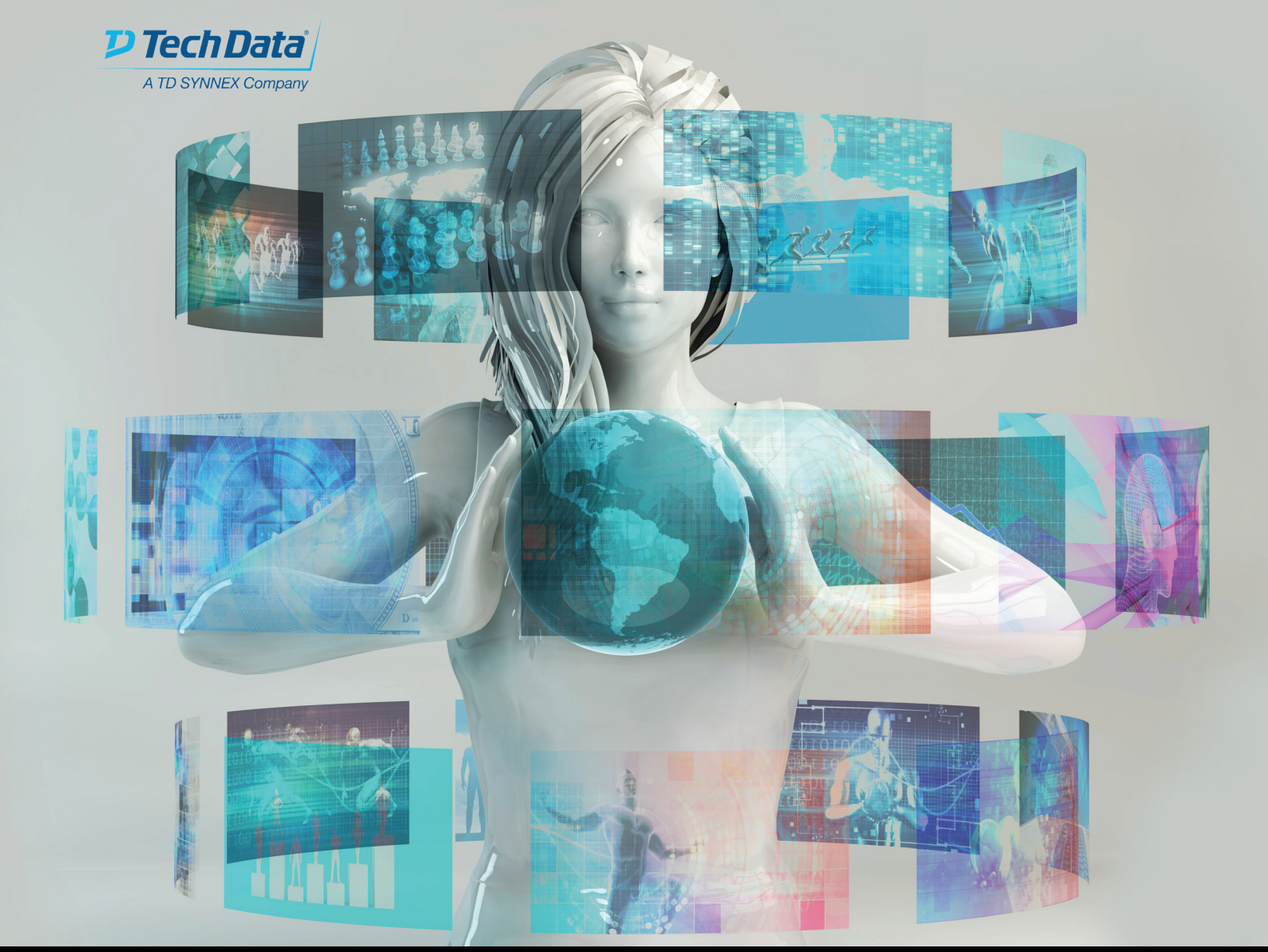
SDC CHANNEL INSIGHTS
SUSTAINING DIGITAL EXCELLENCE

How the Channel will explore the Metaverse in 2022



ISSUE II 2022
AN ANGEL BUSINESS COMMUNICATIONS PUBLICATION
SDC-CHANNEL.NEWS

INSIDE

THE MINDFUL USE OF DIGITAL IS CRITICAL

It is easy to overlook the internet and digital consumption when considering sustainability strategies

REALISING A FASTER, GREENER FUTURE

After many years of hype, 5G is finally here. The first 5G networks are now deployed around the world

DATA PROTECTION BUDGETS RISING ENOUGH?

Organisations are best advised to work with an expert partner to devise a Modern Data Protection strategy

SDC CHANNEL SUMMIT

THE 2ND SDC CHANNEL SUMMIT

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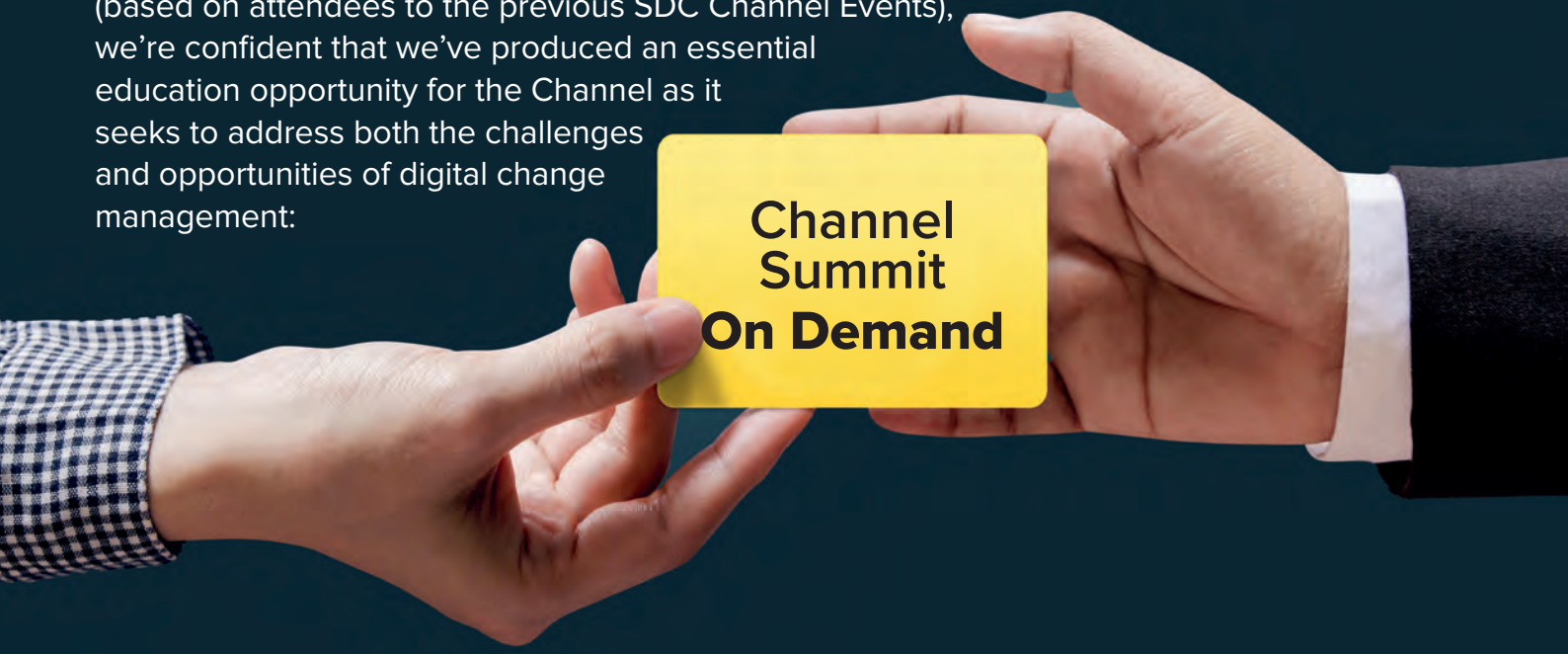
We are delighted to introduce our second virtual conference. Based on extensive research conducted with attendees at the first event, as well as survey feedback from our Channel data base (based on attendees to the previous SDC Channel Events), we're confident that we've produced an essential education opportunity for the Channel as it seeks to address both the challenges and opportunities of digital change management:



Over the course of two, consecutive morning sessions (giving attendees plenty of time to run their business as well), we will be providing invaluable insights, advice and recommended actions to help Channel organisations as both they, and their customers, get to grips with what it means to create, develop and optimise a truly digital business.

Topics include:

1. SKILLS + TRAINING
2. SUSTAINABLE BUSINESS DEVELOPMENT
3. SIMPLIFYING THE SOLUTION STACK
4. SELECTING THE RIGHT SECURITY PARTNERS

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Editor's view

By Phil Alsop

Opportunity knocks

This issue of SDC Channel Insights provides a major insight into some of the key technologies which can help Channel customers not just survive, but actually to thrive in the current volatile business environment. And, as a couple of our news stories suggest, there are plenty of industry sectors seeking to gain a digital advantage.

In other words, the Channel has two major opportunities – to provide technology innovation expertise, and to specialize in one or more industry vertical.

In no particular order, the technology opportunities available to the Channel include: 5G and the edge, AI (including voice AI), hybrid and remote working, applications and digital delivery, collaboration tools, quantum computing (maybe early days for this!), the employee experience, simplifying work complexity. And the industry sectors where digital solutions can make a major difference include hospitality and retail. Hopefully, when you've finished reading the magazine you will have a much better understanding of the technology opportunities and can then make some informed decisions as to which ones you do and don't want to explore further, alongside any thoughts as to setting yourself up as a specialist for one or more industry sector.

That's the easy bit.

However, where you can offer very real value to your customers, over and above the 'simple' supply of technology solutions, is to provide expert advice. For example, quantum computing is out there, but what is it exactly, how does it work and how can it help end users? If you know the answers to all these questions you could prove invaluable to your customer base.

Voice AI is another potentially significant game changer. But this is one topic (of many) where you may well be able to offer advice over and above the nuts and bolts of the technology itself. That's to say, you may well want to advise your customers to think more about how and where this can be used effectively to improve the customer experience, rather than as a barrier to positive interaction. I suspect we are all aware of good and bad experiences we've had when it comes to voice AI, and the bad ones are completely avoidable if the customer journey is properly understood. I'm not suggesting that the Channel needs to take over the running of its customers' businesses, but MSPs and VARs should have the confidence to ask, sometimes uncomfortable, questions.

Many years ago I met the CEO and founder of a major, global independent travel business. We're talking the early days of the Internet. I asked him when he was planning to move his business online, to which he replied that his business was all about providing a bespoke, face to face or over the phone service, so he had no immediate plans to embrace ecommerce. Even today, while the company does have a web presence, the USP is still customers walking into shops or talking to someone on the phone.

The Channel companies which can act as both trusted technology and business advisers will thrive in the era of digital disruption.

SDC CHANNEL INSIGHTS

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SDC CHANNEL INSIGHTS

Technology Channel shows highest level of confidence

Research released by leading global channel services provider, Agilitas IT Solutions has revealed that confidence in the future of the Technology Channel has reached a record height amongst UK industry decision makers, with the overall confidence score reaching 7.8 out of a possible 10. Agilitas unveils these findings through the launch of its annual Technology Channel Confidence Index 2022, the inaugural report of the new EVOLVE era.

SENIOR LEADERS from across the Technology Channel were asked to rate their level of optimism on a scale of 1 to 10 (1 being very pessimistic, 10 being very optimistic) in a number of key areas impacting the sector today.

In addition to staple themes from previous years, Agilitas introduced a number of new topics in response to new trends related to a sustainable future for the planet, people and partners; Culture, Leadership, Globalocal, Purpose, Alliances, and Values.

As we continue on a course of post-pandemic recovery, this year saw a steady rise in total confidence about the future of the whole Technology Channel to 7.8, compared to the 7.4 levels recorded in 2021. When thinking about the future success of their own company over the course of the next 12 months, confidence was even higher with a combined score of 7.9.

Findings show that many Technology Channel leaders are already recognising the need for globalocal supply chain innovation. When asked how important building local supply chains and ecosystems across global markets will be to their business in the next 12 months, respondents offered a mean score of 7.7 (where 10 was 'very important').

Of those surveyed, over half (59%) of channel leaders scored 8, 9 or 10, with Business Owners and Managing Directors citing a significant focus on a globalocal approach to their business model, with scores of 8.3 and 8.1 respectively.

Other key findings from the report include:

Almost half (47%) of decision makers stated their organisations measures sustainability targets quarterly

The level of confidence in delivering customer experiences saw a return to pre-pandemic scores, climbing back up to 7.9 for the next 12 months

Confidence in the channel's ability to form collaborative partnerships that balance profit with purpose was high amongst channel leaders, scoring 7.9 out 10

Company culture was highly important to this year's respondents, sitting at 8.2. Astriking 70% rated its importance 8 and above

Technology Channel leaders showed strong confidence in attracting and retaining talent at 7.8 out of 10, with 64% scoring 8 or above on the scale.

"As the first Agilitas market report of the post-pandemic era, there is no surprise that the first EVOLVE Technology Channel Confidence Index would offer up such a diverse mix of results, full of lessons learned, progression and disruption.

The vision to act with impact extends to all corners of the Technology Channel to build an environmentally, socially and economically sustainable future. Now, the true value of success is no longer determined by financial gain alone, as many channel players seek to re-evaluate the way they do business to find the right balance between profits and purpose," comments Shaun Lynn, CEO, Agilitas.

AI is A1

Over half of global business leaders believe investing in AI will give them a competitive advantage.

SAMBANOVA SYSTEMS has published the results of its global research on AI adoption within enterprise organizations. It found that business leaders are increasingly deploying AI and progress could be further accelerated by moving beyond a fragmented proliferation of small models. Enterprise leaders are placing AI at the core of a multiyear technology strategy and two-thirds (67%) believe it will be transformational or significantly change how they do business in 12 to 24 months.

The driver behind the change that ai will deliver

When asked about the type of change that AI will deliver, global business leaders cited the top three drivers:

•80% think that AI will improve the employee or customer experience by streamlining processes and decreasing response time

- 68% think AI will cut costs by automating processes and initiating a better use of head count
- 51% will use AI to increase profit through better use of data or opening new revenue streams

There is another reason behind adoption of AI – it is increasingly becoming a competitive asset. The research found that almost three-quarters (72%) of business leaders believe their competitors are using AI, and of those almost two-thirds (63%) are concerned their competitors will use AI to gain an advantage over their own business.

Marshall Choy, SVP Product at SambaNova commented on the findings: "Enduring enterprises always keep a sharp eye on technology as a way to rise above competitors. Just like railroads, radio, and the internet have done for previous generations, AI is reshaping business as we know it and over the next decade, early investors and adopters stand to yield the greatest benefits."

Businesses need to consolidate models creating an enterprise-wide strategy based on large models

One of the biggest challenges enterprises face is the number of AI models currently deployed in production. Only 18% of organizations utilizing AI are deploying it as a large-scale enterprise-class initiative. The rest - 82% - are introducing it across multiple programs, which can create unexpected hurdles and a less coherent AI strategy. However, in the era of general purpose large language models, there is now a better way.

Choy elaborated on the benefits of large language models: "You'll be hard-pressed to find an enterprise that runs more than a handful of relational databases. Most organizations have consolidated their databases, which means they are well understood, maintainable, secure and auditable. This hasn't happened with AI models yet."

"Most organizations that have a significant AI footprint have been left with a myriad of hundreds or even thousands of disparate models," stated Choy. "They are not easily manageable, and certainly not auditable. This is where a single foundation model for language can be the firms' AI backbone at enterprise scale as the basis for all AI applications and workflows for the next decade."

Study reveals hybrid, remote work challenges

NinjaOne has released findings from its latest report on the trends and challenges impacting hybrid- and remote-work among highly regulated industries.

