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Tories voice concerns over Huawei's UK 5G role



Senior Conservative Party members have written to fellow Tory MPs expressing concern over the government's decision to allow controversial Chinese technology company Huawei to have a role in building the UK's 5G network.

Former leader Iain Duncan Smith, who is among the signatories of a group dubbed "the Wolverines", said there was cross-party concern about the issue.

The letter, which was also signed by former ministers including Owen Paterson, David Davis and Damian Green, said some MPs were working to find a better solution to the 5G issue.

"We are seeking to identify a means by which we ensure that only trusted vendors are allowed as primary contractors into our critical national infrastructure," the letter reads. "Trusted vendors would be companies from countries that have fair market competition, rule of law, respect human rights, data privacy

and non-coercive government agencies."

Duncan Smith told BBC Radio 4's Today programme that the UK was in danger of isolating itself if it allowed Huawei access to certain areas.

"The foreign secretary said at the dispatch box that China is considered to be an aggressor in these matters, constantly attacking our systems alongside Russia," he told the programme. "They claim Russia is an aggressor and they won't have anything to do with Russian technology – then surely the same principle must apply to China."

The UK government said it would allow Huawei to be involved in building peripheral parts of the 5G and full-fibre network, despite describing it as a high-risk vendor. It will also introduce a regulatory framework aimed at ensuring Huawei's share of the 5G market cannot exceed 35% and can be reduced over time.

In response, Duncan Smith said: "I think there-

fore we need to get the government to look to get the involvement of Huawei not to 35% but to 0%."

He added that there was a lot of disquiet over the government plans. "There is real concern across the floor of the house," Duncan Smith continued. "We've got no friends out there any longer on this issue. Australia I'm told had a go at the foreign secretary about this decision when he went out there, New Zealand is against it, Canada is against it, America is against it. The 'Five Eyes' are all against it. The truth is security and the protection of the UK is the absolute number one priority for any government."

US vice-president, Mike Pence, also indicated the decision by the prime minister, Boris Johnson, to allow Huawei a limited role in 5G rollout could jeopardise a post-Brexit trade deal between Britain and the US.

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Tories voice concerns over Huawei role in UK 5G network

Continued from page 1

“The United States is very disappointed that the United Kingdom has decided to go forward with Huawei,” Pence told the US broadcaster CNBC. “When I went at the president’s direction in September I met with prime minister Johnson and I told him the moment the UK was out of Brexit we were willing to begin to negotiate a free-trade arrangement with the UK.”

However, Pence was non-committal when questioned on whether the decision could prove to be a deal-breaker. “We’ll see,” he said. “But we just don’t believe that utilising the assets, the technology of Huawei is consistent with the security or privacy interests of the UK, of the United States, and it remains a real issue between our two countries.”

His remarks came after it was reported that US president Donald Trump blasted Johnson with “apoplectic” rage during a phone call regarding the UK’s decision. ■



US vice-president Mike Pence told the US broadcaster CNBC “The United States is very disappointed that the United Kingdom has decided to go forward with Huawei”

GTT expands SD-WAN offering with new Fortinet partnership

GTT Communications has expanded out its SD-WAN options with the addition of Fortinet Secure SD-WAN.

The offering that uses Fortinet technology includes integrated next generation firewall and unified threat management functionality combined with an SD-WAN edge device and router. GTT said this provides “an attractive return on investment” with robust security features. The GTT SD-WAN service offering with Fortinet is also said to be particularly suitable for distributed enterprises and branch networking applications in industries such as retail, quick service restaurants, hospitality and financial services.

“Clients rely on GTT to securely connect their locations across the world and to every application in the cloud,” said Rick Calder, GTT president and chief executive officer (CEO). “Our broad portfolio of SD-WAN service options, that now includes Fortinet, ensures that clients can run their applications with superior security, performance and reliability to support their business goals.”

Fortinet SVP of products and chief marketing officer (CMO) John Maddison added: “Fortinet Secure SD-WAN allows GTT to build a smart connectivity platform that delivers additional value to customers through security, analytics and cloud-acceleration services. The combination of GTT’s Tier 1 global IP network and Fortinet Secure SD-WAN enables high-performing and differentiated ser-



The offering that uses Fortinet technology includes integrated next generation firewall and unified threat management functionality combined with an SD-WAN edge device and router

vices for GTT clients worldwide. We’re pleased to partner with GTT to deliver our carrier-grade secure SD-WAN solution to global enterprise organisations.”

