing together its cross-technology portfolio of managed services, delivered through a single scalable and secure platform.

The benefits of Dimension Data's managed services offering include:

NEXT-GENERATION AUTOMATIONCAPABILITIES

Access to comprehensive analytics, service delivery, and process development – along with proactive, near real-time performance visibility and control. The new award-winning Manage Centre portal provides a complete view of an IT estate's performance.

Agility and scalability
The ability to scale in rapid business growth environments with minimised risk of downtime, while unlocking end-to-end

management and visibility across multi-vendor and multi-technology infrastructures.

CLIENT EXPERIENCE
Dedicated client success managers to help adoption and fast response resolution, also providing continuous support for improvement and innovation – as well as the ability to tap into the expertise and capability of industry-leading experts.

CROSS-TECHNOLOGY EXPERTISE
Deep expertise across multiple technology areas including networking, collaboration, security, customer experience and enterprise applications leveraging strong global partnerships with leading technology vendors.

Bill Padfield, Group COO of Transformation and Services at Dimension Data, commented: "Our global managed services and delivery platform has re-engineered the end-to-end client journey, radically simplifying IT operations management and eliminating the pressure of day-to-day operations, while also allowing clients to take advantage of Dimension Data's relationship with other NTT companies and best-of-breed solution providers." ■

KEY TAKEAWAYS
Strategy
- Elevated needs of digital world have left IT teams relying on complex IT estates to meet shifting consumer demands.
- Disparate, multi-vendor setups with public, private, hybrid cloud all need to be constantly maintained and managed.
- Reliance on stretched IT teams with lack of resources, hampering efforts of IT support operations to digitally transform.

Telecom Egypt extends Microsoft cloud leveraging Red-Med Corridor connectivity

Microsoft and Telecom Egypt announced collaboration to extend Microsoft's cloud network to Egypt. Telecom Egypt will provide low-latency connectivity into and across Egypt to help enhance performance and increase reliability for customers of Microsoft services. The collaboration will increase Microsoft's reach to the large Egyptian market in addition to improving connectivity across North Africa and the Middle East.

Microsoft's global network is one of the largest and most innovative in the world. It connects Microsoft's cloud infrastructure of more than 100 datacenters, 135 edge node locations, and more than 100,000 miles of fiber and undersea cable systems to deliver Microsoft services to customers.

The new point of presence in Egypt will benefit from a direct connection to Microsoft's global infrastructure to enhance the delivery of numerous services for customers. Microsoft's network investment will increase capacity and use the latest in network optimisation for the delivery of Microsoft services in Egypt.

The new enhanced network presence in Egypt will connect via Microsoft's global network to transatlantic and trans-Arabian paths, which will improve connectivity across North Africa and the Middle East, including enhancing connectivity to the new Microsoft cloud regions in development in South Africa and the United Arab Emirates.

Telecom Egypt's global network was built over the years through investments in consortiums and private international submarine cable systems. Its reach and

position as an international hub with tens of Terabits per second lit capacity makes it the partner of choice for content providers.

Egypt's distinctive geographic location on the Red and Mediterranean seas has enabled Telecom Egypt to connect more than 11 cable systems from the East and 13 from the West linked

with the Red-Med Corridor consisting of 7 diversified highly reliable routes across Egypt.

Committing on the announcement, Dr Amr Talaat, Minister of Communications and Information Technology of Egypt said, "Egypt is moving forward to become a global digital path in the light of its unique characteristics, especially its geographical location overlooking the Red and Mediterranean seas. The Ministry is committed to the development of the telecom and information technology industry in Egypt, and appreciates partnerships that empower local institutions and drive business development."

"We are pleased to partner with Microsoft as it represents one of the first steps toward our strategic digital transformation plan," said Adel Hamed, Chief Operating Officer, Telecom Egypt. "Telecom Egypt's geographical position and its digital infrastructure will enable major cloud providers such as Microsoft to enhance their reach to consumers and enterprises in Egypt as well as reach other markets." ■

New POP in Egypt will benefit from a direct connection into Microsoft's global infrastructure.

KEY TAKEAWAYS

Strategy
- New network presence in Egypt will connect via Microsoft's global network into transatlantic and trans-Arabian paths.
- Enhance connectivity into new Microsoft cloud regions in South Africa and UAE.

Execution
- Microsoft cloud includes 100 datacenters, 135 edge node, 100,000 miles of fiber and undersea cable systems.

Egypt's **CIB** deploys risk management, anti-money laundering **SAS** analytics

Egypt Commercial International Bank, the largest private sector bank in Egypt, has collaborated with SAS, to deploy Enterprise Risk Management and Anti Money Laundering. Commercial International Bank's strategic partnership with SAS emphasizes the bank's commitment to streamline its risk management processes and adhere to local regulations and global standards with regards to advanced analytical monitoring, reporting and an adequate control framework.

With this achievement, Commercial International Bank continues to be a pioneer of innovative technology and digital transformation, and holds true to its mission of creating shareholder value while paving the future landscape for banking in Egypt and the region. The deployed Enterprise Risk Management solution ensures that the bank is leveraging the leading global techniques and standards in tracking its various risk types, including operational risk, market risk, as well as credit risk, while providing all the needed business intelligence and simulation mechanisms to empower timely and data insight driven decisions.

SAS AML solution further strengthens Commercial International Bank's capabilities for proper identification of unusual transactions and activities and effectively manages its compliance risks with effective, sustainable processes and controls in order to safeguard the bank's reputation as well as meet regulatory requirements leveraging advanced analytical algorithms and machine learning techniques.

SAS hosted a project completion ceremony to commemorate this

SAS hosted a project completion ceremony to commemorate implementation and the award was received by Mohamed Sultan, Chief Operating Officer and Hanan El Borollossy, Deputy Chief Risk Officer.

remarkable implementation in line with Commercial International Bank's ERM initiative. Emphasizing on the uniqueness of this particular initiative, SAS recognised the efforts put forth by both the teams to make this project a success and presented Commercial International Bank with its excellence and leadership award.

The award was received by

Mohamed Sultan, Chief Operating Officer and Hanan El Borollossy, Deputy Chief Risk Officer. Established in 1975, Commercial International Bank is Egypt's leading private-sector bank.

At the signing, Talha Karim, Head of Risk Management, Risk Group at Commercial International Bank said, "The implementation of the SAS Engine for Credit, Market, and Operational Risk is aligned with Commercial International Bank's strategic ERM initiative with the objective of a holistic and forward-looking approach to Risk Management, coupled with a robust Risk Appetite and Risk Culture framework."

Emphasizing on the strong capabilities offered by these Abla Khairy, Chief Compliance Officer at Commercial International Bank said, "With the deployment of this solution, we believe that the implementation of the SAS AML Engine will guarantee proper management of compliance and apply a risk-based approach which will assist to safeguard the bank's reputation and avoid any adverse actions of non-compliance." ∎

KEY TAKEAWAYS

Strategy
- CIB's partnership with SAS streamlines advanced analytical monitoring, reporting, control framework.

Execution
- Enterprise Risk Management solution ensures the bank is leveraging global techniques in tracking risk types.
- SAS AML strengthens proper identification of unusual transactions and activities and manages compliance risks.

Syniverse, Tata Communications launch managed network to support 5G and IoT

Syniverse and Tata Communications extended their relationship to create a fully-managed, end-to-end IPX network interconnection partnership. It will offer operators better visibility, customer service and control of the data flowing across their interconnected networks.

The way data travels across networks today via interconnection means that an operator's IPX provider has no visibility or control of the data once it is handed off to an interconnected network. This strategic IPX network partnership means that Syniverse and Tata Communications will work closely together to manage traffic so that there is higher quality service, greater global reach, increased capacity and improved connectivity for data travelling between the two companies' networks.

The partnership is backed by their network expertise and platforms that support 5G and internet of things IoT, creating a comprehensive and reliable foundation for mobility services worldwide.

Through this agreement, Tata Communications and Syniverse will leverage each other's IPX networks to expand the collective reach of directly connected global mobile service providers. This means that the customers of both Syniverse and Tata Communications will have access to the greatest number of IPX connections in the industry – approaching 300 directly connected IPX GRX customers with a total reach of nearly 800 mobile operators representing

ANTHONY BARTOLO,
Chief Product Officer, Tata Communications.

more than 25,000 diameter roaming routes.

Additionally, the customers of both companies will gain enhanced monitoring, reporting, redundancy and quality of service through this relationship. The policy solutions will offer full visibility and management of traffic on each network, plus transparent service level agreements.

The customers of both companies are able to leverage the Tata Communications MOVE mobility and IoT platform, which today connects 4 out of 5 mobile subscribers and carries around 30% of the world's Internet routes. With this agreement, they will benefit from a fully-managed, end-to-end IPX network service to enhance the performance of their mobile devices, while reducing the cost of roaming.

The new partnership will also free customers from the financial

and tactical burden of working with different networks in different regions, while allowing them to further the reach of their connected devices.

"By joining forces with Syniverse, we are one step closer to our goal of creating an environment where everything and everyone can become seamlessly connected, anywhere in the world," said Anthony Bartolo, Chief Product Officer, Tata Communications. "As our customers leverage next-generation IoT and mobility services to drive their digital transformation, they need a solid foundation to ensure that they are able to capture, move and manage information seamlessly and securely worldwide. The powerful combination of Tata Communications' and Syniverse's capabilities and global reach will enable them to do just that." ∎

KEY TAKEAWAYS

- Syniverse, Tata Communications will manage traffic so there is higher quality service, global reach, increased capacity, improved connectivity.
- Customers can leverage Tata Communications' MOVE mobility and IoT platform which carries 30% of Internet routes.
- Customers will benefit from end-to-end IPX network to enhance performance of mobile devices reducing cost of roaming.

Majid Al Futtaim digitally revamps Carrefour shopping experience using SAP

(Left to right) Abdullah Saqqa, Head of Customer Experience, SAP Middle East and North Africa; and Marco Antonio Urios, Senior Vice President, Omnichannel Solutions and Supply Chain at Majid Al Futtaim Retail.

Majid Al Futtaim, a Middle East retailer, is spearheading the digital transformation of the region's $313 Billion retail market, both in taking a growing slice of e-commerce and enhancing Carrefour customer shopping experiences online and in-store. The Middle East retail sector is undergoing a sea-change. As more malls open, the GCC's retail sector will grow by 25% to $313 Billion by 2021, according to Alpen Capital. Online shopping revenues are also increasing. Deloitte projects the Middle East e-commerce market will triple to $49 Billion by 2021.

Majid Al Futtaim, which is headquartered in Dubai, is responding to these retail changes by digitally transforming its Carrefour brand with global technology company SAP. Carrefour now has one digital platform that integrates over 100,000 products on its website, in-store kiosks and tablets, and mobile app. Majid Al Futtaim is re-inventing experiences for over 750,000 daily customers and also simplifying its supply chain.

"The Middle East retail sector is experiencing seismic changes,

which is a major opportunity to enhance our customer experiences with real-time insights," said Marco Antonio Urios, Senior Vice President, Omnichannel Solutions and Supply Chain at Majid Al Futtaim Retail. "As part of our vision of creating great moments by offering inspiring experiences, our digital transformation with SAP enables our customers to order online or from our mobile app and have them delivered to their doorstep."