SURVEYING 400 EMPLOYEES across the financial industry and the public sector, the report identified multiple areas gaps in organization's readiness to support hybrid and remote employees, ranging from a lack of security policies and oversight to disconnects on employees preferred work schedules and connection to other team members as well as the organization. The report, "Hybrid and Remote Employee Management 2022: Confronting Security, Operations, and Culture in Regulated Industries," is available for download at https://www.ninjaone.com/hybrid-remote-work-report/

"The results of our study show that hybrid working models are definitely preferred by employees," summarizes NinjaOne CEO Sal Sferlazza. "At the same time, however, a significant proportion of companies still have some catching up to do in terms of implementation. Uniform guidelines and a secure IT infrastructure must form the foundation, but a unified IT management platform, such as NinjaOne's, can fully support IT teams and service providers adapting to a remote-first world."

Employees Want Remote Work Despite Executives' Push For a Return To The Office

Recent headlines point to a strong desire among upper management for a return to the office, but according to this new report, most employees want to continue working from home, at least part of the time. More than 90% of employees NinjaOne surveyed said they wanted to work from home at least one day a week, with a quarter saying fully remote work was their preference. This divide is already playing out in the midst of The Great Resignation and record levels of staff leaving their jobs for opportunities that better match their work preferences. While many organizations have instituted changes, such as investing in home-based IT tools for remote employees or adopting new software to support remote teams, many organizations appear to be taking a wait-and-see approach due to limited investment in developing a remote-first strategy.This dichotomy between employee preferences for remote work and organization's investments in making that possible will represent a challenge that CIOs and IT leaders must contend with.

Communication among remote and hybrid teams is strong, but needs management

41% of employees say that new communication channels have made them feel more connected to their co-workers, with about 35% saying they communicate more frequently, too. These are positive signs that remote employees are still able to build bonds and relationships, but organizations should be more actively engaged in managing the tools and devices used to collaborate.

Only about half of organizations said that IT managed their communication channels. That responsibility was pushed to others, like department heads or even individual employees, and it represents a major cybersecurity oversight as end-users are much less likely to maintain and patch software. Bringing communication and collaboration channels under management by the IT team should be a top priority for organizations.

Lack of Security Policies, Employee Oversight adds to Widening Gaps

Security is a challenging job that requires specialized skills, tools, and training to do. Unfortunately, 45% of organizations rely on department leaders or employees themselves to manage the security updates on their devices and applications. In today's competitive business environment, the efficient and secure management of IT resources and employees is a necessity. By outsourcing this task to employees themselves, organizations wade into risk that's easy to avoid. Poor security management also extends to data privacy and security guidelines, which are incomplete or missing for almost half of organizations. Adding to the security concerns, nearly 40% of respondents hadn't had a security training session for 6 months or longer, with 14% having never had security training. Employees asked to manage their own security and IT needs must be properly supported if they hope to succeed, and based on these findings organizations could be doing more.

Productivity gains come at the expense of employees free time

48% of employees say working remotely made them more productive, but at the same time 40% also say they are working more hours. This finding echoes recent headlines suggesting that employees are working longer hours while home. Burnout and supporting employee mental health are important considerations for an employee's decision to stay with a company, and should rise as a priority among leaders.

Unified Remote Management Tools are Needed to Help Hybrid and Remote Teams Thrive

As the trend toward hybrid work models continues unabated, many companies are clearly struggling to efficiently and securely manage remote workforces and a plethora of new devices and applications. To cut through this noise and take back control, CIOs and IT leaders should look towards simplifying their IT tools stack with unified tools that balance ease of use and power.

Post-pandemic leaders emerge to reimagine applications and digital delivery

Cisco AppDynamics has released the annual Agents of Transformation report which reveals the emergence of a new class of post-pandemic technology leaders who are reimagining applications and digital services delivery as the lines between IT operations and business strategy blur.

CISCO APPDYNAMICS, a leading provider of Observability and Application Performance Monitoring technology, has published findings from Agents of Transformation 2022, the fourth annual report that analyzes the skills and attributes of elite global technologists.

In the wake of the pandemic, it reveals the emergence of a new class of technology experts stepping up to meet critical challenges that are blurring the lines between business strategy and IT operations. The report also cites the demand to make all products and services digitally available in the Experience Economy amid heightened security threats, increasing complexity, and the accelerated shift to hybrid work and the cloud.

"The bar continues to rise, and over the last year we have seen a redefinition of what it means to be an Agent of Transformation. These leaders are looking to better understand how issues in their respective domains impact the total experience of users and applications, adapting to change with solutions that positively affect the overall business," said Liz Centoni, EVP, Chief Strategy Officer, GM of Applications.

According to the Cisco AppDynamics report, 74% believe that their experiences in recent years – particularly during the pandemic – have accelerated their careers, and 88% now consider themselves to be business leaders. However, just 10% of technology experts have reached the elite status of 'Agents of Transformation'. These individuals represent top-flight leaders who are reimagining and delivering high-value applications and services that create the always-on, secure, and exceptional user experiences now demanded by end users and customers. Respondents cite a fundamental change in the role of technologists, including the skills and resources required to operate effectively and proficiently. At the same time, they say they now contend with soaring complexity and volumes of data from across the technology stack and must integrate a massively expanding set of cloud-native services with existing on-premises systems and tools.

- 88% believe that what it means to be a technologist has changed
- 84% say the skills and qualities that define an Agent of Transformation have evolved
- 66% indicate that it is now more difficult to be an Agent of Transformation
- One in four say their organization remains stuck in reactive, "fire-fighting mode"

Digital transformation means almost every company and organization interacts with consumers via web and mobile applications, and the transition to hybrid work means more interaction with SaaS tools and web interfaces. While consumers can pivot fast to another brand's app or service, companies that cannot instantly improve digital experiences risk having loyal customers walk away.

While acknowledging the far-reaching consequences of this change, respondents in the Cisco AppDynamics report note that they need help navigating the technical and operational ambiguities of digital transformation. Specifically, they are looking for unified visibility into their IT environments to better manage and optimize application availability and performance. This requires focusing investments on application security, observability over cloud-native applications and infrastructure, and linking IT performance to business decision making.

- 77% believe it will be important to invest in application security over the next 12 months to meet customer and employee needs
- 71% think their organization will need to invest in observing cloud-native applications and infrastructure
- 84% say that the need to maintain the performance of business applications is now more important than ever
- 85% state that full stack observability is core to sustainable transformation and innovation in their organization.

Ivanti research uncovers employees' work frustrations

The research uncovered 64% of employees believe their experience with technology impacts their morale, but only 20% of the C-Suite put budget toward improving the digital employee experience, and only 21% of IT leaders prioritize end user experience when selecting a tool.

IVANTI has published the results of its State of the Digital Employee Experience (DEX) study. Ivanti worked with global digital transformation experts and surveyed 10,000 office workers, IT professionals, and the C-Suite to evaluate the level of prioritization and adoption of DEX in organizations and how it shapes the daily working experiences for employees. The report revealed that 49% of employees are frustrated by the tech and tools their organization provides and 64% believe that the way they interact with technology directly impacts morale.

In fact:

- 26% of employees are considering quitting their jobs because they lack suitable tech,
- 42% have spent their own money on better tech to work more productively,
- and 65% believe they would be more productive if they had better technology at their disposal.

Conflicting views remain between C-Suite, IT, and employees when it comes to the future of work and technology's role in enabling the culture of hybrid work. Just 13% of knowledge workers prefer to work exclusively from the office, yet 56% of CXOs still feel that employees need to be in the office to be productive, although 74% of the C-Suite report they are more productive since the start of the pandemic – showing a disconnect between what they have experienced and what they believe employees need to do to be productive.

Globally the C-Suite's number one priority was employee productivity, with workplace culture and employee satisfaction falling further down the list. Furthermore, 62% of the C-Suite concedes that leadership prioritizes profitability over employee experience. As employee experience continues to fall to the bottom of the C-Suite agenda, IT will continue to deprioritize it on theirs, with only 21% of IT leaders considering the end user experience to be the main priority when selecting new tools.

"Ensuring positive employee digital experiences is the new cornerstone of modern business IT management," noted Steve Brasen, Research Director with Enterprise Management Associates. "The improvement of workforce productivity helps attract and retain essential talent, accelerates business agility and competitiveness, reduces operational costs, and drives organizational success and profitability. Understanding DEX requirements is the key to adapting related technologies and practices that will support each organization's unique environment." Innovation is undeniably the driving force behind the rise of hybrid work, but the unfortunate truth is that many organizations still experience major challenges in its adoption. The top challenges reported by office workers include too many emails or chat messages (28%), a lack of connection to coworkers (27%), and software not working properly (23%). But despite these challenges and executive skepticism, all groups reported being more productive in the era of hybrid work, highlighting the fact that it is not so much the place of work that impacts productivity, but the experience that people have when interacting with technology.

"The Everywhere Workplace has forever changed employee expectations when it comes to where they work, how they work, and what device they work on," said Jeff Abbott, Ivanti CEO. "How employees interact with technology and their satisfaction with that experience directly relates to the success and value they deliver to the organization. The Digital Employee Experience should be a board level priority, and IT teams are poised to be strategic leaders in their organization to make it happen."

The growing variety of devices and networks that hybrid workers use has greatly expanded the inventory of assets that IT teams need to manage, but 32% of IT professionals still use spreadsheets to track these assets and only 47% agree completely that their organizations have full visibility into every device that attempts to access their network. One of the biggest challenges facing IT leaders today is the need to enable a seamless end user experience while maintaining robust security. The challenge becomes more complex when there is pressure from the top to bypass security measures, with 49% of C-level executives reporting they have requested to bypass one or more security measures in the last year.

Intelligent automation will lead companies out of global crises

Automation Anywhere signals intelligent automation will be a strategic lever as businesses brace for a recession.

AS WORLD TENSIONS INCREASE and the stock market faces volatility, business leaders indicate that intelligent automation has become a pivotal strategy to navigate current market challenges and sustain business performance. Of the 1,000 global organizations surveyed, more than 90 percent say automation addresses the impact of supply chain and economic uncertainty, according to the third edition of the *Automation Now & Next report from Automation Anywhere* and leading research firm Futurum Research.

Consequences of the global pandemic, ongoing trade concerns, and political conflicts have disrupted business operations, which has, in turn, exacerbated existing workforce issues, created supply shortages, and made demand forecasting and customer engagements more complex. The *Automation Now & Next* report found that overwhelmingly, organizations are making intelligent automation a foundational technology to overcome these obstacles.

"We're seeing things we never thought we would experience in our lifetime – and that's forcing companies to rapidly adapt and understand how to remain agile for unexpected events and scale their automaton strategies amid ongoing disruptions," said Mihir Shukla, CEO and Co-Founder of Automation Anywhere. "Our third Automation Now & Next Report revealed that intelligent automation is the prevailing technology that is proving to be the most crucial asset for businesses in every sector across the globe. As a result, organizations have dramatically increased budgets to support new automation initiatives."

This is particularly timely due to global workforce shortages juxtaposed with unprecedented product and customer demand. Shukla continued, "It doesn't matter what you produce, or where you produce it. It's vital to get work done and deliver products to customers. And with the speed and agility offered by cloud automation, we can address this need."

- 77% of respondents said they've made automation a priority for the next 12 months having achieved an average return on investment of 6.3X
- 94% of respondents state automation is helping address supply chain issues
- 61 % of respondents strongly agree that automation has helped address staffing shortages

Automation Investments are Trending Upwards

Looking ahead to 2023, the report shows automation budgets are dramatically increasing, with more than 77 percent of organizations indicating they will boost their automation budgets in the year ahead and expect to have 500 or more bots deployed within 12 months. A quarter of respondents say they are escalating automation funding by at least 25 percent to help speed up automation deployments.

With automation proving to be core to business operations the report also indicates that:

- 70% of companies state that 30% of their work across business functions can be automated

The Future of Automation is Cloud

The research also found that cloud-based automations are integral for future-proofing business transformation strategies. Cloud delivers agility and flexibility to rapidly respond to the nature of today's quickly evolving environments, which rings true for the 90 percent who said they're moving from on-premises to cloud automation – and for the 93 percent who said they have already adopted a cloud-first approach for all new initiatives.

81% of UK business leaders expect industry disruption from quantum computing

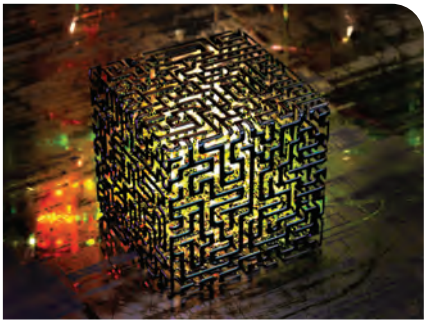
Despite awareness of its potential, detailed understanding of quantum computing remains low among business leaders who responded to our survey.

EY's QUANTUM READINESS SURVEY 2022, produced in collaboration with the National Quantum Computing Centre (NQCC), has found that 81% of senior UK executives expect quantum computing to play a significant role in their industry by 2030.

This research marks a continuation of the UK's commitment to developing its quantum computing capabilities, spearheaded by the NQCC alongside policy makers, academia and industry. The NQCC represents a £93m UK Government investment over five years through UK Research and Innovation (UKRI) with the aim of placing the UK at the cutting edge of quantum computing. Despite growing anticipation among senior leaders, strategic planning for quantum computing is in early stages for most organisations. For example, only 33% are engaged in strategic planning related to quantum computing and a quarter have appointed specialist leaders or set up pilot teams.

Quantum computing is in its relative infancy as a technology, but its transformative potential is already being recognised by the UK's business leaders. While the majority believe its full impact will not be felt immediately, almost half (48%) think that quantum will begin to transform industries as soon as 2025. Furthermore, respondents were almost unanimous in their belief that quantum computing will create a moderate or high level of disruption of their own organisation, industry sector, and the broader UK economy in the next five years.

Different sectors of the economy have differing views on the timeline for quantum computing's maturation. Executives in consumer products and



retail are most optimistic, with 70% believing quantum will play a significant role by 2025.

Meanwhile, 56% of telecoms, media and entertainment, and technology (TMT) executives foresee the same impact in this timeframe. However, most respondents in health and life sciences companies think maturation is more likely to occur between 2026 and 2035.

Planning for quantum is lagging behind

Despite the majority of survey respondents forecasting quantum disruption by 2030 or sooner, strategic planning cycles for quantum are lagging behind. Most organisations expect to start their quantum journeys in the next one to two years. Almost three-quarters (72%) will start planning by 2024. This will involve recruiting people to lead quantum computing efforts across the organisation. Only 25% of the organisations surveyed have done this, but 71% are hopeful of appointing a specialist quantum head in the next two years. As well as hiring leaders, respondents are aiming to set up pilot teams to explore the potential of quantum for their business: over two-thirds (68%) expect to have done this by 2024, but only 24% have done so already. Piers Clinton-Tarestad, Quantum Computing Leader EY UKI said: "This study reveals a disconnect between the pace at which industry leaders expect quantum to start significantly transforming businesses and their general preparedness for its impact. Maximising the potential of quantum technologies will require early planning to build responsive and adaptable organisational capabilities - which is a challenge because while the progress of quantum has accelerated it is not following a steady trajectory. "Quantum readiness" is not so much a gap to be assessed as a road to be walked, with next steps being regularly revisited as the landscape evolves. Businesses that expect industry disruption within the next three or five years, therefore, need to act now."

Competitive advantage and hi-tech use-cases driving quantum optimism

As with any nascent technology, the drivers for investing in quantum computing are varied and in development.

One factor playing on the minds of almost half (47%) of business leaders is that rival firms are working to develop their own quantum capabilities, which may possibly give them a competitive advantage. Almost all respondents (97%) believe that their competitors are currently engaging with quantum computing in some capacity. In terms of use-cases, the most promising application for quantum computing foreseen by industry leaders is enhancing operations involving AI and machine learning. This was especially true of leaders within financial services, automotive and manufacturing. Quantum's ability to accelerate computational modelling and simulations are front of mind for those in health and life sciences, while TMT respondents cited its potential to evolve existing methods of cryptography and encryption as its most critical function.