Mike Sapien, vice president & chief analyst US for enterprise services at Ovum, said that by adding Fortinet as another vendor platform, GTT has enhanced and broadened its SD-WAN service to offer enterprises even greater networking agility

and integrated security capabilities. “The integration of SD-WAN technology with GTT’s Tier 1 IP network offers performance and efficiency advantages when leveraging the core network for internet traffic destined for the cloud,” he added.

GTT has been a Fortinet customer since 2007, but this new deal gives it a third-option for offering GTT’s network-based, managed SD-WAN services. ■




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While using the health sector as example, the webinar is meant for all IT administrators interested in the use of UEM and Automation software.

Register at:
baramundi.com/en-gb/webinar-nhs



Sean Herbert, baramundi Country Manager UK

Sir Keir’s staff accused of hack

The Labour Party leadership campaign has been soured after its most senior official accused Sir Keir Starmer’s staff of hacking into an internal party database.

Jennie Formby, general secretary of Labour and an ally of outgoing leader Jeremy Corbyn, reported Starmer’s campaign to Britain’s data watchdog over claims that it had gained unauthorised access to a party membership list.

The former Labour cabinet minister Lord Falconer of Thoroton said that the claims against Starmer were a “bare-faced and repulsive attempt to cause problems for his campaign”.

The Labour MP Wes Streeting said: “It

is disappointing that the Labour leadership race has gone from being a good-natured debate between candidates to one which is being fought in the gutter by proxies.”

Currently, Starmer has no way of canvassing voters directly, but Rebecca Long-Bailey, who is also running for leadership against Lisa Nandy, has access to a separate, extensive database of members built up by the campaign group Momentum.

The frontrunner’s supporters said Formby’s allegations are “utter, utter nonsense” and a tit-for-tat move after they had raised concerns about the data use of Long Bailey, preferred successor, by a section of the party to Jeremy Corbyn. ■



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O2 to open radio access network for increased 4 and 5G coverage

O2 has unveiled an open radio access network (O-RAN) project to broaden its number of infrastructure partners.

It is particularly useful for coverage in hard to reach rural locations – such as an area with a very small population – or where a sharing model is more cost effective such as dense urban locations where large numbers of small cells are required.

O2 has partnered with Mavenir, Dense Air and Wave Mobile to implement O-RAN in London and other UK locations and the company expects commercial deployment of O-RAN to pick up pace over next 18-24 months.

Brendan O'Reilly, CTO of O2 said: "By opening up our radio access network to smaller vendors, and as we look towards wider adoption of 5G, O-RAN will be part of the solution to bring the latest connectivity to more people around the country".

The operator will use Mavenir former to increase coverage and capacity in London, providing enhanced mobile connectivity in busy areas like stadiums and shopping centres.

"Densification of coverage in cities is a challenge but OpenRAN is ready to take it forward and Mavenir is proud to work with O2," said Stefano Cantarelli, CMO of Mavenir.

Dense Air will work at Millbrook to deploy both 4G and 5G networks over an O-RAN solution. O2 works with Millbrook Proving Ground as the public and private network provider of 5G connectivity for the

testing and development of CAV technology.

"Dense Air and Airspan Networks, our technology partner, have built a unique hyper-dense pervasive 4G and 5G O-RAN based solution at Millbrook," said Paul Senior, CEO of Dense Air. "The O-RAN deployment which utilises over 70 radio nodes, 19km Fibre and mmWave front haul delivers network capacity at a scale never seen before at any Proving Ground, allowing the validation of future CAV (Connected and Autonomous Vehicle) use cases".

Coverage solutions are being developed

with Wave Mobile whose current O-RAN network is active on several sites across the UK including Woldingham, Surrey that carries mobile traffic for O2 customers. The provider said this could be expanded to provide community based mobile services in "not spots".

"We are proud to be working with O2 by providing hard to reach and low consumer density areas with essential coverage," said Anthony Timson, CTO of WaveMobile said. "Cost optimised O-RAN technology allows greater capacity and simpler configuration which massively benefits the end user". ■



O2 has partnered with Mavenir, Dense Air and Wave Mobile to implement O-RAN in London and other UK locations and the company expects commercial deployment of O-RAN to pick up pace over next 18-24 months

'UK cybersecurity sector worth £8.3bn' – DCMS

The UK's cybersecurity sector is now estimated to be worth more than £8.3bn, a jump of 46% from £5.7bn in 2017.