Worldwide, 81% of retailers say it is important to transform customer experiences and equip store associates with real-time

KEY TAKEAWAYS

Strategy
- Majid Al Futtaim is responding to retail changes by digitally transforming its Carrefour brand with SAP.

Execution
- Carrefour has a digital platform that integrates over 100,000 products on its website.

insights, according to SAP research. Among customers, Accenture shows that 91% are more likely to shop with brands that recognise and remember them and provide relevant offers.

In 2018, Majid Al Futtaim launched the Carrefour digital platform, running on the SAP Hybris solution, now called SAP Commerce Cloud, in Egypt, Jordan, the Kingdom of Saudi Arabia, Lebanon, and the UAE. This year, Majid Al Futtaim plans to extend their services across more markets it operates Carrefour in.

The company also launched an express online one-hour delivery service, CarrefourNow; Scan&Go – enabling customers to scan and pack products as they shop the aisles for seamless in-store shopping; among several other omnichannel digital solutions for in-store and online shopping.

In recognition of its success, Majid Al Futtaim Retail received SAP's International Omni-Channel Transformation of the Year – South Europe, Middle East, and Africa, award. Majid Al Futtaim Retail received the award in the presence of the State Secretary of Baden-Württemberg, Germany's Ministry of Economic Affairs, Katrin Schütz.

"Majid Al Futtaim demonstrates how a home-grown UAE brand can compete on a regional and global level thanks to the power of digital transformation and e-commerce innovation," said Abdullah Saqqa, Head of Customer Experience, SAP Middle East and North Africa. "As an Intelligent Enterprise, Majid Al Futtaim is transforming customer experiences to allow customers to purchase the products that they want from anywhere, at any time, and from any device." ◼

Telecom Egypt to leverage Nokia's Wing platform to offer enterprises IoT services

(Left to right) Amr K El Leithy, Head of the Middle East and Africa market, Nokia; Adel Hamed, Managing Director and CEO of Telecom Egypt; Dr Amr Talaat, Egyptian Minister of Communications and Information Technology; Federico Guillén, President of Customer Operations, EMEA and APAC, Nokia; and Pierre Chaume, Head of the North Africa Market Unit, Nokia.

Nokia and Telecom Egypt announced they will build the first cloud infrastructure in Egypt exclusively for Internet of Things services. Telecom Egypt will use Nokia's Worldwide IoT Network Grid, WING as a Service, as the platform to launch IoT services for the enterprise segment later this year.

Nokia WING enables operators like Telecom Egypt to offer IoT services to enterprises on a global scale. Telecom Egypt will be able to tap into the growing IoT market fast and cost-effectively due to the Nokia WING one-stop model, which includes a worldwide IoT Infrastructure-as-a-Service and pay-as-you-grow business model. WING enables Telecom Egypt to provide global IoT service at almost local prices as opposed to more expensive roaming prices.

As part of a Memorandum of Understanding, Nokia and Telecom Egypt will also explore joint marketing initiatives and will work to accelerate the development of an IoT partner ecosystem in the country. A number of IoT use cases drive automation, which will help enterprises cut their operational expenses, enhance productivity and bring new services to market faster.

Telecom Egypt is a telecom operator in Egypt providing telecom services to its customers including fixed and mobile voice and data services. Telecom Egypt has a long history serving Egyptian customers for over 160 years maintaining a position in the Egyptian telecom market by offering its enterprise and consumer customers advanced technology, infrastructure solutions and network of submarine cables.

Adel Hamed, Managing Director and CEO of Telecom Egypt, said: "We are excited to collaborate with Nokia for this IoT initiative. We have worked with Nokia in the past and we are confident that Nokia WING will enable us to bring world-class IoT use cases to our enterprise customers in Egypt and later in the region."

Ankur Bhan, Head of WING business at Nokia, said: "We are pleased to announce this collaboration with Telecom Egypt to enable next generation of IoT services for Egypt and the African market. Our cloud-native IoT proposition and pay-as-you-grow business model makes it possible for Telecom Egypt to move fast to address the vast IoT market opportunity in Egypt." ∎

KEY TAKEAWAYS

Strategy
- Nokia and Telecom Egypt will work to accelerate development of an IoT partner ecosystem in the country.

Execution
- Nokia WING enables operators to offer IoT services to enterprises on a global scale.

Saudi Electricity to roll out 10M smart metres partnering with Nokia, Dawiyat

Nokia and Dawiyat Integrated Telecommunications and Information Technology Company, part of Saudi Electricity Corporation, will collaborate on multiple projects to develop the ecosystem for Industry 4.0 in the country. Nokia's solutions and Dawiyat integrated's vision will together help in building infrastructure for the next generation of services.

Industry 4.0 technologies such as Internet of Things, robotics, augmented intelligence and automation support digital transformation, which enables significant gains in productivity, efficiency, safety and sustainability.

Under the terms of the Memorandum of Understanding, Nokia and Dawiyat Integrated will work together on multiple initiatives:

● 10 million smart meters to serve the citizens and businesses all over Saudi Arabia in accordance with the NTP 2020. Nokia's solutions and expertise will help Dawiyat Integrated to better manage the

KAMAL BALLOUT, Head of the TEPS MEA and Global Energy Segment, Nokia.

infrastructure and use analytics for an improved customer experience.

● Nokia and Dawiyat Integrated will jointly explore working to deploy Industry 4.0 infrastructure and smart industrial solutions to enable companies to benefit from increased productivity and efficiency with integrated infrastructure and services.

● Nokia will be one of the

technology partners for deployment of a Gigabit Passive Optical Networking and IP Multi-Protocol Label Switching IP MPLS communications infrastructure for Dawiyat Integrated FTTH infrastructure.

● Nokia and Dawiyat will collaborate to develop solutions to help the mining industry use digital solutions to adapt to fluctuations in demand, better control operational expenditures and enhance safety.

Dr Ahmed Sindi, CEO of Dawiyat Integrated, said: "Being the Kingdom's neutral wholesale infrastructure service provider, we are thrilled to collaborate with Nokia to bring the Industry 4.0 infrastructure to the country to drive growth across the Kingdom. Nokia's solutions will enable us to improve the resiliency, efficiency and scalability of our network and its expertise will enable us to realise the Saudi Vision 2030 to use digital infrastructure for safer and sustainable growth."

Kamal Ballout, Head of the TEPS MEA and Global Energy Segment, Nokia, said: "We are honored and excited to partner with Dawiyat Integrated on these key initiatives to develop the ecosystem for Industry 4.0. Powered by Nokia's solutions, automation enables businesses to cost-effectively boost production and overall efficiency, which in turn leads to an increase in revenue. A Dawiyat Integrated network that combines a highly reliable and scalable IP MPLS core with pervasive GPON broadband connectivity will support a faster implementation of smart grid while providing a foundation for further innovation."

Nokia, Dawiyat to collaborate to develop solutions to help the mining industry.

Clemenceau Medical begins transformation using Infor CloudSuite Healthcare

Clemenceau Medicine Network is an assimilated network of centers of excellence composed of the core hub CMC Beirut, as well as Clemenceau Medical Center and CMC Riyadh.

Clemenceau Medical Center in Dubai Healthcare City, has selected Infor CloudSuite Healthcare, a platform including Financials, Human Capital Management and Supply Chain, as part of the firm's digital transformation journey. When completed, this new cloud-based platform will help Clemenceau Medical Center, scale its operations for future growth.

Clemenceau Medical Center selected Infor over competition due to Infor Healthcare CloudSuite's industry specific functionalities and the proven track record of Infor's partner E3 in healthcare and in regional specific requirements in supply chain, human capital management.

The E3 team has international, regional and local healthcare, industry-focused experience that enables them to successfully deploy the systems with accuracy and speed without compromising on the quality of the implementation process. Infor's industry-specific cloud-based solutions are based on applications that have helped hundreds of healthcare customers globally to gain and maintain industry leadership.

Clemenceau Medical Center in Dubai Healthcare City, 100-bed state-of-the-art medical center, will constitute one of Clemenceau Medicine Network's main hubs, with the objective of implementing the Clemenceau Medicine's healthcare delivery system to patients in Dubai. Clemenceau Medicine Network is an assimilated network of centers of excellence composed of the core hub CMC Beirut, as well as Clemenceau Medical Center and CMC Riyadh.

The green field hospital Clemenceau Medical Center intends to operate on an optimised efficiency basis and most importantly full utilisation of human capital capabilities, while ensuring local compliance in their operations globally. Clemenceau Medical Center has chosen Infor CloudSuite Healthcare which is designed for the healthcare industry and provides advanced business functionalities that align with the hospital's vision.

Clemenceau Medical Center expects to benefit from Infor CloudSuite Human Capital Management due to its agility, ability to align talent with organisation's strategy, and the tools and technology that contribute in making well-calculated decisions about the workforce.

These new solutions will run on Infor OS technology that includes Infor ION, which facilitates loosely coupled integration of third-party software, and the Infor Ming.le user experience which incorporates analytics, alerts, business documents and supports user collaboration to boost efficiency and drive user productivity.

Infor CloudSuite Healthcare helps improve transparency, strengthens financial discipline, streamlines close and cash management processes, reduces transaction costs and processing time through AP automation. Infor CloudSuite Healthcare also helps manage sourcing and contract lifecycle, complements web-based requisitions in order to minimise operational costs and identifies additional saving opportunities through analytics tools.

E3 is an organisation focused on the Middle Eastern Healthcare Sector with offices in UAE, Saudi Arabia and Jordan. ■

KEY TAKEAWAYS

Strategy
- Infor CloudSuite Healthcare improves transparency, financial discipline, cash management, reduces transaction costs, processing time.
- Infor CloudSuite Healthcare manages sourcing, contract lifecycle, web-based requisitions.

Dubai Refreshment transforms management reporting using SAP HANA on Fujitsu

Fujitsu migrated ten SAP applications, in addition to managing the migration from a legacy database to the new environment. This enabled 350 users in five locations to have anytime access to core business functions.

Fujitsu announced it has successfully implemented SAP HANA for Dubai Refreshment Company, bottler and distributor for PepsiCo in the region. The project went live in less than five months of commencing implementation with Fujitsu, and will also deliver support services for five years. The migration will enable Dubai Refreshment Company to make available business reports within seconds, ramping up employee productivity, and easing the delivery of live data analytics without the need of a data warehouse.

SAP HANA is a market-leading in-memory data and application development platform. Fujitsu Integrated System PRIMEFLEX for SAP HANA is backed by 40 years of experience in delivering fast, secure, high availability implementations that enhance operational efficiency and business productivity.

Prior to Fujitsu's involvement, DRC's SAP deployment was based on a vendor's proprietary hardware and operating system, which made operations more complicated. With the new environment implemented by Fujitsu, accurate business dashboards, fed by live data from SAP HANA as the data source, is made available to the management.

This frees up time for the IT team to focus on important tasks that add to the organisation's overall productivity. Dubai Refreshment Company is also leveraging SAP Fiori to enable sales and delivery drivers to make transactions in real time, rather than coming back to the office to file invoices, giving greater visibility of stock and invoice clearance across the business.