CELEBRATING 13 YEARS OF SUCCESS

Announcing the 13th edition of Angel Business Communications' premier IT awards will be lucky for some!

This year, we're planning on making the SDC Awards bigger and better than ever, and that's why we're launching them so early – to give you plenty of notice to make sure that your product launches, customer success stories and overall company brilliance will be recognised during 2022. And we've also got our editor, Phil Alsop, on the case. He'll be spotting potential award winners via the news, case studies and articles he receives over the next few months, and we'll be inviting these companies to be a part of our awards as well.

The deadline for nominations is beginning of September. But we recommend that, as and when you do something that you think deserves recognition at our awards, please do send us an entry at the time, rather than wait until the very last minute. Not only will that ensure that you don't miss the deadline, but it also means that there will be more time for the voting and promoting process, as we'll be featurin g the awards finalists extensively across our Digitalisation World media platform well ahead of the awards ceremony at the end of the year.

We're delighted to say that we already have a main sponsor for the SDC Awards 2022 – Exagrid – but there are plenty of other sponsorship opportunities available, and your company will receive extensive promotion ahead of the awards ceremony, on the night itself and in the post-event publicity. There are many great value packages to share with you, so please do get in touch.

NOW, GET NOMINATING!

https://sdcawards.com/nominate

DEADLINE: 2 September 2022

SDC AWARDS 2022

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COMPETITIVE ADVANTAGE
The SDC Awards panel will validate entries and announce the final shortlist to be forwarded for voting by the readership of the Digitalisation World stable of publications in November 2022.

WINNERS WILL BE ANNOUNCED AT A GALA EVENING ON THURSDAY 24 NOVEMBER 2022 IN LONDON.

How the Channel will explore the Metaverse in 2022

Metaverse has become a hot buzzword recently. This concept of how physical and virtual worlds are absolutely blended and become new places for people to live their lives and buy and sell caught peoples' imaginations in 2021.

BY LUC VAN HUYSTEE, VICE PRESIDENT FOR MOBILITY AND CONSUMER ELECTRONICS SOLUTIONS AT TECH DATA

THE TRIGGER for this was how Facebook's Mark Zuckerberg described how the future of Facebook lay in building a metaverse. He promised serious investment in making this a reality. To put a stake in the ground Zuckerberg also renamed the holding company for his businesses, Meta.

So, the future is the metaverse, right?

The irony is that for all its exciting ambitions, the metaverse is the latest catch all phrase for a revolution in extended reality technologies, services and solutions that's been gathering pace in recent years. The umbrella term for the market is extended reality. Its main components are virtual reality, which immerses users in a fully digital, computer-generated, interactive environment through a headset or surrounding display; augmented reality, which overlays digital 2D or 3D content and information onto the real world via a mobile device or headset; and mixed reality that allows digital and real-world objects to exist together and interact in real time

Ahead of Zuckerberg's pronouncement about the metaverse, analyst firms were tracking healthy growth for extended reality. For example, IDC projects the EMEA AR/VR market to grow substantially in the next few years exceeding $16 billion USD in 2024. There also has been influx of investment into start-ups with extended reality propositions. One institutional stockbroker

estimated £154m worth of capital flowed into the private virtual reality sector in the UK alone and this is a 72% increase over 2020.

2022 does look it will be a pivotal year for the extended reality market. IDC's Ramon T. Llamas, research director, Augmented and Virtual Reality team summed up the opportunity when he said in January 2022: "2021 marked a strong step forward for the worldwide AR/VR hardware market. Despite the pandemic, consumers and enterprise users have warmed to the notion of what this new technology can do on both a personal basis and a professional basis. Layer on top of that the growing curiosity around the metaverse in recent months, and vendors will find themselves in the valuable position of establishing and growing the market and reap strong growth in the years ahead."

What's interesting about this projected growth is how it is not predicated on the consumer market alone

Naturally, when the commercial potential for the metaverse or extended reality is discussed, consumer demand tends to bubble to the top. For example, the recent acquisition by Microsoft of Activision has been positioned by Microsoft's CEO Satya Nadella, Microsoft's chair, and chief executive, as demonstrating how gaming "will play a key role in the development of metaverse platforms."

Gaming and entertainment will be a huge segment of the extended reality market but the B2B opportunities are substantial too.

The scope of extended reality to improve workplace collaboration has been expanded by workers' experience of having to work remotely for the last two years or more. Lockdown drove demand for more convenient and realistic ways to interact remotely and online; and this is creating an appetite for extended reality influenced solutions. There is some evidence that the pandemic has led to wider experimentation in immersive collaboration based on AR and VR technology. This can include the scenarios such as allowing remote experts to be made available to guide on-site staff through resolving a problem through extended reality. Or the creation of shared virtual workspaces in which multiple users can view and interact with the same virtual object.

Extended reality can be used to optimise the workplace experience in more specific ways too

There are obvious applications around training to onboard new staff or skill up staff faster by a "learning by doing approach" using VR or AR tools. Business applications of extended reality can also be customer facing for example using extended reality to showcase any configuration or customisation to a customer and thus benefit from closing sales faster and carrying less unsold inventory. Some vertical markets are exploiting how the technology can create realistic simulations of objects and complex processes. This involves converting CAD and BIM files to 3D digital twins to quickly iterate and collaborate on new product designs. The possibilities of what some call the industrial metaverse are considerable and being realised by how BMW is launching a virtualised production line for manufacturing its new electric drive train units.

The growth in extended reality does provide an opportunity for the channel because these implementations comprise many spinning parts from hardware to software to support. The channel can help package up extended reality solutions that address customer needs whether its enhanced collaboration, virtual training, or the more complex solutions in the industrial or design space. For some resellers, this market offers first mover advantage too, especially when they can overlay their vertical expertise onto these new technologies.

But how the channel addresses this market does require a clear strategic vision and a distribution model that's designed to facilitate extend reality solution development and deployment. Firstly, resellers need to have access to all the key hardware platforms which are supporting the growth that we have seen to date. These comprise Google with its Glass hardware, Microsoft HoloLens, Oculus from Facebook, and HP's headset range. Secondly, the fuel for future growth lies in how a reseller can draw on ISVs who complement the hardware and will allow them to go after horizontal solutions. Thirdly, access to services like configuration and financing that help get extended reality projects off the ground and resolve any objections about cost and risk. To give you an idea of the extended reality solutions that are feasible today and can be delivered through the channel let me describe a remote worker collaboration use case base on Microsoft HoloLens.

Utilising Microsoft's HoloLens mixed reality headset, along with Dynamics 365 Remote

Assist, hands-on workers can work in collaboration with one or many team members who see, hear, and can annotate in real time the view of the headset wearer. A 5G datalink over a Cradlepoint 5G router means the remote worker can be almost anywhere with a specialist backup at the HQ. The applications range from engineering to telemedicine. Similar solutions can be built on any of the hardware platforms. Whether it's called the Metaverse or extended reality, the practical applications of VR, AR and mixed reality are going to become better know and more widely applied across all kinds of industries and sectors. The channel can play a pivotal role here when they can aggregate the right hardware, software, and services to create unique solutions for their customers.

Encouraging women to take on digital transformation leadership roles

Transformation in the digital-first world has become business-critical for companies, no matter what industry they're in. It gives organisations the ability to better address customer needs, enhance how they function, and improve their overall offerings.

BY SUE-ELLEN WRIGHT, MANAGING DIRECTOR OF SOPRA STERIA'S AEROSPACE DEFENCE AND SECURITY BUSINESS

THIS CHANGE has, unsurprisingly, been accelerated due to the pandemic, which has vastly altered how businesses and consumers operate. In fact, a new report has found the pandemic accelerated 84% of enterprise organisation's digital transformation plans. To add to this, an IDC report predicts that direct digital transformation investment will total over $6.8 trillion between 2020 and 2023.

It is evident the opportunity in digital transformation is great, however the number of women who lead digital transformation projects is worryingly low. Consequently, there is a lack of representation of women in these roles, something which needs to change. Empowering women to enter the digital transformation industry will not only provide teams with new outlooks and skills, but it will also help pave the way for more women to confidently enter both STEM and leadership jobs.

Considering diversity in teams

As digital transformation is predicted to continue, businesses must adapt to the new world of work – it's no longer an extra, but a crucial component to create social and economic progress. However, to succeed, organisations must deliver transformation

initiatives ethically. This involves being considerate of the backgrounds, lifestyles and capabilities of team members, as well as taking into account gender diversity, alongside other identity markers. Having diversity within a team is beneficial as it encourages a range of perspectives which can enhance creativity and the development of transformation projects.

Laying a path for women to lead transformation projects

This diverse workforce is especially important within the technology industry, which lacks an equal gender balance and boasts predominantly male leadership teams. Despite there being a push to encourage girls to study STEM subjects, the percentage of women in the UK tech industry has only grown from 15.7% in 2009 to 17% in 2021. Moreover, in 2021 it was reported that just 10% of leadership roles in the industry were held by women.

Therefore, in both business transformation projects and leadership, specific jobs need to be fostered for women, whether that's creating more of them, or providing opportunities and supportive networks for women throughout their careers. There are a number of barriers which need to be overcome in order for there to be more gender diversity in the technology sector though.

Firstly, it's often difficult for women to professionally progress given they are often bypassed for promotions and new roles due to the strong misconception that they're too busy with the domestic duties and caring for children. Additionally, women tend to apply to fewer jobs than men. For example, LinkedIn reported that women apply to 20% fewer jobs than men, and that recruiters are 13% less likely to click on a woman's profile when she shows up in search.

Statistics like these show the recruitment process must also be reviewed if we are to find, attract, and retain more female talent. Job adverts must also be made inclusive to attract more female applicants, and recruiters need to become better at removing their biases (both conscious and unconscious) when assessing applications. If positive steps are taken to attract more female candidates, the gender balance in recruitment pipelines will improve and we will see the number of women naturally increase.

The importance of role models

Another important step the tech industry needs to take to encourage greater diversity in their workforce is to publicly commit to empowering women. This is a great way to ensure they stay accountable to their goals and signals to female employees that they will be respected and valued. Initiatives, like Sky's 'Get into Tech' programme, offer women the opportunity to develop the skills needed to kickstart their careers in tech.

Furthermore, directing attention to women already in leadership provides others and younger women with role models to look up to. This can make female leaders more accessible and visible, and inspire both current and future generations. Acknowledging and celebrating a diverse range of women in business can also help to tackle imposter syndrome while facilitating a fair work culture.

Final thoughts

Although, the gender imbalance in the tech sector will not be solved overnight, organisations can act immediately by supporting women at all levels, whether this is through creating opportunities and providing support, or opening up more gender diverse senior roles. Doing so will not only empower women to lead digital transformation projects in the here and now, but will also create future opportunities for younger generations.

What role can the channel play in sustainability?

We are almost a year since the opening of COP26, the UN conference to keep the world on course to meet tough environmental challenges. While the summit focused on governmental action and big business, all kinds of organisations have a role to play, including the channel.

BY DAVID NELSON, SALES DIRECTOR TRADE-IN SERVICES – EMEA AT TECH DATA.

AS BUSINESSES look to digitally transform, more e-waste will ultimately be produced, so finding the balance between business and sustainability goals is challenging.

So, how can the channel help businesses become more environmentally friendly and avoid throwing often usable old technology into landfills?

E-waste Rules Getting Tougher

Europe has some of the toughest e-waste rules in the world, and the European Commission has set out frameworks to further strengthen these regulations in its Circular Economy Action Plan. This plan was adopted in 2020 and aims to eradicate single-use devices and curb the destruction of unsold devices.

E-waste regulations first came into prominence in 2012, but since then, changes have been made to keep pace with the increases in device numbers. Recent research shows that by 2030 there will be approximately 67 million tonnes of e-waste. This has grown by 21 percent since 2014, to 48.6 million

tonnes of e-waste in 2019. This may be due to less than one-fifth of e-waste being collected and properly recycled globally, as it may be shipped to and dumped in other countries which do not have sufficient procedures to deal with it.

Even though, there are these regulatory frameworks in place in Europe, research from the European Court of Auditors cites that approximately 80 percent of e-waste collected in the EU is properly recycled. Yet, recycling and reuse of e-waste is not equal amongst all member states. The channel has an opportunity to assume a bigger role to ensure that used devices get a second lease of life, rather than becoming part of landfill.

Sharper Focus on Smaller Devices

Despite the success of the rules, the EU is still looking at how they can keep up with the changes in technology usage. It is worth noting that International E-Waste Day, taking place in October 2022, is focused on recycling smaller devices, such as mobile phones and tablets. This is a significant change from previous years, as those focused more generally on the proper disposal of end-of-life devices.

The issue of small device e-waste is growing. The United Nations has estimated that in 2019 there was over 22 million tonnes of small e-waste produced globally, which equates to 40 percent of all e-waste produced worldwide. These smaller devices are usually disposed of incorrectly by being thrown in the bin due to their size. As such, the raw materials cannot be extracted, and so cannot be recycled or be reused in other devices.

Reuse Rather than Recycling

For the channel, dealing with e-waste is challenging, it is a difficult and technical job. It is estimated that each smartphone holds approximately 0.035g of gold and $57 billion of it is lost through e-waste, according to data from the Royal Mint.

But there is an opportunity for the channel to get involved and promote device re-use. This is enabled by specialist programmes like TD Renew, making it easy for partners to process and return to the market high volumes of devices to the high specifications demanded by marketplaces and their customers. This process also ensures that all data is completely erased, and devices are ready and able to be resold or reused. At the same time, these programmes help businesses to navigate the complex regulatory environment especially with devices that cannot be re-used. In those cases, a well thought out programme would pass on the device to a specialist recycling firm that operates to strictly certified processes when breaking down the device into marketable components for re-use.

Nevertheless, customers do need to trust the quality of the second-hand devices that they purchase. Any examples of devices that have not been properly cleaned and contain sensitive data will damage the market. This means that quality assurance processes must ensure a device is as good as new when it is ready to be sold in a refurbished device marketplace.

When the channel gets involved in properly managed device re-use, they are contributing to a fast expanding refurbishment economy. In fact, the re-use market will continue to grow, not only because more businesses want to become sustainable, but because there are huge opportunities in the market. Even before the cost-of-living crisis and the rise in inflation, the market for refurbished smartphones and tablets was growing. Research from CCS Insight revealed that in 2021, the sales of second-hand smart phones generated over $13 billion for resellers. Expect these sales to be even higher in 2022.

Reuse Reinforces Strong Customer Ties

Tackling e-waste is a continuous process for businesses. Recent data from Tech Data estimates that by the end of 2022, at least one million devices will be recycled using schemes from channel partners.

In markets where e-waste reduction rates can be lower than other European markets, how these programmes make it easier for a partner to receive and process devices anywhere in Europe is important. Notably, partners in Spain have leveraged these programmes to help their customers recover money for their used endpoint devices.

At the same time, businesses can reinvest that money back in the purchase of new devices. To make this a more holistic process for businesses and customers, if a price is agreed, the buyback will be subsequently completed.

Offering a device reuse and recycling programmed helps partners develop stronger ties with their customers, creating more opportunities for revenue. For example, a partner in The Netherlands, has been able to use these partner schemes to offer additional discounts on quotes for new devices if customers hand in old ones. This reseller has also found that since the beginning of 2022, they have traded in 35 percent more old devices and closed approximately 20 percent more deals on new hardware.

Increasingly businesses are looking to incorporate sustainability into their practices and channel partners can support along this journey. E-waste continues to have an impact around Europe and the rest of the world. As businesses are looking to reduce their carbon footprint, working with the channel can streamline this process, whilst also helping them to save money.