The valuation comes from a report published by the Department for Digital, Culture, Media and Sport (DCMS) which shows that the number of active cybersecurity firms operating in the UK has increased by 44% since 2017, rising from 846 to more than 1,200 firms by the end of 2019.

"Our ambition is to make the UK the safest place to live and work online and it's fantastic to see our cybersecurity industry flourishing," said Clare Gardiner NCSC director of national resilience and strategy. "The NCSC will continue to support, encourage and facilitate cybersecurity research and innovation, and help attract the most diverse minds."

Since 2016 the report estimates that the total investment into the industry has exceeded £1.1bn. In 2019 alone the sector received £348 million in investment. Revenues on average for cybersecurity companies has grown by 46% since 2017.

"It's great to see our cybersecurity sector going from strength to strength," said digital minister Matt Warman, ahead of his speech at international cybersecurity conference SINET. "It plays a vital role in protecting the country's thriving digital economy and keeping people safe online." ■

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Simplify Edge Deployment & Improve Efficiency with Tripp Lite's Aisle Containment System

Tripp Lite's modular aisle containment system is a simple and cost-efficient solution for improving cooling efficiency and performance in edge-of-network applications, data centres and server rooms. Paired with Tripp Lite's EdgeReady micro data centres, it makes deploying self-contained edge computing infrastructure quick, easy and cost-efficient – especially when retrofitting spaces like offices and factory floors to accommodate IT equipment.



Designed to be installed without the assistance of specialists, the aisle containment system creates a semi-airtight room to prevent hot air exhausted by IT equipment from recirculating to rack intakes. This physical barrier makes existing cooling measures more predictable, efficient and effective.

Aisle containment optimises the efficiency and effectiveness of existing cooling to allow increased equipment density without costly capital expenditures. Rather than spending precious time and money on building dedicated IT spaces from scratch, you can quickly and easily retrofit non-traditional spaces like spare offices and factory floors to accommodate edge computing. You can also allow free stranded capacity to increase equipment density in existing racks. This ability to adapt your IT capability to changing market conditions by quickly and easily reconfiguring IT infrastructure is key to the organisational agility required to thrive in today's fast-paced world.

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Smart sensors and devices in edge locations like factories, offices, homes, stores and warehouses have become smaller, less expensive and increasingly interconnected, creating an explosion of data. IDC predicts that 150 billion IoT devices will create 90 trillion gigabytes of data by 2025. Organisations in every sector – including business, manufacturing, telecommunications, healthcare, financial services, retail, transportation, government, energy and education – are racing to analyse and capitalise on IoT data by implementing an edge computing strategy to supplement traditional core/cloud data centres. Gartner predicts that data processed outside core/cloud data centres will grow from 10% currently to 50% by 2022.

Tripp Lite makes it quick and easy to deploy edge infrastructure. Preconfigured EdgeReady micro data centres (MDCs) integrate a rack enclosure, UPS, PDU and remote management, with easy-to-add options for cooling, extended runtime, KVM, security and cabling. Dozens of stock configurations are available for immediate order, and options for customisation are unlimited.

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Designed for flexibility and compatibility, the Tripp Lite aisle containment system adapts to the unique requirements of your edge application, whether you have several racks in a single row or a full data centre. In addition to EdgeReady micro data centres, the aisle containment system is compatible with Tripp Lite's full line of edge-friendly IT infrastructure solutions, providing unlimited options for customisation.

Scan the QR code to learn more about Tripp Lite's aisle containment solutions



Manchester tech cluster gets £2m shot in the arm

Enterprise City, the technology cluster in Manchester, has been handed a £2m grant from the Department for Culture, Media and Sport (DCMS) to aid its Exchange programme. The funds will be used to support and attract more cloud service, cybersecurity and edge technology firms to the city. "Exchange is a unique programme that adds genuine value to the city and its booming tech and digital sector," said Tanya Grady, head of partnerships at Enterprise City. "We would not be able to deliver this level of comprehensive training and coaching without the funding from MCC and DCMS, which will create more than 2,000 jobs in the city."