Fujitsu migrated ten SAP applications, in addition to managing the migration from a legacy database to the new environment. This enabled 350 users in five locations to have anytime access to core business functions.

Farid Al-Sabbagh, VP and Managing Director at Fujitsu Middle East, said "We delivered all the solutions at an extremely competitive price and also provided a number of references specific to the region, demonstrating our expertise in similar deployments. That made it the stand-out choice for this long-term project, which will bring strong operational efficiencies to Dubai Refreshment Company and enable them to focus on their strategic growth vision to be the region's leading food and beverage provider."

Tarek Elsakka CEO of Dubai Refreshment Company, said: "To drive the efficiency of our operations and to fully leverage the potential of big data analytics, we were seeking to migrate our IT infrastructure to SAP HANA. We worked with Fujitsu to implement a solution that meets our business goals and boosts employee productivity." ■

KEY TAKEAWAYS

Execution
- The project went live in less than five months of commencing implementation with Fujitsu.
- Fujitsu migrated ten SAP applications, in addition to managing the migration from a legacy database to the new environment.
- The project will deliver support services for five years.

Cash
- With the new environment implemented by Fujitsu, accurate business dashboards are fed by live data from SAP HANA.

People
- 350 users in five locations have anytime access to core business functions.

Emirates NBD transforms treasury services to single view with Calypso upgrade

Emirates NBD, announced that it has partnered with Calypso Technology, the standard for treasury and capital markets software, to deliver Calypso treasury platform. This is a key milestone in Emirates NBD's delivery of its multi-year digital transformation journey, part of the Group's AED 1 Billion investment towards digitising operations, products and services to enhance proposition to corporate clients and retail customers. Emirates NBD's four-year digital transformation is now half-way complete, with an expected end-date of 2020. Launched in 2016, it includes an end-to-end upgrade of Emirates NBD's capabilities across IT systems, architecture and infrastructure, as well as the bank's information security and data, and finally, in terms of its IT business model.

As an existing Calypso client, the end-to-end upgrade to Calypso Version 15 ensures that Emirates NBD's enterprise treasury solution will continue keeping pace with the increasingly sophisticated

ABDULLA QASSEM,
Group Chief Operating Officer, Emirates NBD.

needs of its growing Treasury client-base.

Centralisation and consolidation were key goals for the upgrade, ensuring that all products and functions are henceforth available in one single core system, supporting all of Emirates NBD's domestic and international markets. Further benefits include enhanced ease of use and scalability of Emirates NBD's

treasury platform.

Calypso Version 15 further strengthens the platform's resiliency and availability, while real-time monitoring capability is provided through App Dynamics. With Calypso's new Front Office Workstation, Emirates NBD traders can now efficiently monitor their cross-asset positions and P&L in real time. With Calypso's robust capital reporting framework, Emirates NBD is also well positioned to meet Basel 3's upcoming capital reporting requirements.

Commenting on the achievement, Abdulla Qassem, Group Chief Operating Officer, Emirates NBD said: "As we progressively deliver our AED 1 Billion digital transformation, it is critical to support the continued growth of our Treasury business with a sophisticated and scalable enterprise platform. With a fully centralised, upgraded treasury enterprise solution in place for all international markets, that also delivers full resilience, availability and real-time monitoring, we look forward to continuing our decade-long partnership with Calypso."

The bank currently has 230 branches and 1,069 ATMs and SDMs in the UAE and overseas. The Group has operations in the UAE, Saudi Arabia, Egypt, India, Singapore, United Kingdom and representative offices in China and Indonesia. Calypso Technology, is a cloud-enabled provider of cross-asset front-to-back solutions and managed services for financial markets with over 35,000 users in 60+ countries. Calypso is pioneering native cloud technology, AI, Big data that reimagine capital markets. ■

KEY TAKEAWAYS

Strategy
- Emirates NBD's four-year digital transformation is now half-way complete, with an expected end-date of 2020.
- Centralisation and consolidation were key goals for the upgrade ensuring one single core system.
- Emirates NBD is well positioned to meet Basel 3's upcoming capital reporting requirements.

Execution
- Calypso Version 15 ensures enterprise treasury solution will keep pace with needs of growing Treasury client-base
- Strengthens resiliency and availability while real-time monitoring is provided through App Dynamics.

Good morning Alexa, Emirates NBD transforms transaction banking using iGTB

The project integrates iGTB's Digital Transaction Banking platform powered by an integrated front-end omni-channel CBX portal to deliver a seamless user experience to Emirates NBD's corporate clients.

Emirates NBD, a leading bank in the region, announced a planned end-to-end digital transformation of its Transaction Banking platform. The transformation is part of the banking group's AED 1 Billion commitment to digitise operations, products and services, enhancing its proposition to corporate clients and retail customers.

Supported by transaction banking and technology specialist Intellect Design Arena Limited's Intellect Global Transaction Banking iGTB, the planned project is aimed at strengthening Emirates NBD Transaction Banking's market. It will cover the bank's operations across trade corridors in the UAE, Saudi Arabia, Egypt, India, Singapore and the United Kingdom.

Emirates NBD's investment in a new digital platform will strengthen the bank's position as the country's market leader in Transaction Banking. The project integrates iGTB's Digital Transaction Banking

platform powered by an integrated front-end omni-channel CBX portal to deliver a seamless user experience to Emirates NBD's corporate clients.

The new platform will offer clients the ability to view, monitor and control their working capital needs across cash management, trade and FX enabling easy, informed and on-the-go decision

making with one-click efficiency in addition to fully integrated back-end product processors across all lines of business.

The UAE's leading position as the vital hub connecting Asia and Africa with the west combined with a reported increase in trade volumes by UAE businesses this year have led to a significant growth in the country's transaction banking sector. Emirates NBD is the only UAE-based bank with physical presence across important trade corridors from the Middle East and North Africa across to Asia and the United Kingdom.

The planned platform will enable Emirates NBD Transaction Banking clients anywhere in the world cross-channel accessibility, irrespective of the country they operate in. As at 31st December 2018, total assets were AED 500.3 Billion.

Commenting on the planned transformation, Sumit Aggarwal, EVP and Group Head, Transaction Banking Services, Emirates NBD, said: " iGTB's in-depth domain knowledge and expertise made it our partner of choice to create a best-in-class digital Transaction Banking platform that will strengthen our capability to respond to evolving business needs. Clients are at the centre of our digital transformation journey and we believe this platform will enhance our proposition and enable us to deliver seamless user journeys and access to all aspects of working capital management with enhanced visibility and data analytics."

K Srinivasan, President, APAC, South Asia, Middle East and Africa, Intellect Design Arena, added: "Transaction banking has been an industry dominated by global banks. Intellect has been empowering banks in the Middle East to launch and commercialise the transaction banking business in an integrated way and to gain significant market share. This is highlighted by this announcement of another signature deal." ∎

KEY TAKEAWAYS

Strategy
- Emirates NBD is the only UAE bank with physical presence across Middle East, North Africa, Asia, United Kingdom.

Cash
- The project strengthens Emirates NBD transaction market covering UAE, Saudi Arabia, Egypt, India, Singapore, United Kingdom.

Honeywell transforms security for new Cairo using Command and Control Centre

Khaled Hashem, Honeywell's President for Egypt and Libya, appears with General Eng Mohamed Abd Allatief, ACUD General Manager.

Egypt's new administrative capital will feature public safety and security infrastructure following an agreement signed between the Administrative Capital for Urban Development, ACUD and Honeywell. The new capital, one of the world's largest smart city projects, is being built in three phases, 45 kilometers east of Cairo and will expand to cover more than 700 square kilometers once complete.

Honeywell will deploy city-wide security and surveillance systems as part of the first phase of development, in collaboration with its partner MTI, to integrate security systems across the capital into a single point of control, known as an Integrated Command and Control Centre, ICCC.

The contract was signed in Cairo by General Eng Mohamed Abd Allatief, ACUD General Manager and Khaled Hashem, Honeywell President for Egypt and Libya in the presence of Deputy Head of Information Systems Department ISD, General Hesham Shendy and US Chief of Mission and Chargé d'Affaires, Thomas H Goldberger.

The Integrated Command and Control Centre will integrate advanced Internet of Things, IoT software and hardware solutions onto one common platform for a holistic city view that provides unified public safety services, coordinating security response units, city police and medical dispatch.

The control centre will also connect video feeds from more than 6,000 IP cameras over a futureproof wireless network, and run sophisticated video analytics to monitor crowds and traffic congestion, detect incidents of theft, observe suspicious people or objects, and trigger automated alarms in emergency situations.

The technology deployed at the New Capital will include Honeywell's cyber security systems. The Integrated Command and Control Centre has already been successfully implemented across smart city projects in India. Honeywell is playing a defining role in the growth of India's 100 Smart Cities.

The agreement reinforces Honeywell's commitment to developing smart cities in Egypt, and enabling effective skills and knowledge transfer in line with the goals of Egypt Vision 2030. The company's diverse hardware and software solutions promote greater safety, security and energy efficiency for cities and buildings, and drive operational efficiencies by leveraging data analytics and cloud technologies.

Operating from Cairo, Honeywell works with some of Egypt's key government and private sector entities in the fields of smart cities, building automation, oil and gas, refining and petrochemicals, defense, aviation, infrastructure development, logistics, security and fire safety. The company has been present in Egypt for more than 50 years, and is committed to providing the best talent and technologies to support development across Egypt's major industries. ∎

KEY TAKEAWAYS

Strategy
- Honeywell will deploy city-wide security and surveillance systems as part of the first phase of development.
- In collaboration with MTI, Honeywell will integrate security across the capital into a single point of control.

Siemens suppliers must be step by step cyber security compliant

New Siemens suppliers must comply with minimum binding cybersecurity requirements, which will be introduced step-by-step starting in February 2019, and anchored in a separate, binding clause in all new contracts. These requirements will apply primarily to suppliers of security-critical components such as software, processors and electronic components for certain types of control units. Existing suppliers who do not yet comply with the requirements are to implement them gradually.

The goal is to better protect the digital supply chain against hacker attacks. In this regard, Siemens is following the course laid down by the Charter of Trust for cybersecurity. The requirements stipulate, for example, that suppliers must integrate special standards, processes and methods into their products and services.

The reason: to prevent vulnerabilities and malicious codes at suppliers – and thus in Siemens products as well. In the future, suppliers themselves must, for example, perform security reviews, conduct tests and take corrective action on a regular basis. Siemens is making these requirements mandatory for its own activities as well.

In the fall of 2018, Siemens further strengthened its internal capacities for repelling hacker attacks and restructured its cyber organisation. Operating as a worldwide network, the new unit combines what were once separate areas. As a result, Siemens is now the first major company to take a

ROLAND BUSCH,
Member of Siemens' Managing Board and COO, CTO.

holistic approach to the topic of cybersecurity. Not only does the new Siemens organisation investigate, analyse and repel hacker attacks; it also develops new cybersecurity services and teams up with the company's business units to launch these services on the market.