The mindful use of digital is critical in supporting sustainability efforts

It is easy to overlook the internet and digital consumption when considering sustainability strategies. While the impact of our physical devices is more widely spoken about, especially in terms of their disposal and reuse, the environmental consequences of data and the internet itself are seldom considered.

BY AMY CZUBA, SENIOR ACCOUNT MANAGER AT NEXER DIGITAL

THE WEB DOESN'T ORIGINATE from a Wi-Fi box in the corner of a home or office but is actually comprised of vast amounts of data held in data farms, a network of 7.2 million warehouses full of servers across the world. These are incredibly intensive facilities, taking huge amounts of energy to power and cool to prevent overheating on a 24/7 basis.

These data centres not only generate carbon emissions but also put excessive stress on the grid and may become a contributing factor in rolling blackouts and housing shortages in certain areas. West London, for example, is facing a new housing ban as the grid in the region is at capacity, partially due to the development of a number of new data centres built alongside the M4. The Greater London Authority said that these facilities can require the same amount of electricity as a town or small city to ensure resilient internet service, which highlights just how exhaustive they are, especially when multiplied worldwide.

So, what is the solution?

Society has become so reliant on the internet since its inception, that getting rid of it or even using it less, may not be plausible options. The answer to the issue is a greater awareness of the environmental impact of data and a more mindful approach to how it is used.

Many businesses, and indeed individuals, have become more aware in recent years of the need to operate or live more sustainably. People have been encouraged to reduce plastic and think about how they travel, and businesses have introduced sustainability policies, to varying degrees of success, to demonstrate and be held to account on their commitment to customers and stakeholders for whom this is a growing priority. However, most of these efforts focus primarily on the physical – how supply chains are being managed, energy use in buildings and commitments to recycling and waste management. When digital is left out of strategies, there is the risk that the good work that is being done elsewhere is being counteracted by poor and polluting digital practices.

What needs to be considered when reducing digital impact?

In a business context, the majority of digital carbon emissions will be a result of internet-based communications such as emails, data storage, and the company website and intranets.

Communication

The typical office worker receives around 140 emails per day, and each one will emit carbon to send and receive. The amount generated depends on the contents of the email – the longer it is, the bigger any attachments or the more people it is sent to, the more carbon will be produced. Founder of the World Wide Web, Tim Berners-Lee, said in 2020 that one email could generate anywhere between 0.03g and 26g of CO_2.

With this in mind, business leaders should encourage employees to be conscientious with emails, only copying those who need to see them and compressing attachment files when possible. They should also investigate implementing 'sell by

dates' on emails, whereby emails are automatically deleted after a certain period of time so that they are not being stored unnecessarily, as this is also a carbon emitter.

Data storage

According to digital sustainability expert, Gerry McGovern, 99% of data is 'digital waste'. This term refers to junk on the web that is not used or viewed, such as old, redundant emails. It can also apply to excess data stored on cloud systems or out-of-use websites. All this digital waste drains energy even though no one needs it.

Getting into good habits, such as deleting multiple versions of the same document and clearing out emails periodically will help to reduce carbon footprint. Companies should consider investing in this, as Nexer Digital has done, where each employee is allocated half an hour a week to clean up their digital trash. By giving employees this time each week to remove historic calendar meetings or unsubscribe to mailing lists that they don't read, the business's overall carbon footprint is reduced. This little and often basis makes what can seem like an overwhelming task much more manageable.

Organisations could also rely less on cloud storage and use hard drives. This could be an appropriate approach to storing data that is needed, but not accessed very often such as contracts and invoices before they reach a time they can be disposed of. A hard drive is 3,000 times less polluting than the cloud, so is a good way to hang on to information without costing the environment as much.

Websites and intranets

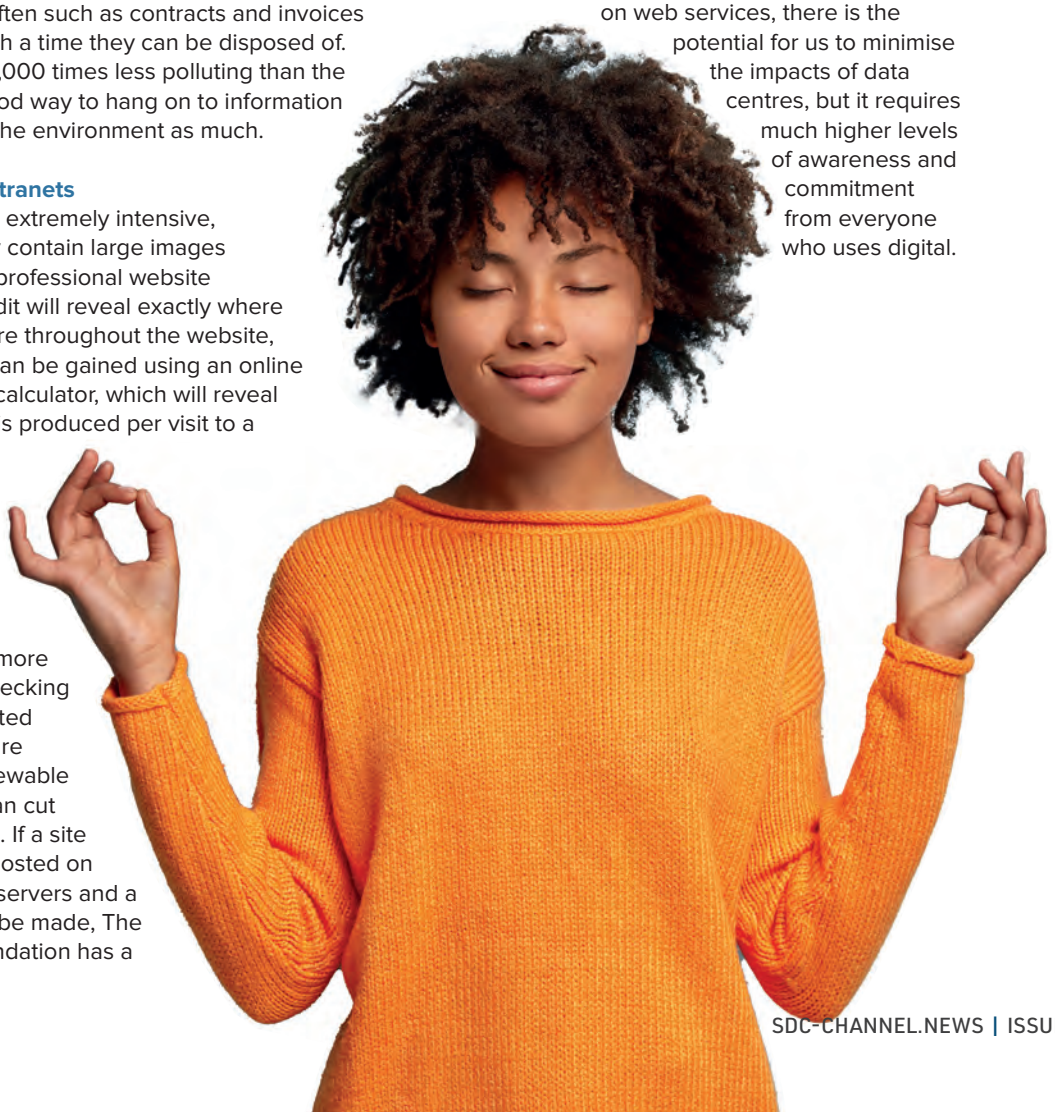
Websites can be extremely intensive, especially if they contain large images or videos. A full professional website sustainability audit will reveal exactly where problem areas are throughout the website, but a snapshot can be gained using an online website carbon calculator, which will reveal how much CO2 is produced per visit to a webpage.

The first step that should be taken when making a website or intranet service more sustainable is checking whether it is hosted on servers that are powered by renewable energy as this can cut emissions by 9%. If a site is not currently hosted on green-powered servers and a switch needs to be made, The Green Web Foundation has a directory of approved sustainable hosts. Once a site is using renewable energy, content and technical optimisation can be made to the website. Bundling requests and compressing pages will reduce bandwidth strain, and therefore carbon emissions. As will using smaller versions of images, preventing videos from auto playing and reusing elements from other webpages rather than making new ones.

Optimising content through a focus on user experience and SEO improvements will also help to reduce the impact of websites and intranets. If people can find the information, they are looking for quickly and minimise time spent navigating between pages, less carbon will be generated. Keeping online content concise not only boosts readability but also helps decrease time spent on each webpage, again reducing emissions.

Data centres, and therefore the web as a whole, are becoming a growing cause for concern due to carbon emissions and high energy consumption that might destabilise the grid, leading to issues in other parts of society, such as exacerbating housing shortages. From this, it is clear why organisations and the individuals within them need to be more aware of their digital practices.

From encouraging mindful communication and data storage to committing to audits and improvements on web services, there is the potential for us to minimise the impacts of data centres, but it requires much higher levels of awareness and commitment from everyone who uses digital.



Working with big tech unlocks the true green capabilities of cloud computing

The problems posed by climate change simply cannot be overlooked any longer, with carbon dioxide emissions being the biggest cause for rising temperatures around the world.

BY ASHISH ARORA – VICE PRESIDENT (UK, IRELAND & BENELUX) AT HCL TECHNOLOGIES

THE UK has been particularly vocal in raising the alarm, and will use the UN's 2021 COP26 climate change conference, hosted in Glasgow, to urge economies to drive towards net-zero emissions by 2030, in line with the Paris Agreement and the UN's own Framework Convention on Climate Change. It's not just governments who have been taking responsibility over climate change – businesses have been looking to change their behaviour as well. In particular, many have been coming to terms with the environmental impact their everyday IT activities are having.

For example, a single Google search uses the same

amount of electricity as it takes to run a lightbulb for 17 seconds. The five billion views of music video Despacito by 2018, meanwhile, meant that it had driven the consumption of the typical amount of energy used by 40,000 US homes a year. When you have billions of people running Google searches or watching YouTube videos every day, it's easy to understand how big our carbon footprint could become.

All of this activity is really adding up: Greenpeace has warned data centres consume almost 7% of the world's electricity as part of its 'Click Clean' campaign. But exactly how can businesses start to move in the right direction and cut down on these alarming figures?

Cloud computing can cut carbon footprints
In very simple terms, if businesses switch their IT systems from on-premise to cloud computing, it's the equivalent of joining a car pool or using public transport, rather than using their own vehicles. Having your own servers on-premise requires hardware, facilities equipped with power supplies and cooling units to avoid overheating.

If they can join a "car pool" with big cloud service providers like Amazon, Microsoft and Google, businesses will be in line to reduce costs and operate more efficiently, with cloud-native applications consuming less infrastructure, physical space, and energy per user. Businesses will also be better-equipped to support remote workers, further reducing carbon emissions involved in creating and maintaining large office spaces. Of course the cloud provider will still be using data centers, but the big players are all harnessing their resources to work towards carbon-neutrality.

Big tech is leading the charge

The tech giants are all hard at work reimagining their infrastructure to lead the fight against climate change. Analyst house Bloomberg NEF says the technology sector is signing a growing number of clean energy deals, driven on by sustainability commitments and pressure from investors and governments.

Google is being particularly vocal about the progress it has made, claiming to be the first organisation of its size to operate with 100% renewable energy. Google's data centers run on wind farms and solar panels, and AI/ML are used to adjust cooling technologies to ensure servers are protected, but also that energy is not wasted.

Microsoft, meanwhile, has set itself the target of becoming a carbon negative organisation by 2030. Twenty years further down the line, it wants to remove more carbon from the environment than it has emitted in total since being established in 1975. As well as favouring renewable energy sources, Microsoft is also investing in carbon reduction and removal technologies, as well as leading the experimentation of how data centers could be operated under water, keeping them cool without draining electricity.

Cloud computing can cut carbon footprints. In very simple terms, if businesses switch their IT systems from on-premise to cloud computing, it's the equivalent of joining a car pool or using public transport, rather than using their own vehicles

Amazon has also pledged to reach net-zero carbon across its entire businesses by 2040. AWS' data centers in Virginia account for almost three quarters of the world's internet traffic, meaning Amazon achieving net neutrality could have a massive impact on the planet.

Using green data centers to reduce carbon footprints

The EU wants data centers across the continent to be carbon neutral by 2030, and if we invest in the right areas, new innovations and technologies could achieve this goal. If the world runs cloud computing in a greener manner, businesses can also benefit from reduced costs, greater efficiency, enhanced reputations and future-proofed operations.

All of this means moving to green data centres should be a no-brainer for cloud service providers. We need to adopt renewable energy sources, use energy-efficient hardware and software, power facilities with clean energy and use energy-efficient lighting. IT decision-makers everywhere have a responsibility to check their suppliers are taking these kinds of steps, and set up KPIs that drive them to further reduce their emissions. Just because a business no longer has physical servers and data centers, it can't take an 'out of sight, out of mind' approach: when using cloud, all of us should take responsibility to ensure our carbon footprint is as small as possible.

How to channel sustainability to hit Net Zero

Channel partners need to examine the tech portfolio they are offering in order to
ensure they have solutions that are as green as possible.

BY GEOFF GREENLAW, VICE PRESIDENT, EMEA & LATAM CHANNEL AT PURE STORAGE

EVERY ONE OF US has a role in building a more sustainable and environmentally friendly future. As governments and companies set ambitious Net Zero targets, the direction of travel is undeniable. Those of us in the technology industry are increasingly aware of the environmental impact of technology decisions. Building sustainable technology infrastructure is essential to mitigate global warming and the impending impacts of climate change.
The channel has an imperative role in supporting customers to achieve their green goals, cut their carbon footprint and roll out pragmatic, sustainable technology strategies. Let's take a look at how the channel can position itself at the forefront of efforts to reduce carbon use.

Sustainability is a channel responsibility

It wasn't too long ago when partners were telling us that sustainability efforts and IT strategies were not discussed in the same conversation. Today, there are very few organisations that don't have reducing both environmental footprint and energy use high on their agenda. It's so important, it's increasingly being added to Request For Proposals (RFPs).
Add to this the regulatory perspective: governments

are introducing new rules and mandatory regulations, and every company is looking to identify ways to cut emissions and improve sustainability. Channel partners need to champion green IT in order to compete effectively and differentiate themselves: 'being green' is now a truly competitive advantage. Those channel partners that aren't able to recognise the shift in priorities for organisations, and help enable change, are going to be significantly behind the curve. Sustainability is a shared responsibility for everyone: individuals, governments, vendors and the channel all need to play their part in contributing to reducing their own, and their customers', carbon footprint and ensuring any new technology implemented is as 'green' as possible.

Business priorities and environmental impact
Agility and efficiency have been well established as pillars of business success for the channel; pillars which cross-over with sustainability efforts. The explosive growth of data and corporate digital transformation has kept IT professionals focused more on keeping up with increasing data storage capacity and controlling costs than on reducing their environmental load. It's possible to focus on these concurrently and channel partners can really help here.

As people generate more data, it becomes imperative to implement sustainable technology solutions as a key element to reducing energy use. Channel partners who embrace flash storage will have an advantage. Flash is a perfect example of a technology that supports both business and environmental priorities and helps customers deliver on the need to prioritise sustainability. Innovative flash-based storage arrays use less power and provide better performance on key metrics such as capacity per watt, bandwidth per watt, and capacity per rack-unit, resulting in an overall smaller data center footprint.

With storage systems and components representing a significant portion of the hardware in data centres, upgrading to more efficient solutions can significantly reduce the overall power and cooling footprint. The overall effect is technology that is more environmentally friendly and helps meet customers' sustainability ambitions.

Sustainable by design

Looking at the tech sector more broadly, entire tech lifecycles, solution design and delivery models have come under scrutiny. This is understandable given the growing number of RFPs that focus on the green credentials of technologies, Managed Service Providers (MSPs) and rese llers.