Vodafone Ireland launches new SD-WAN and wins Ryanair

Vodafone Ireland has launched a new SD-WAN service and secured airline Ryanair as a customer. Although the operator did not reveal which it was using for the managed service offering, it has previously deployed Cisco's Viptela SD-WAN service. The newest SD-WAN offering, which is targeted at medium-to-large organizations, is virtual and it sits on both existing and new networks. With the SD-WAN service, Vodafone Ireland's busi-

Over half of global enterprises fail to communicate data sanitisation policies

A new study of data sanitisation policies reveals that in many cases there remains a gap between policy and execution, despite new legislation placing greater emphasis on privacy and data protection. Research by Blancco Technology shows that in the UK, despite 97% of UK companies having

a data sanitisation policy in place, more than a third (37%) have yet to communicate it across the business. Overall, nearly half of companies (42%) do not have a data sanitisation policy in place that's being effectively and regularly communicated across the organisation.

Human expertise 'most important in cyber resilience'

More than 40% of respondents in the latest Twitter poll run by Infosecurity Europe, the information security event, singled out human skill and expertise as the most important element of a successful cyber resilience approach. The aim of the poll was to explore the importance of resilience in cybersecurity, that is the ability of an organisation and its cybersecurity professionals to prepare, respond, and recover when cyberattacks happen. It also projected that 146 billion records will have been exposed from 2018-2023.

Huawei reaction

Huawei will continue to be used in the UK's 5G networks, but with restrictions. It will only be allowed to account for 35% of the kit in a network's periphery, which includes radio masts – and will be excluded from areas near military bases and nuclear sites. "The government has struck an artful and sensible compromise," said Paul Beastall, head of strategy, Cambridge Consultants. Angus Ward, CEO of BearingPoint//Beyond, added: "In my view, this news could take focus away from what should be the main focus of mobile operator boards: how well are they prepared to monetise their massive 5G investments, how do they get a suitable return on investment?" added Angus Ward, CEO of BearingPoint//Beyond.

'Increase in cyber security employment'

A report by the Department for Digital, Culture, Media and Sport (DCMS) has noted an increase in cyber security employment. The UK Cyber Security Sectoral Analysis 2020 said there was a 37% rise in employment within the sector since

2018. Some 43,000 Full Time Equivalents (FTEs) are said to be currently working in cyber security, while the report also found that 2019 was a record year for cyber security in regards to investment, some £348 million was raised over 80 deals.

Cybercrime figures are 'tip of the iceberg'

New figures which report a fall in 'computer misuse' and a rise in fraud shows the authorities are failing to grasp the true impact of cybercrime, according to a cybersecurity expert. Tim Thurlings of bluedog Security Monitoring says that the current figures disguise the full extent of the problem and demonstrate the need for more accurate ways to measure

cybercrime. New figures released by the Office of National Statistics show that, according to the National Fraud Intelligence Bureau (NFIB), 'computer misuse crime' fell by 11% in the year ending September 2019 to 21,471 offences, following rises in the previous two years. The NFIB figures include cases reported by businesses and other organisations.

UK sees first nation-wide IoT data collection network

WND UK, the Sigfox network operator, said it has deployed the first UK-wide IoT public network for secure sensor data, achieving over 90% population coverage in just 18 months. Sigfox is a low-power wide area network (LPWAN) technology, which is purpose built to provide low-cost connectivity and enable the use of cost-efficient silicon modules. Harnessing ultra-narrow band technology, Sigfox provides basic connectivity to devices that do not require high throughput. This approach is ideally suited to the vast majority of IoT devices.

Word on the web...

As digital transformation continues to form a large proportion of Service Providers' work, there has been a notable shift in their role. Jelle Frank van der Zwet, segment director IT service providers at Interxion, explains how digital transformation has markedly changed the services bringing in revenue...

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UK businesses turning to multiple cloud providers

UK businesses are turning to multiple cloud providers to manage IT costs and have access to a flexible menu of services, according to new research. The ISG Provider Lens Cloud Transformation/Operation Services & XaaS Report for the UK in 2019, published by Information Services Group (ISG), notes that large UK businesses trading in their old capital expenditure IT models and embracing multi-cloud strategies with public cloud providers. Using several cloud services helps UK companies improve their speed to market and gives them cost flexibility, the report added.



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Building stronger cybersecurity

Corey Nachreiner, CTO at WatchGuard Technologies looks at cybersecurity in the construction industry

It's no secret that much of construction has progressed slowly in technology adoption and this applies to cyber security. Despite this, the industry rarely makes headlines around serious security breaches. There are a few notable exceptions such as the recent incident at Canadian-based Bird Construction, which had 60 GBs of data stolen. In fact, recent figures from Allianz Insurance revealed that theft costs UK construction firms £800m a year. Another report of alarming statistics, insurance provider, Hiscox, stated that last year, 55% of UK firms have faced cyberattacks, with losses amounting to an average of £176,000.