The goal is to react to attacks with even greater speed and flexibility. In every region and at every division, the company has also strengthened its network of cybersecurity managers, who now report to Natalia Oropeza, Siemens' Chief Cybersecurity Officer. Siemens has been active in the field of cybersecurity for about 30 years. Its first cybersecurity team was established back in 1986.

"This step will enable us to reduce the risk of security incidents along the entire value chain in a holistic manner and offer our customers greater cybersecurity," said Roland Busch, Member of Siemens' Managing Board and the company's Chief Operating Officer and Chief Technology Officer. "If all our partner companies put their global weight behind these measures and implement them together with their suppliers, we can generate tremendous impact and make the digital world more secure." ∎

KEY TAKEAWAYS

Strategy
- Siemens is the first major company to take a holistic approach to the topic of cybersecurity.
- The goal is to better protect the digital supply chain against hacker attacks.

Execution
- New Siemens suppliers must comply with minimum cybersecurity requirements, which will be introduced in February 2019.
- These requirements will apply to suppliers of security-critical components such as software, processors, electronic components.
- Existing suppliers who do not yet comply with the requirements are to implement them gradually.

TRANSFORMATION OF AIRPORT HUB SERVICES

Growing number of passengers and aircraft and limited space at airports are putting pressure for on-time turnarounds on ground handling providers like Swissport.

Similar to the growth in the number of vehicles in an urban area, the number of aircraft and the passengers they ferry, are in a phase of constant growth. Globally, the number of aircraft is expected to double from the base year of 2015 up to 2035. Since there are only limited number of airports and limited amount of space in each airport, this implies that each aircraft movement on the ground needs to be efficiently handled for faster turnaround.

Faced with the pressure of managing multiple cost heads, airlines are now outsourcing their airport ground handling and cargo management services to specialist companies, and focusing on their core competence.

While growth trends in passenger volumes tend

LUZIUS WIRTH, *Executive Vice President EMEA, Member of Group Executive Management at Swissport.*

MARK SKINNER, Senior Vice President Middle East and Africa, Swissport.

Swissport operates in 300+ airports and 50 countries, handled 260 million passengers and 5 million tons of cargo, and uses 120+ certified warehouses to manage cargo operations. Services include Baggage services, Gate and check-in, De-icing, Fuelling, Security, Lounge operations, Maintenance, Freight handling, Trucking, Warehousing, E-Freight services.

KEY TAKEAWAYS

Strategy
- By adopting the greenfield approach new stations are global players from the first day of operations.
- Benchmark for Swissport is to know about its performance better than the customer, so that it knows what to do, to make it better.

Cash
- Faced with pressure of managing cost heads, airlines are now outsourcing airport ground handling services to specialist companies.
- Growth trends in passenger volumes tend to follow macroeconomic fundamentals, but growth in aircraft turnarounds are more immune to such highs and lows.
- Increasing sizes of aircraft are positive driver for growth of outsourced aircraft handling on the ground.

People
- Customers can receive the service they expect from day one.

to follow macroeconomic fundamentals, the growth in aircraft turnarounds are more immune to such highs and lows. Coupled with the increasing sizes of aircraft, both factors are a positive driver for the growth of outsourced aircraft handling on the ground as well as cargo management.

Luzius Wirth, Executive Vice President EMEA, Member of Group Executive Management at Swissport, believes this is a reason to be optimistic about its future global growth. "We are the largest player in the market and we have only 14% of the market. There is room to expand and the Swissport formula helps in that journey," he says.

Swissport entered the Middle East in 2015 and has set up greenfield operations in Middle East and Oman. For Swissport, "Middle East is seen as a growth region," comments Mark Skinner, Senior Vice President Middle East and Africa, Swissport. Including Saudi Arabia and Oman operations, Swissport now has an employee strength of 1,000 in the region. In Saudi Arabia, Swissport operates in three airports and has 17 customers. In Oman, Swissport operates in two airports, one of them being an oil field.

Skinner points out that there are three ways to enter a new market. The first is buyout or inorganic growth; the second is organic growth

from existing operations; and the third is a greenfield approach. For the Middle East region, Swissport selected the greenfield approach. "We chose this one for Middle East since we did not want any legacy and any history. The greenfield development is giving us the chance to get new equipment, get a top quality product, train our own people, and grow as fast as we want," explains Skinner.

For Wirth, adopting a greenfield approach in the Middle East allows Swissport to bring in its core competence of delivering service quality and managing costs. "The greenfield approach is the most difficult and the most expensive approach. But it is also the easiest one to implement," says Wirth. The greenfield approach allows Swissport to train the new staff from the ground up, building its own work culture.

By adopting the greenfield approach, once ready the stations are global players from the first day of operations. Customers can also receive the service they expect from day one.

The Swissport formula for growth relies on two primary factors. More aircraft movements, more passengers, more airlines, on-time turnarounds, cargo movements, cross selling of services such as lounge hospitality management,

The new software relies on a variety of factors that influence the punctuality of flights including data about en-route weather, air traffic control, airport operator, aircraft rotation delays. After initial calculation of an estimated arrival time, the algorithm checks various parameters and adjusts ground resource planning accordingly.

Swissport's Dynamic Delay Prediction Tool

The global service provider of airport ground services and cargo handling was honored for a new machine-learning tool, which helps to dynamically predict aircraft delays at Finnair's hub in Helsinki-Vantaa. The machine-learning algorithm, developed by the Finnish IT company Bluugo, enhances efficiency on the ground by detecting resource constraints long before an aircraft is airborne.

For its prediction, the new software relies on a variety of factors that influence the punctuality of flights. In addition to weather data en-route or at the destination, it includes data from air traffic control and from airport operators. Aircraft rotation delays are also considered for subsequent flights.

After the initial calculation of an estimated arrival time, the algorithm regularly checks various parameters and adjusts ground resource planning accordingly.

Thanks to the new solution, the Swissport Operations Control Center has an extended planning horizon and can more efficiently allocate staff and ground support equipment. The ability to react earlier makes the entire service chain more reliable for its customers. In the coming months, further data streams are to be connected to the tool to further increase accuracy.

are responsible for driving the top line numbers. Strong focus on cost management and quality of services, ensure that the bottom line is controlled. While there is wide portfolio of services there is a consistency in the delivery.

Staff is also a big part of the Swissport operating cost. Skinner indicates that planning tools allow Swissport to optimise costs of equipment and staff between regions especially during lows and highs like the Hajj pilgrimage and for trainings. "Becoming smart is a continuous process," reflects Skinner.

"This is all about systems, procedures, processes, looking at costs, and making sure we have the right talent around the aircraft to deliver the service. That is something we push quite religiously across all airports," stresses Wirth. The same airline customer in two countries can expect the same service. Moreover, wherever Swissport is operational, both airlines and airports talk to the same supplier, namely Swissport.

Another key component of the Swissport formula is the application tool called the Arrival Delay Estimate System. This application predicts the global impact cost from the delay of an aircraft's movement at any particular airport station. The application uses a large number of variables such as aircraft movements, weather, manpower, fleet movement, and collectively assesses the cost impact of any delay. Artificial intelligence and machine learning help to forecast how an airport will look like after a couple of hours if there has been a delay.

Wirth elaborates, "We have a tool deployed specifically for Swissport. No other ground handling service provider has that. I can see every flight on my phone, where it left, how many passengers on board, what is the load, is it on time. If it is late, are we responsible and what is the reason?" The benchmark for Swissport is to know about its performance better than the customer, so that it knows what to do, to make it better.

Other on-going technological initiatives across Swissport include proximity sensors in vehicles to avoid collision with aircraft; on-ground tracking of airport vehicles through telematics; simulators for vehicle training; amongst others. Adding RFID tags to the baggage is a requirement presently being studied by IATA. This requires multiple parties to come together including aviation and airport authorities, airlines, baggage suppliers, and service providers.

Wirth admits that technology innovation is moving faster on the passenger side than on the airport side. "These are technologies that will come. I am absolutely convinced, when you look at the speed of technological transformation at the passenger side that has already started to materialise. But the innovation has not yet arrived on the airfield," he reflects. ◾

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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

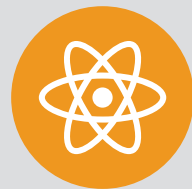## Mesh

#3 Blockchain

#6 Smart Spaces

#9 Ethics & Privacy

#10 Quantum Computing

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INTERTWINING IOT AND AI IN SOFTWARE SOLUTIONS

While Internet of Things has been around for years, combining it with artificial intelligence will yield higher revenues, believes Raj Sabhlok.

RAJ SABHLOK, President Zoho Corp and ManageEngine.

As a Group, opportunities around Internet of Things are addressed in a couple of different ways. One division that is totally focused on it is Web MNS. They provide the IoT infrastructure, a programmable environment to create IoT applications.

WebMNS was the Group's first company as well, 22 years ago and it essentially was IoT technology before. The business was to provide agents that can go out and instrument anything. Now it is called Internet of Things and it is popular. What is interesting about Internet of Things is that you can not only set up these applications, but you can monitor these applications as well and that all happens with WebMNS.

The adoption of IoT in terms of companies making revenue, are far less than would have been expected and there is certainly a lot of hype around IoT. While there are a lot of use cases for it, there are very few vendors that are creating multiple billion-dollar businesses.

It is possible that IoT needs additional functionality in the way of artificial intelligence to control devices independently, and this is intertwined. You need good software management to have a real IoT solution. The better the software management, the faster something will scale out. IoT technologies are also being adapted within business applications like CRM to create applications that can support and feed service management

Artificial intelligence is taking IT management to the next level. In the early days, IT management was all about just making sure systems were operational or uptime. How systems were actually performing came after that. The focus subsequently moved to performance management and a lot of that was built into IT performance applications.

As systems became more critical, the focus has turned to root cause analysis. In other words, if something goes wrong, how do you figure out what the problem is. So, the next thing is artificial intelligence.

Artificial intelligence is doing things that human does not do very well. Being able to take multiple data points from all different angles and make some semblance out of that information. For this security is a great example, that can use all these data points.

Artificial intelligence brings it altogether and says, this is what an employee normally does. But all of a sudden, an employee may be very active elsewhere.

What is going to happen first with artificial intelligence, is it will help to detect information that you would normally not see with the naked eye. While presenting that information it will automatically take care of a lot of actions. In the region, the Group has grown by more than 25% as an average and that is a big number for an IT management company. ■

KEY TAKEAWAYS

- While there are a lot of use cases for it, there are few vendors creating billion-dollar businesses.
- It is possible IoT needs additional functionality in the way of artificial intelligence to control devices independently.
- You need good software management to have a real IoT solution.
- Artificial intelligence is doing things that human does not do very well.
- Automation is another element of artificial intelligence and is based on machine learning.

CONNECTIVITY BACKBONE FOR WORKPLACE TRANSFORMATION

Secure, reliable, pervasive connectivity is the platform for transformational experiences in the workplace, explains Alan Ni from Aruba HPE.

ALAN NI, Director of Smart Spaces and IoT, Aruba HPE.