A modular approach to design has become the norm in recent years, allowing specific components to be replaced as needed, instead of entire systems: embedding sustainable design into hardware and software. This minimises hardware refresh cycles, reduces e-waste sent to landfill and helps MSPs give their customers the reassurance that their solutions are sustainable.

Scale sustainably

Scalability has become important to customers as they look to make the most of investments without being tied into purchasing technology they don't use for several years, resulting in waste. Resellers and MSPs need to be able to offer alternative as-a-service models to organisations to only pay for the resources they need, without taking on the management of those resources at the back end. This approach means technology can be managed centrally by a service provider who is set-up and incentivised to work as efficiently as possible. This leads to lower levels of energy consumption and far less waste, as companies no longer need to run under-used or over-sized systems. Effective, efficient and sustainable.

Channeling our sustainability efforts

When Net Zero requirements first started to spring up, some companies staked out sustainability as a USP: now, it is a business imperative. Setting green commitments as an industry and supporting customers to make this environmental transition must be a priority to future proof the channel for prospective customers. Sustainability will soon be as important a driver for how IT decision makers select IT suppliers as price, performance and cost savings. Channel partners need to examine the tech portfolio they are offering in order to ensure they have solutions that are as green as possible. Infrastructure solutions should be agile and adaptable, ready to deploy without complete overhauls, ready to expand capacity on-demand as customers need and also reduce energy consumption and emissions. If this is incorporated into channel sales agendas, there is a remarkable opportunity to positively contribute to energy reduction, shape a greener future and set precedents that define our world for decades to come.

5G and the edge: the IT channel industry's role in realising a faster, greener future

After many years of hype, 5G is finally here. The first 5G networks are now deployed around the world and telecoms giants like Ericsson predict that 5G will penetrate every market on the globe by 2026. With higher bandwidth and faster speeds, applications such as smart cities, digital healthcare and live-streamed virtual reality are all now coming to fruition – paving the way for a smarter, faster future.

BY MARTIN RYDER CHANNEL SALES DIRECTOR FOR UK AND IRELAND, VERTIV

IT'S ALSO NOW more evident that 5G and edge computing are intrinsically linked. Eliminating backhaul latency issues inherent to a reliance on a central data centre, edge computing is widely considered one of the most important technologies of the next decade – and it's likely that much of the debate on how to roll out 5G successfully will focus on leveraging and making improvements to edge infrastructure.

So, what does the future hold for 5G and the edge and why do IT channel providers play a vital role in ensuring not only a bright future of 5G, but also a sustainable, energy efficient one?

A focus on physical infrastructure

We're on the cusp of a 5G powered world, with technology developments and applications which were once a pipe dream becoming very real, very quickly. But we also know that physical infrastructure

is key to the successful roll out of both 5G and edge computing – with the power, cooling and enclosure equipment, as well as the compute it supports, providing the foundation on which exciting new applications can run.

Making the right physical infrastructure choice is even more important at the edge given that many deployments are in locations where additional support and protection is required – and of course, navigating edge infrastructure is also made more challenging with the broad and varied definitions of edge.

Fortunately, there is an ecosystem of suppliers, system integrators and other channel partners with experience and expertise in edge deployments to provide support. And what's more, technology vendors like Vertiv are committed to training and working alongside these partners to continue investing in and delivering the right solutions for customers, at the right time.

Tackling the energy conundrum

As well as delivering huge performance gains, 5G is widely recognised as being more energy efficient than 3G or 4G when it comes to the power required to transmit data. Indeed, according to Vertiv's research with STL Partners, 5G networks can be up to 90 per cent more efficient per unit of traffic than their 4G predecessors.

But despite these headline promises, the sustainability benefits of 5G won't come without significant challenges. Whilst 5G networks may be more energy efficient than 4G, the network densification necessary to fully realise the promise of 5G unavoidably adds to the increased energy demands, which are estimated to be 3.5 times more than 4G. And with these increased energy demands comes inevitable price hikes as well as the potential for sustainability setbacks.

So, with the largest energy increases expected in macro, node and network data centre areas, there's significant work to be done. The IT industry must lead the way by developing technologies and practices to streamline the rollout of 5G and provide the promised sustainability gains.

The good news is that technology providers are already making strides. For example, Vertiv's extensive research on edge archetypes and infrastructure models is aimed at standardising the design and deployment of various edge sites including those supporting 5G networks.

Edge archetypes and infrastructure models

As edge networks mature and sites become more sophisticated, creating edge infrastructure models is a necessary step toward understanding site-specific equipment and design standardisation that can increase efficiency, reduce costs and streamline deployment. The industry has struggled to consistently define or categorise edge deployments. At Vertiv, we took a first step toward categorisation with the introduction of edge archetypes in 2018. Our latest research further categorises edge sites based on factors including: location and external environment, number of racks, power requirements and availability, site tenancy, passive infrastructure, edge infrastructure provider, and number of sites to be deployed.

The four infrastructure models identified are:

- Device Edge
- Micro Edge
- Distributed Edge Data Center
- Regional Edge Data Center

Further details of each model can be found in the research linked above.

The central role of the IT channel

Unfortunately, there is no silver bullet to reduce energy consumption across 5G networks. Achieving a meaningful reduction will require incremental efforts across the network, some of which will include things that seem obvious, such as deployment of high-efficiency rectifiers and smart management of power conversions across sites.

Others will require strategic investment and new thinking, including everything from re-engineering cell site shelters and enclosures to optimise cooling costs associated with IT equipment, to increased use of renewable energy sources and hybrid power systems. And we'll need to look across the globe for inspiration too. For example, hybrid power systems are a concept largely foreign to the United States today but widely accepted in other territories such as South America and New Zealand.

there is an ecosystem of suppliers, system integrators and other channel partners with experience and expertise in edge deployments to provide support. And what's more, technology vendors like Vertiv are committed to training and working alongside these partners to continue investing in and delivering the right solutions for customers, at the right time

IT channel businesses have a real opportunity to lead from the front by engaging the market and building on an ecosystem of expert partners to steer and mentor the 5G and distributed compute revolution. The channel has long been an advocate for the technological transformations that help businesses and societies thrive. And the same is true in this instance.

We know that 5G networks rely more on IT systems than traditional 3G or 4G networks, and there is an important advisory role to be had. Vendors and customers will expect channel partners to offer their expertise and support as telecom operators look to rollout 5G networks as efficiently as possible.

As well as invaluable expertise, channel partners can deliver a portfolio of energy-smart solutions for the edge. For partners, there is considerable scope for selling the critical infrastructure to support data processing on a local scale and offer simplified, modular and self-managed solutions to accommodate 5G networks.

Putting theory into practice

Channel partners will be pivotal to customers' success in upgrading their edge infrastructure. And tech vendors will also increasingly rely on the channel in order to scale the sophisticated products required for a more robust edge applications.

But how should resellers begin a conversation with their customers to improve their experience at the edge? Partners should approach the edge through three types of applications: legacy, geographic and dynamic edge.

In the first instance, resellers have an opportunity to upgrade customers' existing infrastructure in their comms rooms to include more sophisticated equipment that includes remote monitoring and remote access to enable hybrid working.

Secondly, resellers can take advantage of geographic edge applications to provide more colocation that is geographically closer to the end user, and thirdly, the dynamic edge deals with two-way traffic between applications. This application type takes advantage of 5G and mobile devices.

A brighter future

Ultimately, the future for 5G looks bright – and the IT channel looks set to play a central role in its success. We know that the road ahead to a sustainable 5G future relies heavily on making improvements to edge infrastructure, and that whilst this is likely to be complex to manage, a strong network of resellers, distributors and partners are working hard to make it all happen – powering a faster, cleaner, smarter world for all.

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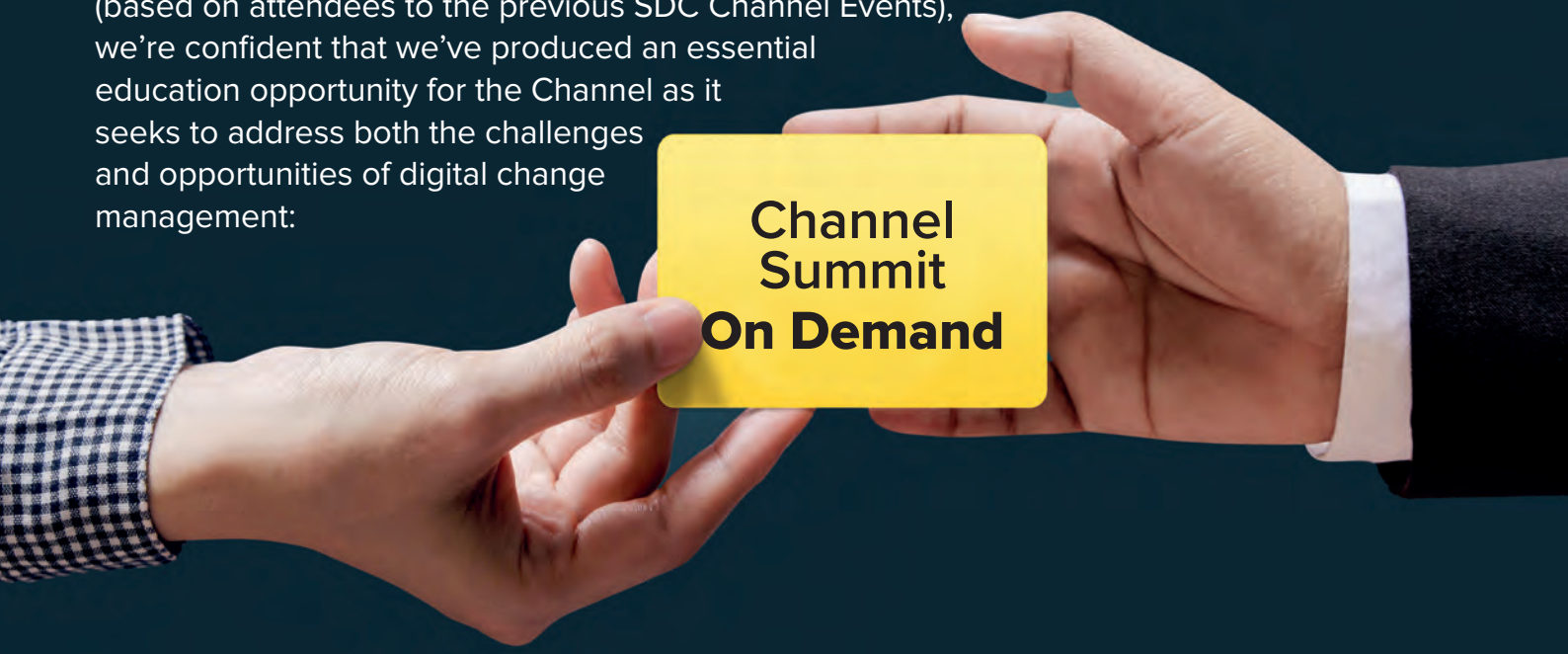

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The foundation for IoT success is business strategy

When it comes to the Internet of Things (IoT) the potential for our lives, businesses and industries as a whole to completely transform and improve has never been greater.

BY PETER RUFFLEY, CEO AT ZIZO

FROM A FULLY CONNECTED HOME, through to data being shared with manufacturers to help enhance products and manufacturing methods, the monitoring of patient wellbeing and medical equipment with the creation of 'smart' hospitals, optimising the supply chain and ensuring the right temperature of goods in transit, and calculating the most effective route for drivers to enhance the first and last mile within delivery services – the possibilities seem endless.

Research predicts that by 2025, there will be 55.7 billion connected devices worldwide, 75% of which will be connected to an IoT platform. What this means is that the amount of data being collected, and potentially the high volume of low value data collected, is becoming truly overwhelming. Whilst 5G and edge computing will make it possible to transmit data through high powered, low latency networks, these technologies are in their infancy, with few use cases. Network infrastructure challenges mean that 5G is still some way off and if we are going to be doubling the amount of connected IoT devices, organisations need to fully understand the value that is locked within their data. The question has to be, why does ALL IoT data need to be sent back to data centres?

If organisations want to become truly data driven and be able to have IoT data move their business forward, organisations must begin by having a concise business strategy in place, teamed with supporting technology. In order to do this successfully and achieve the most value from IoT, there are five steps businesses must consider first:

Defining Business Challenges

Just because an organisation has connected devices, it doesn't mean that they'll necessarily get value from them. Value lies within the data. So, whilst there will be those in the company saying 'we need IoT', what questions ultimately does the data from IoT devices need to answer to help the business grow, improve processes and/or enhance the customer experience? What insight does the business want to have from monitoring each device? What does the outcome of the investment need to be?

Good and Bad Data

With so much data at their fingertips (this can be millions or billions of rows of data), businesses really need to start, if they haven't already, moving away from the idea of having every device connected and the 'let's store everything just in case' mindset when it comes to their data. They need to be able to work out what is 'good' data and what is 'bad' data. If all a business has coming back from devices is low value data / low hanging fruit, it will not benefit them. Cloud storage, while low cost at the start of any IoT project, quickly becomes expensive at scale, and the same goes for processing that data – which as the volume grows, so does the processing time, and the cost.

Edge Analytics

Organisations need to become more strategic with how and where data is analysed. Not just in terms of getting insights, but looking at the data itself and working out where the inherent value lies within it. When data can be analysed down at the edge, only the most valuable data collected will be shared and in real time, making the process more cost effective to the business. Additionally, the amount of data being collected from connected devices puts a great deal of pressure on a cloud network. If organisations want to be sending data to the cloud, then a hybrid approach using edge analytics will ease the load. Edge data analysis is traditionally delivered through a single sensor node before being passed back to the cloud, but new advances in edge computing platforms allow for the analysis of both real-time and historical data, creating a more holistic view and enabling better training models for Artificial Intelligence (AI) and Machine Learning (ML).

Be ready for 5G, but it isn't here yet

There is no doubt that 5G is going to make a huge impact on the way that businesses and other entities, such as smart cities, are able to utilise and manage data. However, like the initial roll-out of IoT platforms and technology, we are still very much in the early adopter phase, with limited access to both full 5G platforms or test beds. Many technologies are still utilising older bandwidths, and there is a case for looking at some of the more proven technologies to deliver point solutions that are better suited to individual use cases.

Specialist Expertise

A business might spend a considerable amount on IoT and other emerging technologies and be able to retrieve a lot of data but if it doesn't know how to get value from it, it's pretty much worthless. Due to the complex nature of any IoT deployment, there will be a requirement for specialist skills and expertise. Working with device suppliers will help organisations to understand data formats and to work out what data is actually needed to deliver insights to meet the defined strategy. Edge computing will also have a big part to play in sending the right data to tools and technologies that can be accessed by individuals who can make a difference for the business.

With so much data at their fingertips (this can be millions or billions of rows of data), businesses really need to start, if they haven't already, moving away from the idea of having every device connected and the 'let's store everything just in case' mindset when it comes to their data

Adopting modern technologies does not mean living on the edge for the channel

The channel's role is to support customers with their edge journey by doing what they do best.

BY EMILY NERLAND, HEAD OF GLOBAL SALES, NS1

EDGE, what does it really mean? The fact is that it represents different things to different people. For some companies it is about improving performance or achieving resilience, for others it is about providing secure access for employees and customers. At this early stage in the development of edge, the top priority for channel professionals is to be open minded in determining what edge means to their individual customers.

Like so many technologies that have come before, edge is not something that can be neatly packaged up and presented to a customer as a fait accompli. Rather it will evolve as a solution to many different problems, and it will be deployed in multiple ways, so the starting point will always be the challenge that the customer is facing at the time.

Edge is customer-led

At this point, customers are leading the charge in edge deployments, and the metrics they impose inform the channel as to the next steps they take. This is a well-trodden path. The introduction of SD-WAN, for example, also offered transformational benefits, which were appealing to customers. But integrators took a cautious view, waiting to see how companies and new vendors would fare with these new solutions before investing heavily in building technical knowledge.