This has proved a wake up call and combined with GDPR, it appears the industry has finally realised the value of its data and the importance of protecting it. According to UK Government data, between 2018-19, businesses in construction spent on average £3,750 on cyber security. While not a big number, it is a 188% rise on the previous year.

The industry and its sprawling supply chain face the same threats and vulnerabilities as every other, but there are many areas, particularly around active construction sites, that pose greater cyber risks along with physical security aspects.

For a new construction site, one potential attack vector is the office or offices, temporary bases where developers, engineers and construction managers connect with their organisations and share plans and financial data. This is also where they set up an IT hub, typically including a cellular or wired internet connection, wireless hotspot, computers and printers. There may also be workstations with computer-aided design and drafting (CADD) and blueprint software for real-time updates and changes.

This traditional infrastructure presents a ripe target for cyberattacks and the temporary nature of these sites means organisations may not have put in the security controls of permanent ones. Additionally, security can often be laxer, especially if there is a 'bring your own device' policy, allowing workers to access critical systems on their own devices. In this case, it is important to have a policy requiring passwords and other validation, while mobile devices should always be assessed for vulnerabilities.

Digital plus physical threats

Another susceptibility is that some forward-thinking construction companies may be undergoing digital transformation and using wireless or cellular-connected rugged tablets and shared blueprints and plans on digital devices rather than paper. They could be using drones for site inspections or 3D printers for prototyping. Today's cyber criminals already target tablets, smart phones and mobile devices and while attacks on drones or

3D printers aren't as common, they are possible.

Physical site security is more focused on preventing the theft of equipment and materials than protecting exposed data cables, for example, that could be tapped into to monitor traffic and 'listen in'. Inside an existing building, security controls may get disabled or minimised for workers needing frequent access. Planting devices or trojans, which would give attackers remote access to the facility once completed, are not common threats, but again are possible.

Motivation

One main motive for targeting a construction site is the theft of intellectual property, such as blueprints which could provide intelligence needed to defeat the physical security in future. It's always easier to hack a company from the inside than out. Another could simply be compromising the supply chain to divert payments or extortion via ransomware. Then there is the targeting of building automation systems being installed in new developments for planting of malicious devices, which then open a backdoor into the future tenant's network.

Awareness and counteractions

Better cyber security awareness is an important starting point and should be standard. Being aware of phishing, other malicious emails and not clicking on every link will significantly improve things. Understanding the connection between physical and cyber security is also important as cyber attackers often gain access by simply walking through the front door - there is a lot of movement on a building site. Anyone wearing a hi-viz jacket may be assumed to be there legitimately.

Another thing to look for are malicious requests for wire transfers. This is an area which has given thieves access to companies and individuals and is of particular interest in construction where multiple bills, invoices and payments permeate. In these scams, criminals might send phony invoices or calls requesting immediate payment to avoid defaults.

Building on firm foundations

Like any other business, strong cyber security needs to be built on strong foundations. This should follow the same lines as with any organisation. Computing devices on site should be secured in the same way as in an office: firewalls should be deployed, along with other network security services, endpoint anti-malware protection, patch software, back up data etc. New generations of ruggedised appliances from multi-function security appliances to wi-fi access points make this easier, while remote monitoring and management tools allow IT managers to update and monitor alerts without travelling nationwide.

While things are improving, the industry still has catching up to do and there is still a risk that hackers may see the sector as soft targets. As the housebuilding industry increasingly holds more data on its buildings, suppliers, house buyers and their solicitors, construction certainly needs to invest more in cyber security.



Corey Nachreiner, Chief Technology Officer, WatchGuard Technologies



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AD-2C-BRO-810

Is your organisation 'IoT ready'?

By Alex Wilkinson, chief operating officer, Solutionize Global

The Internet of Things (IoT) may still be in its relative infancy, but it's gradually building apace – as more enterprises begin to uncover the power it possesses when looking to harness data.

From manufacturing to healthcare, more industries are becoming aware of its critical capability to process and convert information into rich, meaningful real-time analytics, in order to do everything from flag potential issues with infrastructure and track usage to demand for services and understanding customers' online behaviours.

IoT adoption shows no signs of slowing down either, as its implementation has proved to have the correct operational efficiencies in place – all of which can be adapted, and evolved, to successfully provide useful knowledge to operate in a challenging economic climate.