Alan Ni is responsible for driving innovation and strategy around helping enterprises and organisations create smarter spaces, leveraging mobility and IoT. Ni works directly with customers to define their requirements and outline a solution plan. The idea is to expand the ecosystem and ensure smooth integration with other solutions to enable transition to smart digital workspaces.

Ni defines transformation as leveraging a range of technologies to improve or materially transform a business or end-user experience. The nature of work and workplaces is changing as people expect mobile devices to digitise physical experiences.

In the physical office, the rise of activity-based working environments is providing people with new options in work settings. Mobility and location-based services are the keys to unlocking high performance workplaces that embrace and promote collaboration, creativity and more effective teamwork.

Outside of work, end user expectations for experiences are rising as well. Lying at the heart of all of these transformations is pervasive, secure connectivity augmented by location-based services. Customers learn that it is a journey, that the deployment is not the end, but just the beginning. With the new solutions in place they can continue to adapt and support their employee, customer, and partner needs as they evolve.

For a dream transformation project to roll out and be successful, it is imperative to have committed buy-in from all stakeholders, who may reside in different groups within an organisation. It also needs to have a clear strategic direction, an identified problem to be solved, and the customer's willingness to be flexible and willing to push the boundaries and fail. They also need to have committed funding in place and tie the project into a strategic initiative.

AmericasMart Atlanta, the largest wholesale market center of its kind in the United States, recently underwent a digital transformation and is delivering a unique mobile experience. Its three interconnected buildings contain more than 1,500 permanent showrooms as well as exhibition halls, collectively housing 4.2 million square feet of product. Members representing more than 9,000 different brands, exhibit at AmericasMart and its 16 annual tradeshows.

AmericasMart moved forward with its transformation, deploying access points, controllers, network management and network security solutions, augmented by a location services platform and beacons to enable accurate blue-dot navigation and turn-by-turn directions via its mobile app. Future plans include the addition of proximity notifications for guests and also asset tracking. The new location services are saving attendees and exhibitors time by providing the most direct and efficient routes through the market center to find what they need.

With digital transformations, lessons learned from one type of customer deployment can often be applied to other market segments. ■

TRANSFORMING DOCUMENT MANAGEMENT AND WORKFLOW

Clearly defining customer objectives and getting the organisation to buy-in are important ingredients for success explains Xerox's Pui Chi Li.

PUI CHI LI, Head of Marketing, Middle East and Africa, Xerox.

Xerox actively works with its customers to help them transform their organisations. The vendor understands that digital transformation is the application of new processes and workflows, however fundamentally it needs to be treated methodically like any business transformation.

Transformation is sometimes incorrectly viewed as a flash moment for an organisation, however this cannot be further from the truth. Transformation is a constant state as it is a critical part of adapting and moving to a changing environment. "At Xerox, we fully embrace this mantra both for our customers and also for ourselves," says Pui Chi Li.

In many cases, transformations are extensive and often challenging due to existing processes and mind sets. The best, most efficiently delivered transformations are often with the active support of an organisation's senior leadership team. That means the wider organisation participates and supports the change from start to finish, overcoming challenges along the way as a team rather than a side project.

According to Pui Chi Li, "From our experience, the first step is to define with a customer their objectives. This enables the customer to set clear goals for the transformation process and guides the supplier on areas of focus."

Some examples can be to reduce the hours spent or the number of errors on a particular workflow. It can also be to increase the amount of customer facing time for sales reps by enabling them to work efficiently, remotely.

Xerox's Managed Print Services tools and techniques are used to implement digital transformation. As an example, a critical aspect is the collation, management and understanding of the significant volume of data that organisations suddenly have access to. In such cases, Xerox can help customers navigate this assessment stage prior to automating and optimising.

Xerox has experience working with business and key decisions makers to guide them through critical business transformation steps, applying well used frame works, tools and techniques to ensure the best possible solution is delivered. Xerox's Managed Print Services offering has three main stages: assess and optimise; secure and integrate; automate and simplify. These are designed to bridge the paper and digital worlds so customers can print more cost effectively, conveniently and securely.

Xerox's ConnectKey portfolio delivers smart, connected workplace assistants that reflect the evolving needs of today's businesses. Personalised workflows, one-touch access to the cloud and multi-layered security features are the new print, copy and fax.

The Connectkey platform also allows for the bespoke development and use of Apps which enables a new level of customisation to our customers, simplifying frequently used workflows and functions but is also able to be applied to more complex and extensive processes to help our customers become more efficient, productive and focus on their core businesses. ∎

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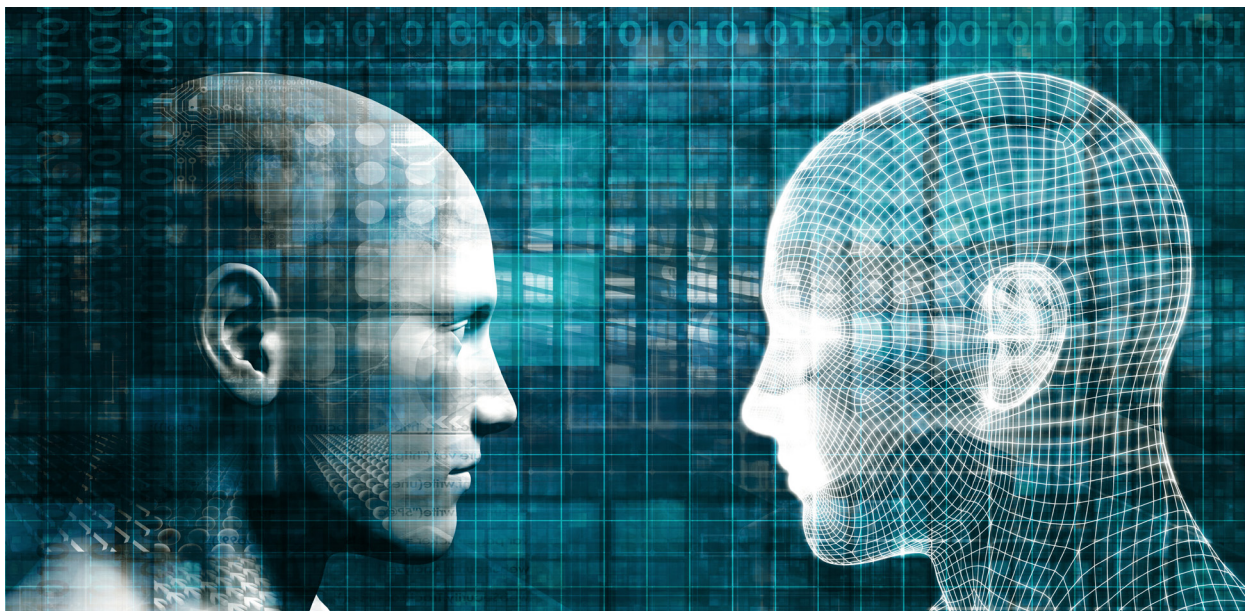
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AUTOMATING THE UNKNOWN RULES OF BUSINESS

The real value of artificial intelligence is to be able to discover the unknown rules and correlations that drive business through vast collections of data, cloud and various emerging technologies.

Artificial Intelligence is not one technology or discipline, but a set of technologies. In science fiction, and increasingly in research, artificial intelligence is often discussed in terms of general intelligence. General intelligence is when a computer thinks like a human. It is about taking acquired knowledge and skills and positively correlating those across completely different tasks.

The focus and the usefulness of artificial intelligence in business applications lies in specific intelligence. In specific intelligence we train computers to do things like understanding language, image recognition, pattern recognition, data classification, and data prediction. The training is embodied in artificial intelligence models that are then used to understand classify predict new data.

Computers using the artificial intelligence models can typically perform the tasks such as classifying images more quickly and accurately than humans, and some cases also better. But the application of the artificial intelligence modes is very specific, for a particular type of problem only. For example, an artificial intelligence model that is good at identifying similar looking images would not be of much use to control traffic.

What has changed recently is that several artificial intelligence technologies such as language understanding and deep learning have reached a level of maturity, in part due to the massive amounts of training data generated by the big Internet services. They have also become a lot more accessible and affordable thanks to the cloud and the investments made by the big cloud providers. The important thing is not artificial intelligence in itself,

Important artificial intelligence applications in human machine interaction are the abilities to translate human speech to text, understand natural language, and to interpret images: Michael Oussi, Global Chief Customer Officer, IFS.
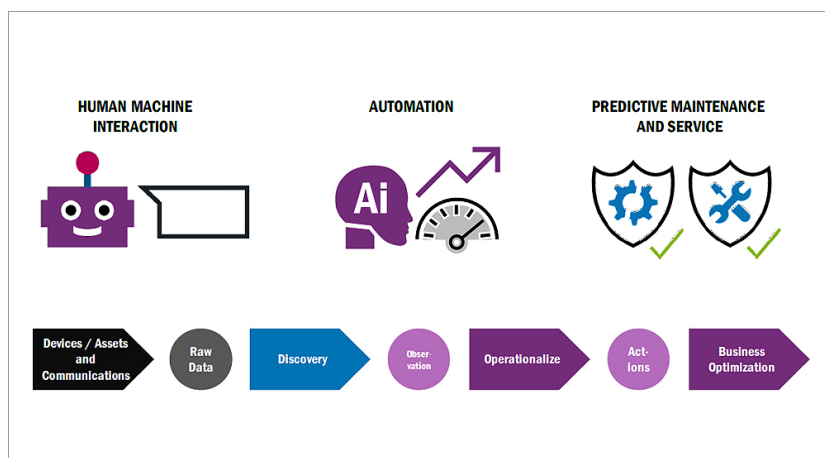
There are three key areas where the use of artificial intelligence will provide major improvements and new capabilities: human machine interaction, automation, and predictive maintenance and service.

but rather what it can be used for.

We see three key areas where the use of artificial intelligence technologies will allow us to provide with major improvements and new capabilities:

HUMAN MACHINE INTERACTION

Where advancements in speech recognition, natural language understanding, and computer image processing allow us to create things.

AUTOMATION

In terms of automating tasks and decisions that are currently performed manually, but also in terms of providing a smarter, more flexible, and more effective way of handling things we currently automate with simple business rules.

PREDICTIVE MAINTENANCE AND SERVICE

Where machine learning in particular allows us to combine IoT data with data to better predict future maintenance and service needs.

Important artificial intelligence applications in human machine interaction are the abilities to translate human speech to text, to understand natural language, and to interpret images. Imagine

using speech to tell a chatbot on your phone please add this to my expenses for the conference and then snapping a photo of a parking receipt.

To do this the chatbot has to understand your intent as adding receipt to expense report, identify the correct travel expense object, process the photo to understand which part of that text refers to the date, which the amount, and so on. The most common usage today is on natural language interactions using text.

With speech and language understanding being readily available from Microsoft, Google and other players, the challenge shifts from understanding what the user says, to understanding context and how to perform meaningful business tasks. Both of those require tight integration to the business applications.

This is not just about the immediate action of adding a new expense line for the parking receipt, but also the need to understand its context. Only by looking at ongoing travel expenses, travel requisitions and planned training events will a chatbot be able to accurately identify what it refers to.