There's a good reason for this. For a long time, resellers and systems integrators absorbed the solving of customer IT problems and found solutions as part of their value-add. They lived up to customer expectations that they are experts in all areas of

technology. However, as technology has become more complex, and in many cases more niche, it is an unsustainable feat for resellers to develop practice expertise on every emerging technology. Indeed, the pace at which technology is innovating makes channel professionals understandably hesitate before deciding it's worthwhile becoming a specialist.

Channel focus is shifting

Change is happening in the channel partly in response to the emergence of technologies, like edge, that serve vastly distributed networks and workforces. The depth of technical expertise required to understand customers' needs is now falling to vendors, who, after all, are experts in their own solutions, but these connections are being initiated through managed introductions from channel partners. The relationships that integrators have established with customers, the reputation they have built for providing agnostic, informed consultancy, and their ability to set the parameters of the integration to avoid scope creep, are more essential than ever. There is an additional advantage to this shift in how the channel sells modern technologies like edge: shorter deal cycles. Bringing vendors in, particularly in the early stages, to align customers' needs with product capabilities, cuts down the time to value, which results in an improved experience.

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Managing the edge adoption curve

Edge technologies are multifaceted and currently are only suitable for highly geographically distributed organisations with big technical teams and considerable budgets. We are at the start of an adoption curve, and this needs careful handling by integrators until edge reaches maturity. The channel's role is to support customers with their edge journey by doing what they do best, which is to provide quality consultancy and an informed overview of the different vendors and their solutions, and to facilitate a smooth implementation to ensure positive outcomes.

Making the imaginable possible with private 5G and edge computing

The possibilities within the edge and private 5G are endless. It is not a case of whether we will see these changes but how soon we will see them and what transformative new use cases will be born from adopting such technologies.

BY SHAHID AHMED, GROUP EVP NEW VENTURE, AND INNOVATION, NTT LTD.

WHAT DO SMARTPHONES and search engines have in common? Well, for one, each of these – along with many other technologies – haven't just solved a known problem but helped us imagine new business models we otherwise wouldn't have thought possible. Well-known examples include App Economy and Search Advertising, both completely new categories of businesses created by leveraging the power of these breakthrough innovations. Recent developments around private 5G and edge computing are promising a similar seismic shift for the manufacturing, healthcare, and logistics industries – those that have not seen this transformation in decades.

Edge computing combined with private 5G creates opportunities to enhance digital workflow experiences, improve performance, support data security, and enable seamless, continuous operations. While the promises for this combination are enormous, what does this look like for enterprises worldwide?

Edge Computing – The what and the why?

Edge as a Service (EaaS) makes it possible to combine networks, operations, and edge computing that deliver real-time automation and processing. The implications for customer experience and advancing healthcare and manufacturing environments are broad and continue to expand. In a typical architecture, input IoT devices, such as sensors on a factory floor, connect to the cloud where cloud processing systems work with the shared data. Processing in the cloud can trigger other mechanisms that prompt further actions. Each of these steps introduces a level of lag or latency, which limits what is possible for use cases that need the data and act in real-time, not near real-time, e.g., on a factory floor where mission-critical automated ground vehicles and human beings are working together, any delay due to this lag in processing in the cloud could pose a safety risk. The combination of IoT as a 'data-source' or as an actuator and with near-processing collectively is edge computing.

Combined with the ultra-low latency connectivity of private 5G and the proximity of edge computing, everything works together to make use cases where real-time processing of decisions and actions is essentially possible. Although edge computing isn't new, the digitalization of devices, people, and places is increasing, and combined with the speed and coverage of a private 5G network; this enables the on-site processing of business intelligence.

Real-world implications

One real-world application is demonstrated by NTT Ltd.'s recent partnership with specialty chemicals firm Albemarle Corporation. A pilot private LTE and private 5G network was deployed at the company's Lithium mine to enhance hybrid working and improve mining operations. The new network supports global engineers by connecting them with technicians for remote assistance and site surveys to expedite decision-making, reducing international travel requirements and expenses.

Additional use cases to leverage wireless networking at the manufacturing sites are also being explored.

As an early adopter of private 5G, there are still many new use cases to be discovered that can take advantage of the speed and reliability of a private 5G network, actualizing the transformative benefits of its cybersecurity, system controls, and scalability as well as the significantly lower latency of the network.

Leveraging private 5G network capabilities
Private 5G is set to create unprecedented data insights, connectivity, security, and communications alignment. Private 5G changes the game by enabling enterprises with the means to drive digitalization and decisively improve data-based business models while supporting the platforms and services that enterprises use. Along with edge computing, this technology provides enterprises with real-time time-critical production control and data-supported business processes.

These private, local 5G networks can complement the services offered by public networks, especially when Wi-Fi is not viable on the premises of a large factory, hospital, or an expansive logistics environment. Dedicated 5G networks extend connectivity beyond the wireless local area network (WLAN). They also fulfil organizations' technical requirements for improved performance, company control or security, and commercial needs for lowering airtime spending and coverage-deployment costs.

Implications of 5G for industry

Private 5G empowers organizations to have 5G infrastructure owned by and under the organization's control. The concept of enterprise-owned (and enterprise-focused) cellular networks is quickly gaining popularity as the combination of the performance improvements of 5G networks and the control and security enterprises need is potentially too good to pass up.

There are multiple enterprise advantages: First, the business is far less exposed to an outage, breach, or other public service provider challenge. Secondly, changes, tweaks, updates, and customizations do not require third-party approval as everything can be managed in-house. Thirdly, advantages can be reaped from integration with existing infrastructures. Regardless of industry, the drive for the digital transformation of operations and experience, enabled by technologies like private 5G, is in full force. The actual, extensible, enterprise-focused nature of the private 5G network – providing control and lower cost, along with performance enhancements – will transform the industry.

In addition to integrated cybersecurity, private 5G allows an organization to be strategic with its application and connectivity delivery, isolating or dedicating bandwidth to critical functions. As a practical example, consider the deployment of emergency services. consider the use of services in an emergency. Using private 5G networks, bandwidth can be prioritized for communications between nurses and doctors in an emergency over other hospital applications. This means hospital personnel can flood their devices with as much communication as they want without degrading the communications of any other group within the hospital. It is easy to imagine how such priority quality of service could be used in a factory setting, for example, with critical operational and security workloads having dedicated bandwidth.

In the hospital example given above, this could mean reliable mission-critical communications for the emergency department in a healthcare setting without impacting the labs or other testing facilities. This means better performance and reliability, lower latency, and improved patient data security and privacy. Better security and privacy mean happier regulators and improved healthcare with more satisfied patients and practitioners.

Additionally, real-time health and diagnostic data analysis across multiple patient and hospital imaging devices could improve the quality and speed of care delivered. This approach enables improved experiences for both patients and clinicians, where the effects of skill shortages can be reduced. Accessing specialists to guide diagnosis and treatment also becomes more meaningful through real-time connectivity.

The possibilities within the edge and private 5G are endless. It is not a case of whether we will see these changes but how soon we will see them and what transformative new use cases will be born from adopting such technologies.

True multi-cloud: Is the ideal coming closer to reality?

The past two years have shed light on just how critical a digital-first cloud strategy is in keeping a distributed workforce up and running.

BY ANDREW WEAVER, LEAD SPECIALIST SOLUTIONS ARCHITECT, DATABRICKS

ACCORDING TO a recent Gartner study of public cloud users, 81% of respondents said they are working with two or more cloud providers, which just shows how prolific multi-cloud has become to business continuity and growth today. There is also a new breed of technology companies emerging that need to sit across all three major clouds to be truly successful – making the multi-cloud approach non-negotiable. And at the same time, cloud vendors all want to create the best cloud environment, where apps can sit seamlessly across the top and customers can keep their data where it is to perform Artificial Intelligence (AI) and Machine Learning (ML). So, what does this all mean for multi-cloud?

I predict that, over time, we will move towards 'true multi-cloud'. True multi-cloud is, simply, when the end user can safely and without duplication do any job, on any data, regardless of the format, without even having to know which underlying cloud provider they›re using at any given moment. There will be no need to navigate any complexities, such as the networking or IAM model – they will simply be able to go about their working day as the cloud beneath them continues to switch and change, seamlessly.

But how far away are we actually from this ideal? And, if it does come about, how will organisations best be able to tap into its advantages?

The ease of true multi-cloud

Let's start with how true multi-cloud can benefit businesses and the teams within them. Firstly, organisations' skilled data scientists, engineers, analysts and business users will spend less time having to administer the different clouds, move data around, set up network and IAM configurations, and more time focusing on providing value to the business. Secondly, true multi-cloud could result in a significantly reduced tech

footprint for organisations, with a reliance on tools that are universal as opposed to specific to each cloud. This will likely have a cost benefit but it could also mean there is a reduced need for training - both on the tools themselves and the underlying cloud provider that they run on. Employees will be able to get up to speed in less time and with fewer resources, enabling a more fluid, uninterrupted working day, as well as allowing far more time to be set aside for business activities – such as key innovation and the decision making that this drives.

For organisations seeking to lay the groundwork and tap into this to the fullest extent, moving away from data warehouses and adopting a data lakehouse architecture can offer great advantages. A data lakehouse provides easier management, greater governance and efficiency for organisations operating on more than one cloud. As true multi-cloud comes into its own, organisations using a data lakehouse will be able to work with their data without having to continually master the complexities of the underlying cloud. With a lakehouse, organisations can build pipelines and access patterns to collect and enrich data, generate and share insights and even train ML models in an agnostic way that will run on any given cloud.

What true multi-cloud will look like for cloud vendors

Returning to cost, this is another area where organisations could see significant benefits if true multi-cloud were to take shape. None of the clouds are going to 'win out' and replace the other ones – they are all here to stay, even if they will always compete. But in this true multi-cloud future, they will likely compete primarily on features and costs, rather than locking in all of the data and workloads for a given customer. For organisations operating across different clouds, this could see a net benefit of better services at a more competitive price. There has already been some movement in this direction. At AWS re:Invent 2021, for instance, the price reduction for data transfers out to the internet was announced – signalling the lowering of egress fees.

All this cuts away at complexity, giving businesses greater access and control over their data. This could ultimately benefit the cloud providers too as they are trying to win the 'data storage' race, particularly as more data & AI companies emerge. Cloud vendors want customers to have seamless cloud ecosystems, where they can easily access data and leverage AI and ML services wherever their data resides, and true multi-cloud offers a way of making this a reality.

To be clear, this vision of true multi-cloud in its purest form is not something that will emerge overnight – to achieve it cloud providers will need to be able to orchestrate and leverage their services on another cloud. It would be far easier for a cloud neutral platform to provide the same effect, by interconnecting all the various platforms, tools and clouds and providing clear visibility and governance across it all. There is still certainly a long way to go, but with the benefits it can offer to both customers and cloud providers alike, true multi-cloud may be arriving on our doorsteps sooner than we think. For organisations seeking to prepare, looking inwards at their data architecture and management is a key place to start.

How to realise maximum benefits from cloud migration

Whether to gain more flexibility and scalability, replace on-premise hardware, or modernise the infrastructure, moving IT workloads to a public cloud has become key to small and medium enterprises (SMEs) digitalisation strategies. However, receiving maximum business value from the cloud requires careful planning and consideration both pre- and post-migration.

BY BOB PETROCELLI, CTO, DATTO

DERIVING MAXIMUM business value from the cloud is not a one-off endeavour that is completed by the time the virtual machines have been lifted into the cloud; instead, in order to be successful, it is an ongoing effort that requires regular reviews and continuous optimisation. For most SMEs, working with a managed service provider (MSP) is routine, and having a trusted MSP at your side can help alleviate cloud pitfalls.

For SMEs and MSPs alike, once the migration is complete, there's the inherent convenience of no longer needing on-premises hardware maintenance visits. Additionally, cloud migration makes it easier to access applications and data remotely – which simplifies collaboration among virtual teams.

Avoid pitfalls and reap the benefits of cloud migration

While the initial focus of cloud transition is usually on ensuring applications are reliable and continuity is provided in the new environment, you don't want to miss out on its optimisation opportunities. From better utilisation of computing resources to easier access and higher performance, cloud elasticity allows users to seamlessly adapt to fluctuating workloads.

However, if the migration was a pure 'lift and shift' project that prioritised speed and convenience, SMEs run the risk of missing the opportunity to streamline their IT environment. Further, they may find themselves at risk of losing valuable data or suffering damaging downtime. Like on-premises servers, the cloud doesn't provide a built-in continuity guarantee and can experience outages that, due to their 'blast radius', can have significant impact on a large number of customers.

For instance, in October 2021, an outage lasting nearly eight hours impacted the virtual machines and services of Microsoft Azure users across the globe. When attempting to carry out operations such as start, create, update and delete, users received error messages.

This type of incident isn't a one-off occurrence: In December 2021, an outage of over an hour affected Amazon's own services. Enterprise customers couldn't view information on their Amazon Web Service status page. And just one week later,

Microsoft Azure's Active Directory service went down, preventing users from signing into their Microsoft services.

When situations such as these take place, the extended downtimes can be detrimental to SMEs. Not being able to access business-critical applications and data when it's needed could result in lost business, lost revenue, reputational damage and even physical harm. In case of a cloud service failure, a cyber incident, or a ransomware attack, SMEs that rely on infrastructure in the cloud must ensure they have a solid strategy that includes the quick restoration of data and keeping operations functional. In fact, under Microsoft's shared responsibility model, customers are explicitly responsible for keeping their own data secure, protected, and recoverable.

Unfortunately, the built-in data protection and recovery options offered by cloud providers are relatively limited. For instance, Microsoft Azure's free-of-charge, basic Data Redundancy backup doesn't allow automated recovery, nor does it store historical data. And Microsoft Azure Site Recovery, which is provided at an additional cost, doesn't give customers the ability to recover from a backup that is more than 72-hours old. Most SMEs can't afford to risk downtime and the best way to prevent data loss is to perform cloud backups both within Microsoft Azure, as well as to a separate, secure cloud. Third-party business continuity solutions for the cloud are a good solution as many of them offer additional security measures, including ransomware protection and data deletion defences.

Gain confidence by relying on your MSP

SMEs that have made the move to the cloud and are using an Infrastructure-as-a-Service (IaaS) should still expect the same level of business continuity they had on-premises. To ensure this, they should ask their MSP what measures are in place. Questions to ask include: Can they provide evidence of a reliable continuity strategy? Is the strategy tested on a regular basis to ensure backups are working properly and services can be restored quickly? And how will the business continue to operate in the event of a significant cloud outage that lasts several hours?

Transitioning to the cloud can provide SMEs with the opportunity to improve their overall security posture by implementing secure identity management and multi-factor authentication across all applications – so it's also important to discuss security with your MSP, as well as ask how well the new infrastructure is protected against cyberattacks.

When it comes to gaining maximum cloud advantages, SMEs should expect nearly immediate increased agility: being able to expand licences and workloads as needed. Often, applications that were constrained by old on-premises hardware will perform better, providing added business value. Once the cloud infrastructure is running, mature and stable, SMEs should initiate conversations with their MSP about optimising their operating costs in the cloud. Is there a way to optimise workloads and reduce costs without compromising performance and quality?
Finally, it's worth looking at quality of services reports and using analytics to ensure the cloud continues to deliver value over the long term. Evaluate the cost of the cloud services used versus their business benefits and have your MSP demonstrate its value during quarterly business reviews. Above all, know what you want to achieve for your business – remember the cloud is only a vehicle to help you reach your goals, not a goal in itself.

Sales of the Unexpected

The Role of cloud-based supply chains.

BY TERRY STORRAR, MANAGING DIRECTOR, LEASEWEB UK

E-COMMERCE accounted for over one-quarter of all UK retail sales in April 2022, according to the Office for National Statistics, and more than half of UK customers now purchase online more frequently than they did just a couple of years ago. As a result, retailers are working hard to satisfy increased customer demands, despite ongoing supply chain challenges.