Statistics back up this shift towards having a multifunctional system in place too. For example, Vodafone's sixth IoT Barometer reports that 34% of the businesses surveyed are now adopters, and 84% of these have increased confidence in IoT compared to the previous survey. In addition, 60% of organisations believe that it will have completely disrupted their industries in just five years' time.

Therefore, can enterprises even begin to ignore such prominent figures when it comes to finalising their 2020 IT and business strategies?

What are the advantages of IoT?

Whether dissecting data to help a company recognise a customer's online journey – or providing a solution for supply chain management – IoT offers a self-sufficient solution across a variety of sectors.

And when it comes to delving into why it can further boost the firm's offering, it's important to acknowledge where the organisation stands, before proceeding towards the installation of something new.

For those able to venture into the next phase of implementation, a business-savvy starting point would be to conduct a Readiness Assessment. Done in-house, or via an external partner, this audit can help a company underline why it thinks it needs IoT and how it will be of benefit.

To determine this a business should ask itself, 'Why is the firm interested in this development?', 'Which competitors are utilising it in the same space?', and 'Whereabouts in the company's current technology strategy roadmap does IoT fit in?'

As part of this discovery and fact-finding phase, enterprises are able to define priority gains and further conduct competitor analysis – and utilise 'best practice' methods – in order to ensure a seamless IoT transition. There are three further elements to consider too:

1. Does the firm have management go-ahead? A defining part of IoT transformation is achieving C-suite buy-in. Without this, any digital development can fall flat without the budget, support and correct personnel in place to deliver it.

Everyone may not immediately jump at the chance to transfer data over a network without human-to-human or human-to-computer interaction. Therefore, it's vital for leaders to be given all the details surrounding why IoT will make the business more secure and streamlined – and stay ahead of the curve.

2. What is the current technological provision? Concerning the infrastructure already in place, does the organisation have the capacity to grow or change the IoT ecosystem with ease so it can build new apps or add integrations? And what technological devices in its existing suite of digital developments are ultimately compatible with IoT?

Additionally, does the company know what the considerations between a

public cloud hosting solution or a private version? The main differentiator being that organisations won't be responsible for any of the management of a public cloud implementation. The governance and type of industry is likely to have some sway and many organisations will look towards a tailored, multi cloud arrangement.

Of paramount importance, is security. Is the organisation taking ownership of building its own IoT offering or utilising an As-a-Service (AaS) model instead? KPIs and drivers for that data should be set, so that the correct metrics are in place. Knowing what is needed will help identify

the exact stage a company is currently at. Organisations should consider what applications are already in place, how much data processing is needed, what will take place at the Edge or be moved to the cloud, and which analytics are best used.

3. Getting the right team in place Alongside any element of digital disruption, it's vital that the internal team works together, in order to provide a seamless transformation to IoT provision. Experienced and specialist IoT consultants can be critical – they understand how the build will take shape, the electrical engineering required, and can impart

knowledge of IT, cloud, networking and data analytics to upskill colleagues.

If the right skills are not available internally, organisations can work with a managed service partner to identify the savvy professionals needed, in order to deliver the project, end-to-end.

To control budgets, show value and maximise benefits, a cost-effective IoT route is to begin with a small pilot which can be implemented to uncover the true need for digital transformation. That way, an organisation should have all the vital information to hand, in order to make a decision into exactly what is needed – and utilise IoT's benefits to the full.



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The shift to voice tech

It's been around for some time, but while many enterprises embrace it, many still recoil. Robert Shepherd asks why there's a gulf in knowledge and experience between the dos and don'ts

Voice technology is quite broad, as it pertains to anything from voicemail to conference calling to Google Assistant, Apple's Siri and Samsung's Bixby, Microsoft For Teams [fill in the blank].

From reading that list, you'd think voice tech is mainly for consumers and a new concept. However, any purist will tell you that voice recognition actually dates back to 1877 when Thomas Edison invented the phonograph.

Now, we are in 2020, yet there's a huge chasm between what businesses know about voice-enabled technologies and what they do about it.

In 2018, Globant, the IT and software development company, surveyed more than 600 senior decision makers and found that while the vast majority of respondents see big benefits to voice technology, just 31% said they use it daily in the workplace.

However, Steve Murray, solutions director at digital contact centre specialist IPI says voice technology and speech recognition tools in particular, will become a crucial aspect of how enterprises and brands communicate with their customers. "Change is already happening with the way consumers interact with digital technology and voice is at the forefront, with the likes of Siri and Alexa leading the way," he says. "These virtual assistants are already being used by consumers in a multitude of ways, from checking the weather to asking for directions and as this trend continues to grow, enterprises would be remiss not to get on board and meet their customers' demands for voice-enabled self-service technology."