Business applications have always been about automation. Historically this was done by

programming the application to automate certain tasks and decisions, like automatically reserving goods in inventory when an order is confirmed. In situations where greater flexibility is needed applications have introduced configurations and business rules to allow organisations to define how they want automation to happen over and above what is locked in the application's programming.

But business rules have shortcomings. Firstly, there is a limitation in terms of the degree of complexity that it is possible or desirable to develop in relation to rule building. Secondly, business rules do not dynamically change over time, forcing organisations to either use fewer more generic rules or spend a lot of time continuously defining and updating rules.

The next logical step in the evolution of automation is adding artificial intelligence to capture that complexity and dynamic in a self-learning model. Artificial intelligence also has the capacity to detect patterns and rules that might not be apparent to human beings, resulting in better decisions and business optimisations being made.

There is great potential in using artificial intelligence for three categories of automation:

ANOMALY DETECTION

Alerting the user and drawing attention to patterns that the user would most likely not have looked at otherwise. For example, a top five list of invoices most likely to be fraudulent, or a top-10 list of customers most likely to cancel placed orders.

DECISION MAKING

With help of value prediction and classification algorithms, we can start automating decisions based on the likelihood they will be correct. This will often start with

In a layered, multitier architecture, each tier has a clearly defined function with clear separation from and interface to other tiers: Michael Oussi¸ Global Chief Customer Officer, IFS.

recommending a decision which is confirmed by the user, switching to full automation as quality and confidence in the artificial intelligence grows. Correct reports could be automatically approved, incorrect ones rejected back to the employee, leaving managers to focus on the questionable ones only

OPTIMISATION

Taking a complex situation with many variables and inputs and creating the optimal strategy for making many decisions at the same time. Optimisation is seen in areas ranging from supply chain to manufacturing to field service.

Anomaly detection, single decisions, and optimisations are all areas where artificial intelligence can be used to accelerate and improve automation.

Though artificial intelligence has the potential to take automation and quality of decisions to the next level, it is not without its challenges. Most artificial intelligence techniques need access to a large set of historical data in order to train and validate models, limiting where artificial intelligence can be applied.

Using artificial intelligence consumes additional computing resources to train and re-train models, evaluate transactions against models and so on.

Therefore, if automation can be done using a pre-determined behavior, simple business rules or statistical algorithms, that would often be preferable. Where artificial intelligence automation will excel is in areas where it is unknown what the rules and correlations are, or where it is hard to express them. We expect that we will often see rules and artificial intelligence models being used together and in combination. ◼

1994 SOA   IFS APPLICATIONS   2015 LAA
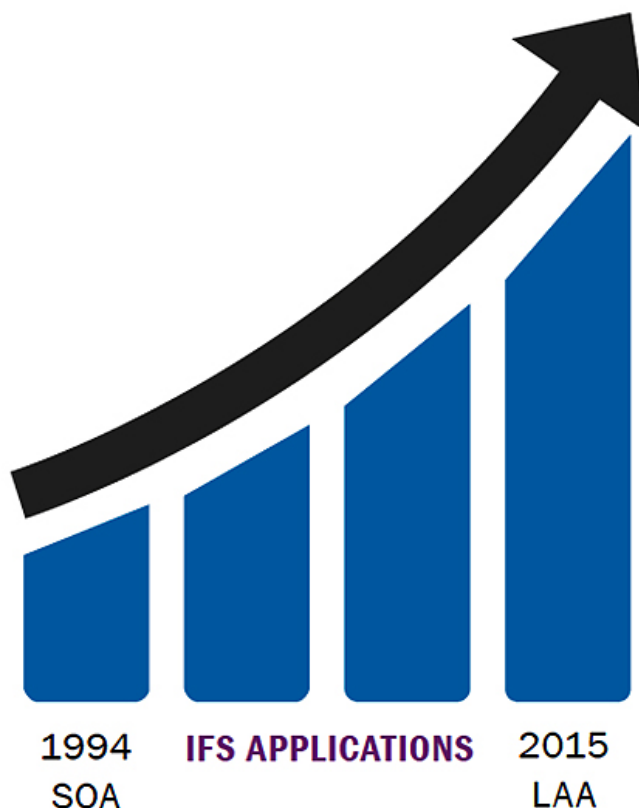
In a layered, multitier architecture, each tier has a clearly defined function with separation from other tiers.

How multitier applications are driving agility

Executives who have been around enterprise software implementations know software systems can take a long time to implement and almost as long to change. This can put businesses in a situation where their business software cannot keep up with the ongoing transformation brought on by economic or technological change. Enterprise resource planning, enterprise asset management, asset performance management and other software products are evolving to address this disconnect. So, what is layered application architecture?

In a layered, multitier architecture, each tier has a clearly defined function with clear separation from, and interface to, other tiers. The data storage tier is based on the relational database model. But no data in the data storage tier can be accessed or modified except through the business logic tier, safeguarding data integrity.

Retiring modifications aids in digital transformation by decreasing the cost of implementing, operating, reconfiguring and upgrading the software. Modifications must be written and tested, increasing cost and time spent in implementation. They must be supported by the enterprise software vendor, which increases the cost of on-going maintenance.

By segregating modifications into their own layer, and setting up rules for when they are invoked by the application, modifications no longer need to be rewritten or uplifted. All that is required is simple testing of these modifications, which may take a third of the time as before. Layered application architecture also defines clear ownership for the areas affecting business functionality and end-user experience. Each layer is automatically overlaid on top of the underlying layers and contains only the changes, additions from underlying layers, making it small and easy to maintain.

VERITAS ™

The truth in information.

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.

LACK OF DATA INTEGRATION INHIBITING TRANSFORMATION

Point solutions implemented to increase data capacity are now hinderances in end to end data integration, movement to digital platforms, and large-scale business and digital transformation.

U AE businesses seek to gain a competitive advantage in today's digital economy, but weaknesses in effectively managing day-to-day data can lead to lost productivity and missed opportunities. When employees have efficient access to data, they are empowered with the insight they need to make better, more informed decisions.

In key findings, only 27% of respondents in the UAE said that their organisation's data is completely integrated, similar to the global average of 29%. More than two-thirds of respondents in the UAE at 68%, said over one hour is lost daily due to data being difficult to locate while 30% said the time lost is less than one hour. This, UAE business leaders believe, leads to an efficiency decline of 17%, slightly higher than the global average. They said that over $2.1 million is lost due to challenges in day-to-day data management annually, similar to the global average.

Value of Data study, conducted by Vanson Bourne for Veritas, covered 1,500 IT decision makers and data managers across 15 countries, including 100 senior professionals from the UAE. A total of 1,500 IT decision makers and data managers were

Many organisations continue to face daily uncertainty over where their data is located and whether it is even protected. Unless addressed, the result will be compromised agility, exposure to security threats, plummeting productivity and lethargic decision making at even the highest of levels: Jyothi Swaroop, Vice President, Product and Solutions, Veritas.

interviewed in October and November across the US, UK, France, Germany, Switzerland, UAE, Canada, Mexico, Brazil, Australia, New Zealand, Singapore, China, Japan and Republic of Korea.

Enterprise data contains amazing opportunities and massive challenges. By contrast, when enterprise data is properly managed, it has nearly limitless potential.

HINDERANCES TO DATA TRANSFORMATION

Data management is an umbrella term that encompasses a number of capabilities including data

protection, data resiliency, and data compliance. Integrated data management, means each of the processes listed talks to the other, data can be easily shared between them, and employees can effortlessly collaborate. By contrast, ineffective data management is built upon technology silos that are not integrated. The negative consequences of a non-integrated data management approach are enormous.

Savvy enterprises soon realised, however, these approaches often have unintended, negative consequences including:
● Rigid complexity is often a biproduct of infrastructure simplification within an IT

environment. A key contributing factor is to this issue is implementing specialised point solutions that will not allow an infrastructure to scale or react nimbly.

• Inefficient spend can result when organisations continually buy additional storage to address escalating data growth. However, this is often the wrong solution to the problem since the actual issue is poor data management, not a need for more data storage.

• Potential data loss can occur when organisations move data to the cloud without a clear understanding of their cloud provider's data protection responsibilities. Likewise, moving to the cloud without a well-thought migration strategy can result in unprotected data that is vulnerable to breaches.
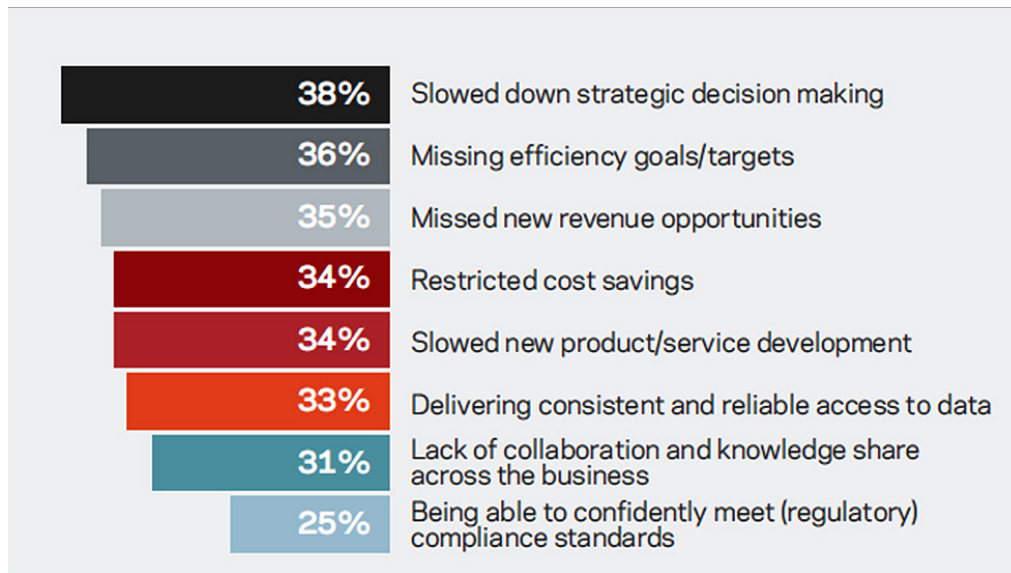
The consequences of ineffective data management can be crippling. Organisations estimate that they lose over $2 million per year as they struggle with data management challenges. 36% of IT leaders say employees are less efficient due to siloed data management processes, while 38% say their organisation's strategic decision-making is slowed because of ineffective data management processes.