In fact, dealing with the unprecedented operational challenges seen in recent years has underlined the significance of having highly resilient supply chain networks that can efficiently adapt to any incident.

The impact of supply problems is very real with research showing that out-of-stock scenarios meant lost sales for nearly half of UK retailers last year. In addition, just under one-third said supply chain problems resulted in increased overheads and narrower profits.

To cope with challenges that are difficult or impossible to anticipate, many retailers are focusing on updating legacy supply chain IT infrastructure to reduce disruptions, improve stock inventory management skills and respond more quickly to critical customer trends. In many of these situations,

the cloud is offering an ideal route to achieving these important objectives to deliver the agility they increasingly need.

Cloud control

For online retailers aiming to improve their manufacturing line and allow smarter supply chains that provide real-time visibility to better serve customers, the cloud opens up a wide range of possibilities.

This includes enabling businesses to handle massive amounts of data from many sources across the supply chain at breakneck speed. In particular, today's cloud services deliver access to the powerful computing capabilities required to produce insights and respond to events in near real-time – and to do so without having to allocate major capital investment to build infrastructure in-house.

In addition, the cloud also allows for improved supply chain connectivity, making it easier for online merchants to interact with suppliers and manufacturers and overcome information silos that often stymie collaboration and agility. These capabilities also extend to managing a variety of supply chain activities, including forecasting, planning, logistics, and procurement, by harnessing the cloud's elastic and scalable computing capability.

For the supply chain to run smoothly, data must be available, and the cloud allows retailers to exchange previously compartmentalised data among internal teams and external partners without the need for complex interfaces. Retailers can then more effectively track their inventory and verify that it has the goods that were promised to customers by bridging this information gap.

They can use the cloud to enable and centralise data integration and provide 24/7 access to data that is critical for enabling real-time visibility of supply chains, such as shipment records from suppliers, tracking information, and more, by partnering with the right cloud hosting provider, information interchange with supply chain partners becomes faster and more effective, making stock management, forecasting and fulfilment optimisation easier.

Increasing cooperation

The modern supply chain functions best when all stakeholders, from producers to retailers and customers, work together from beginning to end. By looking for ways to shift workloads between private and public cloud resources in a secure and cost-effective manner, online retailers can seamlessly integrate data from all trading partners, regardless of geographical boundaries or variations in demand.

In practical terms, the cloud offers seamless and real-time connectivity between supply chain players, ensuring that everyone can collaborate quickly around changing demand signals and make proactive decisions 'on the fly,'. These capabilities can be enhanced further by implementing automated rule-based judgments for basic processes.

The cloud also allows for improved supply chain connectivity, making it easier for online merchants to interact with suppliers and manufacturers and overcome information silos that often stymie collaboration and agility

Using this increased visibility and communication, brands can create fully customer-centric supply chains while also enhancing collaboration and trust amongst business partners. This includes tracking the status of each order from collection through fulfilment and making this information visible to customers, as well as recording real-time data on returns to help optimise inventory and costs.

Dealing with unpredictability

The ability of a store to deliver products in a timely manner is critical to creating a positive online shopping experience. Unexpected circumstances, however, can cause a delay in shipment or manufacturing timeframes.

In the last 18 months, for instance, online retailers have had to deal with a number of supply chain interruptions caused by a variety of challenges such as logistics partner driver shortages, raw material availability in manufacturing and a potential energy crisis.

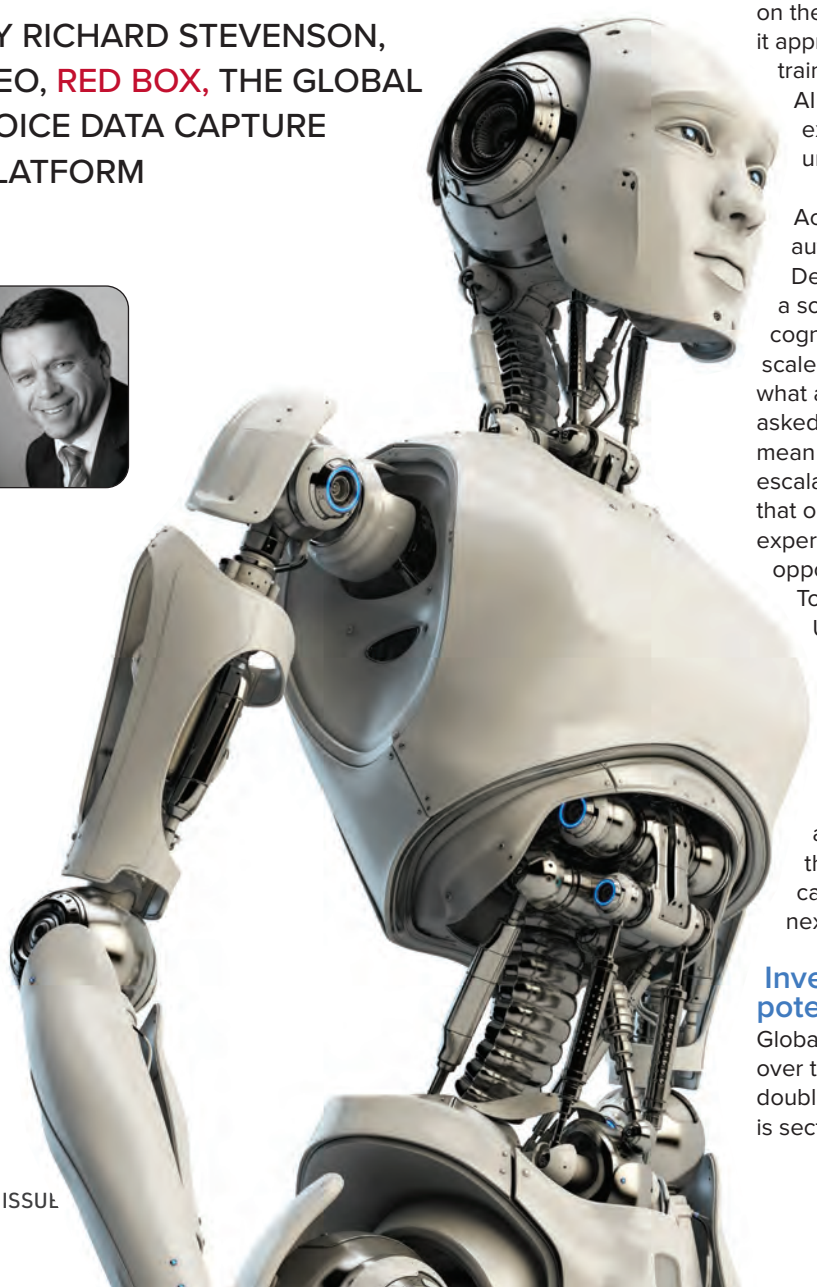
But, by optimising their supply chains with cloud-based intelligence, online merchants are well placed to implement continuous intelligent planning methods. By doing so, long-term forecasting decisions can be fine-tuned and supply chains can be made more adaptive to avoid potential loss.

In an era where retailers increasingly rely on supply chain agility and efficiency to meet customer expectations, cloud-based infrastructure can deliver the storage, computing and communication resources needed to stay competitive. Operating in an increasingly uncertain world with volatile trading conditions, these are essential requirements for retailers focused on the needs of a digitally-centric generation of shoppers.

AI that can 'listen like a human' is set to revolutionise business

It is now time for companies to invest in conversational AI, unlock these benefits and utilise the vast swathes of data held within everyday conversations.

BY RICHARD STEVENSON, CEO, RED BOX, THE GLOBAL VOICE DATA CAPTURE PLATFORM



DR NANDO DE FREITAS, a lead researcher at Google's DeepMind, recently grabbed tech headlines with his claim that humanity is closer than ever to creating artificial general intelligence. Although hotly contested by many in the sector, this type of technology would have a profound impact on the business community, its operations and how it approaches customer interactions. Instead of training algorithms on existing data sets, super AI might be able to listen, read emotion and extract information in a way that mimics human understanding.

According to Adam Sypniewski, CTO at automated speech recognition specialist Deepgram, nobody has yet tried to deploy a solution at scale which models customers' cognitive state; most cognitive modelling is small-scale and often academic. But being able to intuit what a human is thinking, for example, 'she has just asked me three times to repeat myself which might mean she is confused, I should stop this call and escalate to a real human who can help' would mean that organisations could build compelling voice experiences that could help customers and identify opportunities to improve.

To find out more about how advanced UK and US tech leaders believe conversational AI is, and how they plan to use it in the future, Red Box spoke to 800 of them across multiple industries. We found that nearly a third (30%) of the UK respondents believe AI is as good or better than humans at listening to conversations and reading emotions. They also say that the most likely inflection point for the widespread business adoption of AI that can 'listen like a human' in the UK is within the next five years.

Investors and leaders recognise the potential of conversational AI

Globally, AI has seen a huge amount of interest over the past five years with investment more than doubling in the past year to $93.5bn. At its core, it is sector-agnostic, already helping to make huge

advances in areas such as health, pharma, financial services, and increasingly traditional and slower-to-innovate industries like law.

When fed the relevant data sets, the technology can provide actionable insights in areas ranging from compliance to customer service and experience. In our experience, ten minutes of voice data can yield more information about a customer than a year's worth of CRM data – revealing important information about a customer's personality, their experiences, their moods when interacting with a company, and anything else that makes them human.

Take the employee journey as another case. Held within voice data is tone that elucidates the true intentions behind words: with working arrangements that are increasingly remote, and well-functioning businesses operating from different sides of the planet, the ability of companies to record and analyse conversations is key to keeping ahead of and in line with how their workforce is feeling, their productivity levels as they relate to burnout, and how to help prevent the loss of talent. Additionally, understanding insights around call drivers from speech analytics can drive process improvements, content production and training initiatives that improve both the employee and customer experience.

AI in business: An industry snapshot

According to our research, many UK tech leaders believe AI to be superior at performing repetitive tasks (42%) and problem solving (33%) as well as more typically human tasks such as transcribing complex conversations (35%) and understanding individual employees or customers (37%). Whilst AI is typically seen to be best applied to data analysis and problem solving, nine out of ten (88%) tech leaders say AI has, or will soon have, the ability to interpret human conversations as effectively as people can.

But how are businesses currently using conversational AI? Over a third (35%) say the use of AI to analyse conversational data is already helping them to improve customer experience and identify areas for internal improvement. When it comes to where conversational AI is being physically deployed, nearly half of those surveyed said they are already using voice capture technology in contact centres (47%) and between global offices (42%), with this adoption only set to increase. Two fifths (40%) also believe that AI will help improve retention, support flexible working, and provide great efficiency.

Making the workplace more flexible

For over two years now, remote and hybrid working practices have become the norm and businesses have sought to build policies which are practical, effective, and non-exclusionary. Many tech leaders believe AI is already playing a role in this, particularly in industries bound up in red tape where it can assist with complex compliance challenges. This is because conversational AI can flag communications which might breach terms and allow leaders to tackle root issues before they become dangerous to the organisation.

A further 35% of those surveyed believe AI is superior at understanding regional dialects and accents as well as interpreting multiple languages – crucial as workers and customers become increasingly remote from one another. The incoming voice data revolution is becoming clear for all to see.

There is a belief amongst the chief decision makers working in UK businesses that those elements of human interactions that were thought to be beyond the reach of technology have been thrust into the grasp of AI – the productivity and efficiency gains this could bring are immense.

For those tech leaders who haven't yet introduced voice capture software into their business, the average planned adoption time across back-office conversations, internal and external call centres and between different offices was just four and a half years. It is now time for companies to invest in conversational AI, unlock these benefits and utilise the vast swathes of data held within everyday conversations.

Challenges to be considered

So, what's stopping them? One of the roadblocks that many organisations are facing is that they are losing out on unlocking the potential of their valuable data through AI analysis. This is because the third-party providers that they use to capture their communication data often put walls up around the information they collect to push up their own share prices. The result is that businesses' market choice is fundamentally stifled, with the absence of control over various choke points such as databases.

Companies looking for a voice data capture partner should look for those which offer an open platform that allows data to be fed into applications of their choice – such as CRM compliance, business intelligence and AI and analytics tools. They should also ensure that the partnership will not impede on their ability to retain access to their data, always. Aurelie Cnop, Academic Director of the Master in Digital Transformation and Leadership at ESCP Business School says that, looking at developments in neural technology and data analytics as well as increased computing power, it is clear now that AI will progressively augment and streamline many human activities in the next five years. Visionary leaders know that every interaction within their organisation equates to data that can help it to become better – they just need the right tools to interpret it.

The Voice revolution

Why Voice?

BY PAUL CRAIG, HEAD OF IOT AT OV

VOICE IoT is growing exponentially. What was once considered a nice-to-have in IoT is now a reality, transforming the safety and efficiency of organisations globally.

Employing Voice IoT over traditional IoT creates an inclusive environment where you can share data hands-free at speed, personably, and securely. Its benefits are not exclusive to one sector: it has been a driving force in improving protection for lone workers and providing assurances in remote healthcare.

Voice IoT protecting lone workers

When you think of lone workers, you probably picture a telecoms engineer in the middle of nowhere, but actually, the definition includes anyone working solo without management. Hence, a technician working alone in a garage, a carer working call outs alone, or a delivery driver is classified as a lone worker.

Before the 2000s, lone workers had little to no protection, which meant they were vulnerable to emergencies. But then, a change in legislation brought stricter sanctions on companies and directors that were deemed to not be protecting their employees.

Now, most lone workers operate with a Voice IoT-enabled panic button, usually as a wearable device such as a watch. If pressed, it sends an emergency

signal to a team on standby, who can respond. An emergency could be anything from an attack to a fall, and often the worker may be unable to communicate the situation via text or voice.

Voice IoT is crucial in this. Once the button is pressed, it connects to a voice call, and the team can immediately hear the worker's surroundings. If they hear silence, they can safely presume the worker has taken a fall and speak out to reassure them until the emergency services arrive. Whereas, if they hear shouting, scuffling, or fighting, they know the worker is under attack and can discretely send the emergency services out to the incident without alerting the attacker. Added to this, if you are unable to speak, the SIM in the IoT device enables the emergency service to plot the worker's position via data recording and confirm who the person is via the SIM number. Without Voice IoT, millions of workers would still be vulnerable, but with the integration of voice, employers and workers alike can be confident in their safety.

Voice IoT facilitating remote healthcare

For lone workers, both the reassurance and listening capabilities of Voice IoT have equal importance, but in remote healthcare, Voice takes on a greater context, enabling carers to communicate essential reassurance hands-free.

IoT has typically been used in the healthcare industry to monitor vitals remotely, predicting and preventing severe illness and now with the capabilities of voice, carers can communicate with patients from the device too. The demand for remote care has increased rapidly in the past decade, fuelled in recent years by Covid-19. If patients are medically able, staying in their own home reduces pressure on hospital capacity and keeps that person in a comfortable environment.

This further intensified

during the pandemic, as pressure on hospital staff and space grew and the need to isolate patients or keep them out of medical settings to reduce outbreaks soared.

Voice IoT can come in multiple discrete forms for healthcare; workers may wear ID badges or a watch, while care-receivers often wear pendants or bracelets. The more the technology blends into the person's environment, feeling natural, the better the user experience.

For patients in care, it is highly unlikely they've been attacked and much more likely that they are looking for reassurance. Someone living home alone with dementia may be confused and need to hear a calming voice; pressing a button on their device will instantly connect them with a carer who can speak with them and provide comfort.

Similarly, if someone has fallen and cannot reach the phone, they can press the button on their wearable device and they will be connected with a carer who can reassure them that someone is on their way to help.

In some cases, it might not relate to medical services; instead, simply knowing that a family member is available to chat with at the click of a button is enough support for that person. As technology enables remote healthcare, voice ensures that vital human connection is not lost. With Voice IoT, monitoring patients' vitals outside of the hospital, as well as offering remote reassurance, means the level of treatment received by the patient is never compromised, while the ability of healthcare workers tending to multiple patients is improved.