He says, "from the enterprise side", delivering on customer service that

satisfies both the customer and the contact centre agent is crucial. "With voice tech, not only do customers have another option for resolving their query, often without the need for human interaction for simpler tasks, but the human agents will have more capacity to interact with the customer who really needs to speak to them," adds Murray. "Automating a number of tasks with speech recognition software will be beneficial to the enterprise and customer alike."

Dave Cornwell, head of solutions at O2 Business, concurs and says voice tech will "definitely" change the way enterprises work and here's why. "Whilst human-to-human, and human-to-business interactions via SMS, WhatsApp, chatbots and the like continue to grow, voice communications will remain a vital part of enterprise," he says. "The first half of this new decade we expect to see a dramatic reduction in legacy voice services and legacy infrastructure, largely driven by vendor and service provider moves. With it, we will finally see voice move more towards IP."

Curtis Peterson, SVP of operations at RingCentral, says that while voice technology is still in the early stages of implementation, there's certainly a bright future ahead.

"By 2021, Ovum estimates there will be more voice assistants on the planet than there are people," he says. "Voice-technology is making a huge impact on the B2C world thanks to voice assistants such as Amazon's Alexa and Google's Assistant, Duplex. And voice-based AI technology in the B2B world is starting to make its mark with the aim to change the way enterprises work."

He adds that "the aim of voice technology for enterprises" is to help boost staff efficiency and productivity. "Specifically, voice-based AI technology will be able to schedule meetings, highlight topics discussed in meetings or setting task reminders," Peterson continues. "All this is designed to take hours out of work, saving time spent on simpler, mundane tasks. When it comes to communications, we will get to a stage where AI will be able to pull out actionable intelligence from a range of communications, without any human input."

Konftel is a company with a rich heritage in audio conferencing and Stefan Eriksson, the company's marketing and communications manager, says user interfaces have transformed and developed enormously during the last decades and voice hold great promise to open-up for yet another big leap. "The technology as such has been around for quite a long time and lately it has matured significantly and proved to be really useful in consumer applications," he says. "From our perspective, voice tech can be used to improve the user experience in meeting rooms even further. Already the 'one click to conference' features found in some distance meeting solutions has made it straight forward and simple to start or join a meeting. When users can rely on voice commands to do the same and optimally also control other functions, it lowers the barriers to use the conferencing technology."

There are other perks too, according to Simon Moxon, founder and chief executive officer (CEO) at conference call provider Meetupcall. "By utilising conferencing solutions to conduct their meetings remotely, enterprise businesses can save money on both their

travel and human resource costs," he says. "As well as this, as enterprises look for more ways to reduce their carbon footprint, reducing travel costs to meetings that can be conducted remotely is a quick and easy way to achieve this."

Of course, any company will always want to trim its bottom line when it can, so the financial argument makes a lot of sense. But what about the day-to-day running of a team?

"As a network manager, maintaining an internal VoIP platform can be a real pain as you have to be very careful with your firewall," adds Moxon. "You can get hit for telephony fraud which can cost thousands if your firewall is not properly configured and maintained, which makes it far easier to use an external voice tech supplier."

For Murray, first call resolution always will be a top priority for both the call centre and the customer, because agents want to be able to help the customer the first time they get in touch and customers likewise want a swift and effective solution to their problem. "Automated speech recognition tools can do just that," he says. "What's more, if customers with simple issues, like updating contact details or cancelling a subscription, can have their query resolved via voice tech, then human agents will have more time to spend with customers with more complex queries. This extra time will also encourage them to deliver a higher level of customer service and happy customers are nothing if not good for business."

Apart from cost benefits and expediency, Murray says voice tech could be seen as an important recruitment tool to attract and retain younger workers who may already use a phone-based digital assistant. "Certainly, there is a definite advantage to showcasing the use of voice tech in the contact centre," he says. "As more tech-savvy generations enter the workforce, showing them that brands have a digital know-how is key, especially to dispel concerns over the legacy technology that is often associated with call centres. Of course, there is the worry that this automated technology could be replacing agents, but if advertised as a digital assistant that can help with their workload and allows them to spend more time with customers, new agents coming into the contact centre will know that their time and training is valued."