Only 29% of respondents say their organisation has adopted a strategic, fully integrated approach to data management deployment. This implies the vast majority are taking a siloed approach and struggle to integrate disparate data management solutions. Often this siloed infrastructure results from continuing to add specialised, non-integrated point solutions
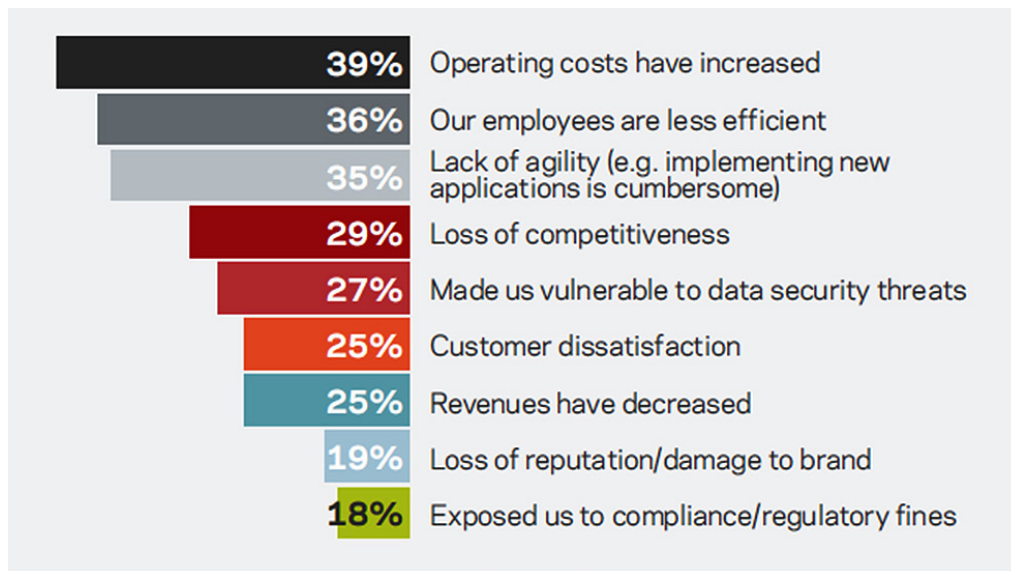
9 KEY QUESTIONS TO UNDERSTAND ABOUT ENTERPRISE DATA

1. Where is it located?

2. What is its age?

3. When was it last updated?

4. Who has access to it?

5. What is its retention period?

6. Is it subject to compliance regulations?

7. Who can access it?

8. What is its level of importance?

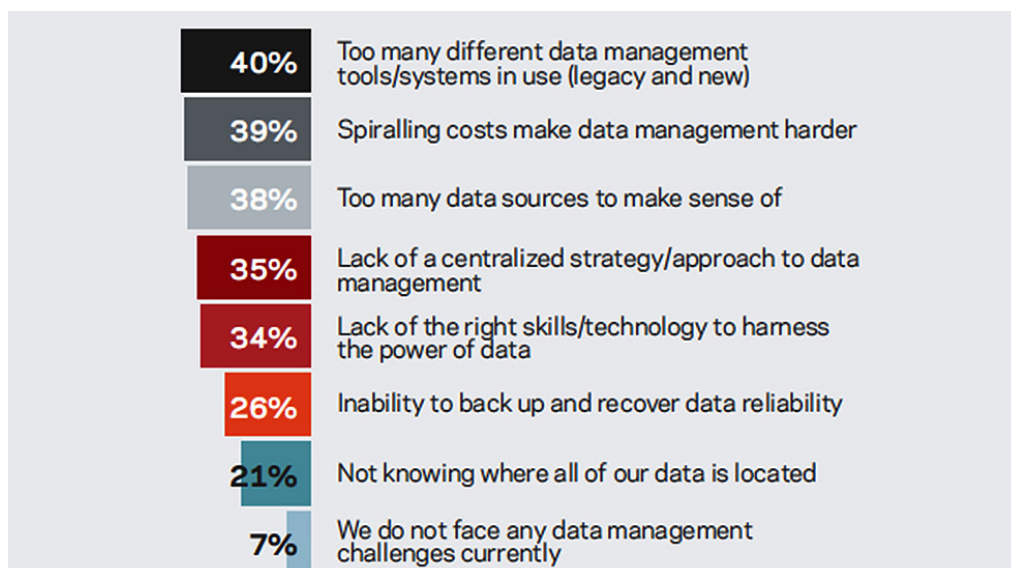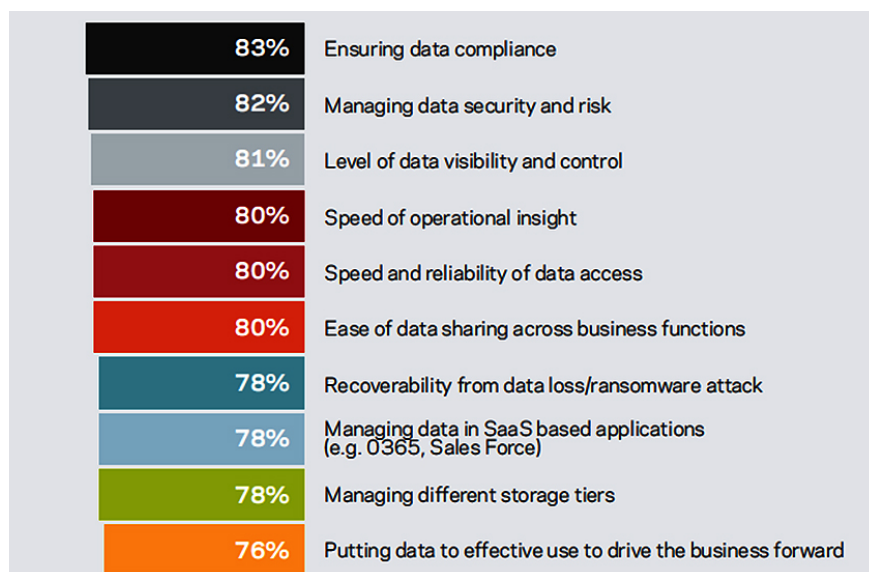9. Is it permissible for this data to sit on public cloud storage?

38%	Slowed down strategic decision making
36%	Missing efficiency goals/targets
35%	Missed new revenue opportunities
34%	Restricted cost savings
34%	Slowed new product/service development
33%	Delivering consistent and reliable access to data
31%	Lack of collaboration and knowledge share across the business
25%	Being able to confidently meet (regulatory) compliance standards

Day to day management challenges.

39%	Operating costs have increased
36%	Our employees are less efficient
35%	Lack of agility (e.g. implementing new applications is cumbersome)
29%	Loss of competitiveness
27%	Made us vulnerable to data security threats
25%	Customer dissatisfaction
25%	Revenues have decreased
19%	Loss of reputation/damage to brand
18%	Exposed us to compliance/regulatory fines

Longer term implications.

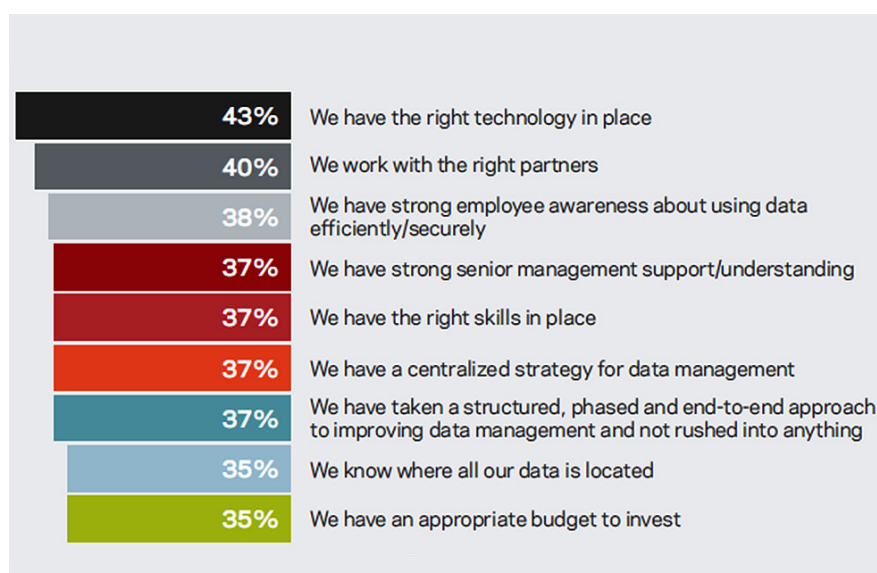|	
40%	Too many different data management tools/systems in use (legacy and new)
39%	Spiralling costs make data management harder
38%	Too many data sources to make sense of
35%	Lack of a centralized strategy/approach to data management
34%	Lack of the right skills/technology to harness the power of data
26%	Inability to back up and recover data reliability
21%	Not knowing where all of our data is located
7%	We do not face any data management challenges currently

What is driving the challenges.

Areas for improvement.

Facilitators for data integration.

Managing data with data

This involves an integrated, three-step process. By taking these steps, enterprises can simplify their environments, drive down costs, and extract more value from their data.

CLASSIFYING DATA
Classifying helps enterprises understand what they have, where it is located, who is using it, the number of copies that exist, if it is valuable or not, and more.

ENABLING POLICIES
Organisations can use the insights gained from data classification to intelligently understand, protect, and maintain their data.

AUTOMATING
There is simply too much data out there to be managed manually. Within every petabyte of enterprise data, there are roughly three billion files, it is beyond a humans capacity to manage it. Automation, through means of artificial intelligence and machine learning, can take on the tasks that an IT workforce cannot and will further unlock the capabilities of an organisations data.

Findings snapshot

A recent survey by Vanson Bourne of 1,500 IT decision makers and data managers across 15 countries confirms that ineffective day-to-day data management costs enterprises by severely impacting efficiency, productivity, profitability.

DATA MANAGEMENT CHALLENGES
97% of the IT leaders surveyed say day-to-day data management challenges have had a major impact on their organisation. These include:
- Slowing strategic decision-making
- Missing revenue opportunities
- Restricting cost savings
- Slowing the speed of new product and service development

INEFFECTIVE DATA MANAGEMENT
Companies also risk significant long-term damage. 95% say their organisation has suffered wider impacts due to data management challenges. These include:
- Increased operating costs
- Negatively impacted employee productivity and efficiency
- Lack of agility
- Inability to compete
- Increased vulnerability to data security threats
- Rising customer dissatisfaction

EVERYDAY CHALLENGES
Organisations face day-to-day challenges managing data. These include:
- Too many different data management systems to manage
- Spiraling costs make data management harder
- Too many complex data sources that are difficult to analyse
- Lacking the right skills to harness the power of data

AREAS FOR IMPROVEMENT
There are areas in organisations that are negatively impacted. These include:
- Ensuring data compliance
- Managing data security and risk
- Improving data visibility and control
- Speed and reliability of data access
- Ease of sharing data across business functions

BENEFITS OF DATA MANAGEMENT
It is important to understand that organisations are reaping benefits of effective data management, which can result in competitive advantage. Benefits include:
- Increased data compliance and decreased data security risks
- Reduced costs
- Increased customer satisfaction
- Higher productivity

FACILITATORS FOR DATA INTEGRATION
- Adopting a centralised strategy to better manage data
- Implementing the appropriate technology
- Working with partners that have experience in complex environments
- Being supported by strong senior management
- Being given an appropriate budget for investing in data management initiatives

and or data storage repositories over a period of years.

It is also important to take a long-range view of data as it moves from cradle to grave and understand how each stage in its lifecycle can result in siloed, non-integrated processes. For example, data is first stored in a particular location for applications to access it. Then it is copied to a secondary location in case the need for backup and recovery arises. It may be provisioned for development and testing purposes, analysed for decision making, tiered to lower-cost storage for cost optimisation, then finally retired or deleted.