Ensuring a reliable connection with multi-network SIMs

Voice IoT is creating new ways to offer protection and care through technology, but none of this would be possible without reliable connectivity. Lone workers can't afford network outages. If they have an emergency and cannot connect to a voice call, they will be entirely alone, jeopardising their health and safety. Likewise, if someone at home suddenly can't connect to their carer and is experiencing an emergency such as a fall, the inability to contact someone could be life-threatening at worst and highly traumatic at best. Installing multi-network SIMs into devices that support Voice IoT means that the SIM will simply connect to another network in the area if a connection drops. This way, users never have to worry about experiencing network outages, and Voice IoT can continue to revolutionise the safety of the world without interruption.

Privacy is now a competitive differentiator - ignoring it will hit your bottom line

The technology boom of the previous few decades produced a big data economy to which the price of entry was individual personal data. After a seemingly unending series of breaches and scandals around the gross misuse of personal data - the backlash has arrived.

BY STEPHEN CAVEY, CO-FOUNDER & CHIEF EVANGELIST, GROUND LABS

THE PRIVACY VIOLATIONS and data mishandling of various business giants have incurred massive public outcry and bottom-line damages. When Facebook was found to have enabled Cambridge Analytica to manipulate personal data in the 2016 US election, the tech giant's stock fell by over $130 billion.

Consumers want their privacy back. A new Cisco study reveals that 90 percent of consumers wouldn't use products and services that couldn't protect their data. An overwhelming majority, 91 percent, added that external privacy certifications directly impinged on their buying process. The market is responding too. When Apple upgraded its iOS in 2021, it gave users the ability to prevent data harvesters from tracking them across the apps they used. That single update sent shockwaves through the digital realm and ultimately cost major social media sites $10 billion in lost revenue.

Perhaps the biggest risk to the financial health of a company when it comes to privacy, however, is the regulator. The last few years have seen regulation pick up steam in new ways. Perhaps the best example is the General Data Protection Regulation (GDPR), The EU's landmark law sets out baseline requirements for the handling and protection of personal data and threatens large fines for those that don't comply. GDPR claims dominion not just over the 32 countries that make up the EU membership, but wherever the data of a European citizen is being processed, giving it a potentially global remit.

Consent

One of the GDPR's foundational principles is the right to personal privacy and the ability of individuals to control the use and processing of their data via a legal principle called Consent. Specifically, Consent refers to the necessity of data processors getting the clear and unambiguous permission from data subjects to process their data. At any time, the data subject may withdraw that consent and request for it to be deleted. They may also demand that their data be altered or inquire as to what data is being held on them and for what purpose it is being processed. Many of the GDPR's largest fines have been issued around consent violations. In August 2021, Amazon was handed the largest fine ever of €746 million, after regulators decided that the online retail giant's advertising practices didn't conform with GDPR's consent requirements. Earlier this year, French regulators fined Facebook and Google €60 million and €150 million respectively for failing to attain proper consent in their cookie issuance processes. In March, Swedish regulators fined dating app Grindr €6.5 million for selling user data without their consent.

Data protection regulation has accelerated around the world. There are now significant data protection regulations passing through over 100 countries in the world - many of them are based on, or mirror, the GDPR.

The Australian Privacy Act, for example, states that compliant organisations have to ensure that they can track, store, protect, produce and alter personal information upon request. Those who violate compliance can be fined up to 10 million Australian Dollars.

China's 2021 Data Security Law (DSL) has its own consent provisions in which the data subject may demand the deletion of their data and can refuse

their data being handed over to third parties. Severe non compliance can result in fines of up to $1.5 million and even criminal penalties.

The Singapore Personal Data Protection Act was passed in 2012, and has since undergone significant amendments. The law mirrors many of the requirements of the GDPR - including requirements for adequate protection of personal data and the attainment and alteration of personal data on request of the personal data subject. Much like its global counterparts - it also threatens significant fines.

These are just a few examples of the privacy regulations that are sweeping - if not already present - around the world. In a global economy, many enterprises will have to comply with at least one of them.

Although they vary in details - many share the same focus on personal privacy and personal agency in data handling. Complying with them necessarily requires a command over data that many cannot meet.

For many, mounting regulatory regimes requires a thorough uprooting of the way businesses and other organisations handle data. The question is how to take this chaotic pile of data - that could be stored in all manner of ways - in images, documents, and emails among others - and make sense of it.

Organisations need a solution which can firstly find their data, organise it and help them make sense of it. Only then can they start complying with the rising tide of privacy regulation.

Data Discovery

Discovery is the first process that complying organisations will have to undergo. This stage allows organisations to understand where their data lies and what types they possess. Discovery starts with the establishment of a particular goal. That may be compliance - but could also cover a variety of resilience and security purposes.

Organisations will then have to start to understand where and how their data is stored - on premises, on third party servers or in the cloud. While they might already know the location of structured data such as a primary customer database store, unstructured data will have to be hunted down too - such as in stray files and emails. This process will produce new insights as to the nature of that data and critically, help you build its risk profile.

Data Classification

Once an organisation's data has been discovered it can then be categorised across a variety of metrics. Those metrics could be organised according to the sensitivity of data or its level of potential personal identification.

Many compliance regimes explicitly list those distinctions and complying organisations should keep them at the centre of their focus. For example - low risk data will likely already be available to the public - such as job postings or a marketing brochure. Meanwhile Medium risk data will refer to internally circulated data which - if it were leaked - would potentially cause a low degree of harm upon the organisation that uses it such as a confidential price list.

High risk data - on the other hand - is data that will either cause a high degree of harm to the organisation or materially damage the personal privacy of those whose data is held by that organisation. It's this kind of data which needs extensive protection such as anonymisation and encryption.

That classification process will allow you to properly allocate resources to protect sensitive information where it lies, and mitigate privacy and compliance endangering risks. This should be the first step in a continuing process of data discovery and classification which will help to verify whether your organisation is storing its data in a secure and compliant manner.

Privacy can no longer be a reactive afterthought. The market is more than willing to punish those who think of it that way and consumers are making it a fundamental basic requirement in their purchasing choices. If that's not enough, regulators are forcing companies to respect personal privacy with a variety of laws which threaten significant fines and, in some cases, criminal charges. Privacy needs to be paid attention to, because if companies don't then markets and regulators will.

Are data protection budgets rising enough?

Organisations are best advised to work with an expert partner to devise a Modern Data Protection strategy that delivers the business continuity solution within an appropriate budget.

BY DAVE RUSSELL, VP, ENTERPRISE STRATEGY, VEEAM

THE RESPONSE of businesses to the pandemic became a huge proof of concept for technology – with organisations forced to make immediate investments in digital which would have normally been staggered over several years. However, increased technology budgets are a long-term trend rather than a short-term fix. This reflects the fact that businesses are focused on building more resilient ecosystems and marketplaces. This trend will continue as enterprises become more agile and future-proof their business models against digital disruption.

The Veeam Data Protection Trends Report 2022 shows that businesses are facing a data protection emergency. The number of organisations failing to protect data is climbing. While this goes some way to explaining why data protection budgets are outpacing general IT spending, are they increasing enough to fully protect business continuity?

IT spending and platform diversity to rise

On average, IT leaders expect their organisation's budget for data protection to rise by around 6%,

according to the current Veeam research. While estimates understandably vary, Gartner's most recent global IT spending forecast estimates the growth of around 5% in 2022 from 2021 – citing high expectations for digital market prosperity. We can draw at least two conclusions from this. Firstly, growth in data protection, as would be expected, continues to ride on the wave of mass digitisation and cloud acceleration. If one goes up the other must go with it. Secondly, businesses are playing catch-up when it comes to data protection. While 6% may not feel like a significant increase on 5%, every 1% is the equivalent of billions of dollars in real terms. So, why are data protection budgets outpacing general IT investments?

There are two answers to that question. The first is that, simply put, organisations can't protect all the data they need to protect. According to our research, 79% of UK organizations have a protection gap between how much data they can afford to lose after an outage and how frequently data is backed up. The second answer is more complicated as it involves looking at causation. There is no single reason as to why businesses are finding protecting their data more challenging than ever before.

There are multiple reasons for this phenomenon. A prominent issue is that the platforms businesses store and use data on are changing, which means the necessary data protection solutions, protocols, and required skills change as well. In terms of platform diversity, we are surging at pace towards a new normal for modern IT with a 50/50 split between on-premises servers and cloud-hosted servers. Looking deeper, within the data centre there is a consistent expectation for both physical and virtual platforms, while within the cloud there is a healthy mix of both hyper scale and managed service provider (MSP) hosted infrastructures. The two key takeaways from these trends are that the data centre is neither dead nor dying. There are still as many good reasons to run a workload on-premises as in the cloud. Furthermore, data protection strategies must accommodate physical, virtual and multiple cloud-hosted options, as well as increasingly popular Kubernetes environments.

Data protection meets SaaS

One of the drivers of the accelerated use of cloud services is the trend of organisations consuming apps as a service. The ongoing explosion in Software as a Service (SaaS) changes the dynamic of how organisations protect data. One such nuance is the danger of IT admins assuming that SaaS apps are equipped with native backup and recovery solutions that meet the standards of a Modern Data Protection strategy. A good example of where such an assumption can prove costly is when using Microsoft O365. While in-built data protection capabilities can give businesses a certain amount of reassurance that most O365 data is backed up and protected, the only way to gain true peace of mind is via a third-party backup solution. Protecting SaaS data beyond built-in backup and recovery functions is imperative given that 42% of UK organisations reported accidental deletion, overwrite of data, or data corruption as a primary cause of IT outages.

The second impact the move to SaaS is having on data protection strategies is the sheer increase in data that needs to be protected. Data volumes are increasing all the time and cloud acceleration only facilitates this trend further. To stop the gap widening further, businesses need scalable data protection solutions which provide the capacity to keep pace with rising volumes of data and apps. The answer to this is cloud-based backup and data protection. Two thirds of UK businesses currently use cloud services as part of their data protection strategy, and this will rise in the next 12 months. Furthermore, the ability to protect cloud-hosted workloads is considered the most important buying factor for enterprise data protection in 2022 by IT and business leaders. To summarise, organisations are using more cloud, they understand that they need to protect cloud data, and plan to deploy cloud-based data protection measures such as Backup as a Service (BaaS) and Disaster Recovery as a Service (DRaaS) to protect it.

One of the drivers of the accelerated use of cloud services is the trend of organisations consuming apps as a service. The ongoing explosion in Software as a Service (SaaS) changes the dynamic of how organisations protect data

Returning to the central question: are data protection budgets rising enough? The diplomatic answer is that there is currently a lot of ground to make up. The exponential rise in data volumes means there's more data to protect while increasing platform diversity means data protection strategies are gaining in complexity. It is likely that data protection budgets continue to outpace general IT spending as businesses gradually look to close that gap between how much data they can afford to lose and how much data they can adequately protect. Of course, spending more isn't the only answer.

Modern Data Protection solutions leverage cloud-based backup and recovery will improve the economics of protecting data at scale – meaning businesses can back up more for less. So, organisations are best advised to work with an expert partner to devise a Modern Data Protection strategy that delivers the business continuity solution within an appropriate budget.

How can Managed Service Providers remain competitive?

With an increasing amount of organisations sticking with remote and, or hybrid working practices, getting fast and efficient access to reliable IT remains one of their greatest challenges.

BY ANTHONY LAMOUREUX, CEO OF VELOCITY SMART, A GLOBAL PROVIDER OF SMART LOCKER SOLUTIONS

IN THE EVENT of a hardware failure, without having on-site IT support that can be called upon to provide support, both employees and their IT support departments face challenges in rapidly delivering the essential hardware required to quickly get up and working again.

This simple problem can damage productivity and negatively impact employee engagement through lost days of work, frustration, ultimately impacting on the bottom line.

With a significant shift towards self-service solutions being adopted by the corporate world they are searching for meaningful ways to save money and time, while increasing productivity.

Computer hardware, for example, can be ready for collection from a centrally located Smart Locker in as little as 60 seconds (a current real-world average of 45 mins), representing an average reduction in time of over 99% (Statistical average of customers, down from 3 days to 45 mins).

Smart lockers technology enables IT Support Teams to quickly and easily secure, manage and distribute hardware. So given that businesses who opt to use managed service providers, expect them to have the skills and access to systems to address issues related to cost, quality of service and risk - it is surely a question of when, not if, managed service providers will implement Smart Lockers, right?

How do smart lockers work in practice?

In short, these clever bits of kit automate the management of high-value devices, reducing loss, damage and management time. Smart lockers benefit from cloud-based software, which offers real-time analytics capabilities, for both the managed service provider and customer alike.

This provides managed service providers with a real opportunity to increase their efficiencies, as well as boosting customer satisfaction - a no-brainer. Smart lockers offer businesses and consumers alike storage solutions that have built in integrated

technology, allowing the smart locker to automate package delivery, notification, and distribution.For the customer, they are able to reduce the downtime between pieces of equipment being deposited and collected. For the managed service providers, this gives them unhindered 24/7 pick-up, drop-off and returns from internal, or external units.
A smart locker system also provides real-time analytics for each stage of order fulfilment, from the moment an order is placed in the lockers, to the moment it is collected up by the customer - giving managed service providers reliable and real-time access to data, on a scale that can't be matched by standard practices.

What influence are smart lockers having on consumer behaviour?

In an age of pretty much everything being available, on-demand, from groceries, to entertainment, people are opting to do what they want, how they want it, at times to suit them.

The 'on-demand' trend is already augmenting and in some places, replacing traditional business models, with technology removing the obstacles of the past to accessing products and services, such as can be seen through the rise in e-commerce brands making everything available, now, thanks to their omni-channel approach.

This has not only set the bar for the speed and choice of service, but has significantly raised customers' expectations and is something managed service providers should factor into their service offering, given their very purpose is to ensure seamless service to their customers.
IT hardware is no different. Typically, the first stage of the customer experience is either to request a new piece of equipment, a replacement item, or to request help with an IT problem - usually a problem that cannot be resolved instantly by remote desktop access, such as a hardware failure i.e. broken laptop, replacement charger cable, or lost mobile phone. The ability to have the equipment collected and replaced in as little as 60 seconds, has to be at the top of any managed service provider's business model.

Mitigating the risks

One of the biggest concerns for IT managed service providers and the businesses they service is ensuring what is delivered is both safe and secure. Smart lockers are able to give the managed service provider, and its customer added layers of security, as unlike a traditional parcel delivery locker, the smart locker uses a personal identification number (PIN) or barcode, which provided to the recipient upon notification of a shipment received and offers the user easy access to deposit and collect their items.
Aside from the logistics involved in the last mile of delivery, comes the risk element for the managed service provider to ensure that the expensive and

business-critical equipment reaches its destination safe and secure.

With traditional methods requiring signatures, perhaps waiting time whilst somebody answers the door, or they find the right floor in a building, this all leves the prospect of theft, false loss claims, and other issues that impact the bottom line in the air - which ultimately will be for the managed service provider to stump up the cash for any replacements, not to mention any penalties imposed as a result of failure to meet replacement times.

How to implement into an existing service management process

There's no argument that both speed and convenience are a standard customer expectation. Smart lockers provide managed service providers with an opportunity to implement cost-effective systems for their customers for retailers to extend the convenience of 24/7 online ordering to the kind of seamless pick-up services that customers expect. The nature of a smart locker neatly fits with existing workflows for managed service providers, whose ultimate aim is to keep their clients' services running, with the added benefit of significantly reducing turnaround times.

Despite the up-front investment needed to source the smart lockers needed to deliver the service, the benefits available from the investment will far outweigh the initial cost.

The future belongs to those managed service providers who are able to deliver what their customers want, when and how they want it - while driving costs down and increasing efficiency.