One of the major implications of non-integrated data management is that all of an enterprise's data is treated roughly the same, which leads to the troublesome issues. In order to manage data effectively, enterprises need to have a deep understanding of their data.

Solving these challenges starts with executing data management properly. However, 93% of IT leaders are experiencing a variety of challenges in implementing data management initiatives including using too many different data management systems, escalating costs, and lacking the right skills and technology to harness their data's value.

58% say the complexity of their data footprint limits their ability to realise the value of their data. 46% admit there is not enough awareness or sponsorship in their enterprise about the consequences of poorly integrated data management capabilities, which implies they are often fighting an uphill battle to drive change.

BEGINNING YOUR DATA TRANSFORMATION

What are the factors that help enterprises realise the benefits of data management? Organisations that successfully realised complete data integration share that focusing on two key areas makes the difference: taking a strategic approach to data management and having the right technology in place.

Organisations with the most successful data management initiatives realise it is a strategic decision to decide how they will integrate all the necessary data management capabilities together. This means carefully considering how their data will be managed throughout its lifecycle including protection, classification, provisioning, analysis, and eventually expunging or archiving data.

Organisations that devise a well-thought strategy for data management and adopt technologies that tie together well are the most

IT LEADERS EXPECT THAT INVESTING IN DATA MANAGEMENT WILL HAVE A HIGH RETURN. THEY ESTIMATE THAT THE AVERAGE ROI FOR EVERY DOLLAR INVESTED WILL BE 2.18.

2.18 ROI

58% SAY THE COMPLEXITY OF THEIR DATA FOOTPRINT LIMITS THEIR ABILITY TO REALIZE THE VALUE OF THEIR DATA.

ORGANIZATIONS LOSE OVER $2 MILLION US DOLLARS PER YEAR AS THEY STRUGGLE WITH DATA MANAGEMENT CHALLENGES

IT DECISION MAKERS WASTE 2 HOURS DAILY LOOKING FOR RELEVANT DATA

likely to succeed in unlocking their data's value. They are also more likely to realise productivity, profitability, and efficiency gains compared to those that don't take these steps.

The next step in using a strategic approach is to consider managing data with data. Organisations use data to manage and govern so many aspects of their business, why not manage data with data? It is a new way to tackle data management challenges, but one with great promise. ■

Excerpted from Realizing the Power of Enterprise Data by Veritas and Vanson Bourne.

WHY CLOUD IS FASTEST AND SAFEST WAY TO INNOVATE

Richard Munro at VMware gives five good reasons to put cloud at the centre of all business transformation in an organisation.

RICHARD MUNRO, Director Global Cloud Strategy, VMware.

nnovation is king. In the face of rising expectations and disruptive digital competitors, enterprises are desperate to innovate to safeguard their businesses and unlock future growth. Yet how often do we see many struggles to be able to execute? Look at Xerox, Kodak, Nokia. All big names that struggled to adapt to the changing demands of the market. Yet, interestingly, these companies often had the next big thing first, yet failed to deliver on those innovations and instead found themselves ceding to others. Why?

People are realising that being able to generate ideas and being able to execute those ideas effectively, either in implementing new business models or turning ideas into business outcomes, are two different things. This was identified as the innovation execution gap in the Innovating in the Exponential Economy Report.

With fluctuating market conditions and the unpredictability of doing business in today's global economy, combined with unprecedented speeds in technical innovation, organisations have to move faster than ever before. This has left traditional approaches to executing ideas no longer fit for purpose.

As the report outlines, to bridge that gap organisations need to finely tune their focus on putting the right people, process and technology into play and creating the right conditions for them to succeed. People is really about the work culture. It is creating, fostering and enabling an environment where individuals feel empowered to come up with ideas themselves, rather than assume it is someone else's job.

Process supports people. Deploying the mechanisms that allow those ideas to be captured, developed and shared effectively with decision-makers.

Underpinning it all is technology. It is how we deliver, the digital foundation on which everything is built: the infrastructure, apps, services and devices which allow businesses to experiment, to scale, to be nimbler; people to work smarter and in new ways, often at speeds and with lower risk profiles not available before. The role of cloud computing in this cannot be underestimated.

That technology and process piece requires CIOs to be the instigators of business delivery. Many are already aware of this, and their role in delivering innovation. According to a report, 46% of CIOs say their function will be essential to fostering innovation within their companies.

HOW DO THEY PLAN TO ACHIEVE THIS?

Even those that do not realise it are taking steps in the right direction. In the past the questions for a CIO have been about the executional concerns of classic IT, which focused on when hardware could be procured and installed. Increasingly, however, they now are asking when will I see results? They are looking for services that can be deployed and integrated quickly, and deliver results and value, even faster.

And this is where cloud environments can really help deliver. There are five core ways that cloud is enabling organisations to execute innovation.

Firstly, it delivers. It is sign up and go simple. Need additional licenses, servers, functionality, features, applications? If it is delivered by cloud the acquisition and set up time is minute compared to on-premises classic IT. Speed in delivering new applications and services is now essential to business advantage, and

KEY TAKEAWAYS

- Traditional approaches to executing ideas are no longer fit for purpose.
- Technology is in the background, IT ceases to be an inertial barrier, users get on with the task.
- Finance is no longer blocker to experimentation and innovation and becomes a strategic weapon.

cloud technologies provide a great sand-pit for experimentation.

This is exactly why Amadeus, a provider of advanced technology solutions for the global travel industry, is using cloud - to help speed application development lifecycles to realise and respond to new business opportunities rapidly.

Secondly, it empowers users to be innovative. That speed and simplicity, combined with a re-imagined digital workspace, allows access to cloud native applications and delivers the heightened, intuitive experience employees have come to expect from the digital tools they use outside of the workplace. It means the technology is in the background, IT ceases to be an inertial barrier, and users get on with the task at hand.

Thirdly, cloud delivers financial freedom. Traditional IT required upfront investment to be hedged against expected requirements. Cloud changes that dynamic – with most services being subscription based, cash can now flow in the form that best meets the needs of the work being done.

That means having the full flexibility of both capital and operational expenditure models to have both long-term spend optimisation and venture-style investment backing for trialing new services or applications. In

other words, finance is no longer the blocker to experimentation and innovation, but becomes a strategic weapon.

Fourthly, cloud delivers scale. It allows organisations to scale up and down all of their resources as business demands it, quickly and without a high cost of change. This means a wide spectrum of our finite resources, including people and technology, can be aligned to shifting business priorities on a daily basis, rather than in quarterly cycles. This gets more out of investment, making it work harder as opposed to standing redundant, and mitigates the costs of deviation where changing course can result in exponential costs increases.

Finally, cloud offers access to shortcuts. That might be prebuilt platforms or X-as-a-service solutions – whatever it is, and whatever you need, it is likely that, a version of it already exists. This is what allows digital native companies to scale rapidly.

Take Uber – it is not all custom-designed code but instead uses other services to get the job done quicker. If you only have to develop a part of your offering from scratch and can augment it with off-the-shelf components that have already been delivered and proven, you will have a much faster, and less risky, time to market.

That said, it is not as simple as listing five reasons and that being it. Consideration needs to be given to the reality of enterprise infrastructure. Most established organisations have a complex mix of legacy systems and applications, some of which are critical to the business, but simply cannot be moved wholesale.

They may need to evolve, they may need to be decomposed, or they may simply have to stay where they are. To support all the ways of working we now need, we need consistency between our different environments

and cloud platforms.

This is where hybrid cloud environments come in. They act as the digital foundation that allows businesses to place applications where they function best, but also provide the flexibility to move services around as circumstances change. By taking a hybrid approach, with seamless connectivity across private and public clouds, it has been able to achieve frictionless IT, in a fast and secure way.

This is vital for CIOs looking to make any sort of transformational business case to their board. The CIO can take a line of business as an example project, use cloud to rapidly transform the necessary elements, and take those results to their leadership to prompt engagement and further sign off.

By being able to action change and deliver results rapidly, the CIO increases relevance. Rather than long term planning to pilot this or project plans to do proof of concepts for that, they have live use cases. In turn, they become the catalyst to turn the established business model into an innovative one.

Innovation is king, but a failure to execute is the death knell for organisations in all sectors. This gap exists because companies lack the ability to effect, and demonstrate the impact of, change without significant debate, sign off and drawn out decision-making. In these cases, silos are the enemy as more problems and barriers spring up around the things you are trying to change.

Cloud can help overcome the gap by providing the technology enabler people and process need to complete the innovation prism. Yet it cannot be a single cloud, but an integrated mix of environments with a consistency at its core to provide the digital foundation.

With this, the CIO's hand is strengthened as they assume their role as the catalyst for transformative innovation. ■

FIVE WAYS CLOUD CAN CLOSE THE INNOVATION EXECUTION GAP

INNOVATION IS KING

Companies are desperate to innovate. It safeguards their business and unlocks future growth.

Yet many struggle to be able to execute. This is called the **innovation execution gap.** To bridge it requires focus on the right culture and the right processes.

But underpinning it all is the technology, specifically cloud technology. It's how organisations deliver a digital foundation on which everything is built: the infrastructure, apps, services and devices which allow businesses to experiment, to scale, to be nimbler; and allows people to work smarter and in new ways.

Which is why cloud has never been more critical in helping CIOs to address the gap; to become agents of change, to get board room buy-in and become the catalyst for transformative innovation.
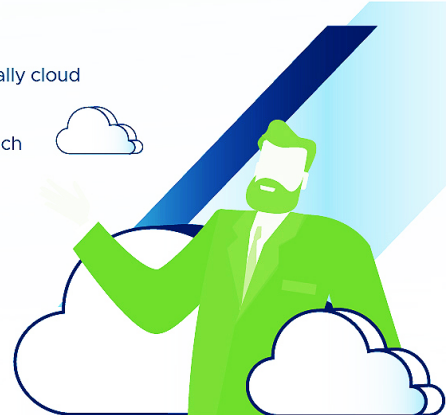
ALL CLOUD IS NOT EQUAL

Incorporating legacy infrastructure into digital environments means a hybrid approach is needed. It allows you to place all the services and apps where they function best. That means time to value is much faster.

CONCLUSION

Innovation is king, but failure to execute is the death knell for organisations in all sectors.

Through hybrid cloud, organisations can build a digital foundation that will unlock rapid results using the right technology, in the right location, at the right time.

Courtesy VMware.

FIVE WAYS CLOUD CAN CLOSE THE INNOVATION EXECUTION GAP

The five reasons why cloud helps bridge the innovation execution gap

1. It delivers.

Cloud is the 'push button' way of getting things done and offers a great sand-pit for experimentation

2. It empowers.

Innovation can come from users. Cloud and access to native apps empower users to work and innovate how they want

3. It's freedom.

Cloud supports subscription financing – cash can be freed and finance is no longer the blocker to experimentation and innovation

4. It scales.

Cloud can help scale up or down as the business demands on a daily basis

5. It shortcuts.

Prebuilt platforms and as-a-service solutions can be acquired and deployed quickly offering a faster, and less risky, time to market

ONE NOTE OF CAUTION –
YOU CAN BREAK ANY OF THESE THINGS
WHEN YOU IMPLEMENT THEM IN A SILO!

Courtesy VMware.