Still, not every enterprise uses voice tech, so there must be solid reasons for their reticence. One of those, unsurprisingly, is privacy, says Cornwell. "Customers' main concerns around voice recording are always around where and how data is stored," he adds. "As we all know, meeting or voice call transcripts can include personal details or commercially sensitive or privileged information. This makes it more important than ever to opt for a supplier that is independently accredited (e.g. CAS(T) certified) and complies with BS10008 legal admissibility requirements." Moxon says "clearly" many enterprises express concerns around security when they are conducting conference calls where confidential information is being shared via telephone lines or VoIP. "As such, they should always look to use a supplier who is ISO 27001 certified," he adds. "As well as being ISO certified, Meetupcall boasts a 256-bit encrypted conference dashboard and secure PINs that are randomly generated and unique to every user, for every call – meaning there is no danger of unwanted guests eavesdropping on their private calls."

Cornwell says At O2 Business, its mobile recording product also offers a one-time GDPR announcement to cut the time to give explicit consent for data use. "Companies may also have to consider providing greater disclosure about when and how they are using voice technology," he says. "For example, this could take the form of the conventional announcement that calls may be recorded and monitored for training purposes – and might need to happen for every call and every meeting."

The fact a large percentage of enterprises have yet to take the leap might not just be down to cost and fears about the quality, might it just be better-suited to some sectors than others? "Since a voice tech project is customer-driven, it can be adapted to suit any enterprise in any industry," says Murray. "Whether it's travel, leisure, banking or insurance, if customers are demanding to have a fully omnichannel experience that includes everything from social media chat to a virtual voice assistant, then it would behoove organisations not to ignore them."

Since a voice tech project is customer-driven, it can be adapted to suit any enterprise in any industry. Whether it's travel, leisure, banking or insurance, if customers are demanding to have a fully omnichannel experience that includes everything from social media chat to a virtual voice assistant, then it would behoove organisations not to ignore them."

He says it ends the need for wires and desk phone units and replacing them for super-fast, efficient apps for mobile, laptops and desktops. Alongside the efficiency benefits it also allows businesses to track, analysis and gather data from communications, which

then can be collated into automatic reports. "Multi-phone support means users can have several devices connected," adds Kelf. So, for those looking to make the transition and for others who still need convincing, it's important to know where to start looking.

"It's clear that implementing a cloud phone system could be hugely impactful on your business operations," says Kelf. "There are a number of organisations that provide effective cloud telephony solutions, but what should you be on the lookout for when selecting a partner? It goes without saying you will require a partner that has experience, expertise and skills required to meet the demands of your business."

Of course, there are different ways enterprises can adapt to the emerging voice platform, so it's useful to know what they are. "Any organisation looking to implement a voice tech strategy needs to ensure that it is customer-led," adds Murray. "Rather than employing this technology because it's fashionable, it's important to consider why it's being implemented and how it will affect and streamline the customer journey. There will always be some processes that are more suited to automated voice tech than others, so it's best to start off small to see where it is most effective before employing the technology in a more fluid and pervasive manner."

The seismic changes in the technology are clear, as the industry has moved through the digital and VoIP eras to find itself in the age of SIP and the phasing out of ISDN and PSTN services, according to Ian Guest, marketing director at Pure IP. He says trends such as Unified Communications and 'as a service' offerings have also contributed to a huge shift in transitioning voice services to the cloud from the more traditional PBXs. "There is no doubt that this evolution of voice technology, bought to us by the likes of Microsoft and others, is driving a change for the better," adds Guest. "However, the sheer speed and nature of the change, particularly around cloud-based solutions, brings with it challenges for enterprise users as they try to keep pace with the technology, and ensure its quality, security, and reliability, while grappling with making the right decisions for their organisations."

Dr John Yardley, founder and managing director of Threads Software, sums it up when he says "there can

be little doubt that the ability to use the human voice does and will have, a significant impact on the efficiency and hence profitability of enterprises. "For one thing, most of us speak significantly faster than we type – and in general, the electronic devices we use to input and output speech are far more ergonomic and portable than those we use for text," he says. "If we could do away with keyboards and displays, we would not only have access to far more information, but we would not have to train people to type – or worse still let them muddle along inefficiently using one finger at a time. The vast majority of human interaction is by voice, so it is clear that by ignoring it, the enterprise is missing out."

Not only is voice not going away any time soon then, it continues to reinvent itself. ■



"Change is already happening with the way consumers interact with digital technology and voice is at the forefront, with the likes of Siri and Alexa leading the way."

Steve Murray, solutions director, IPI

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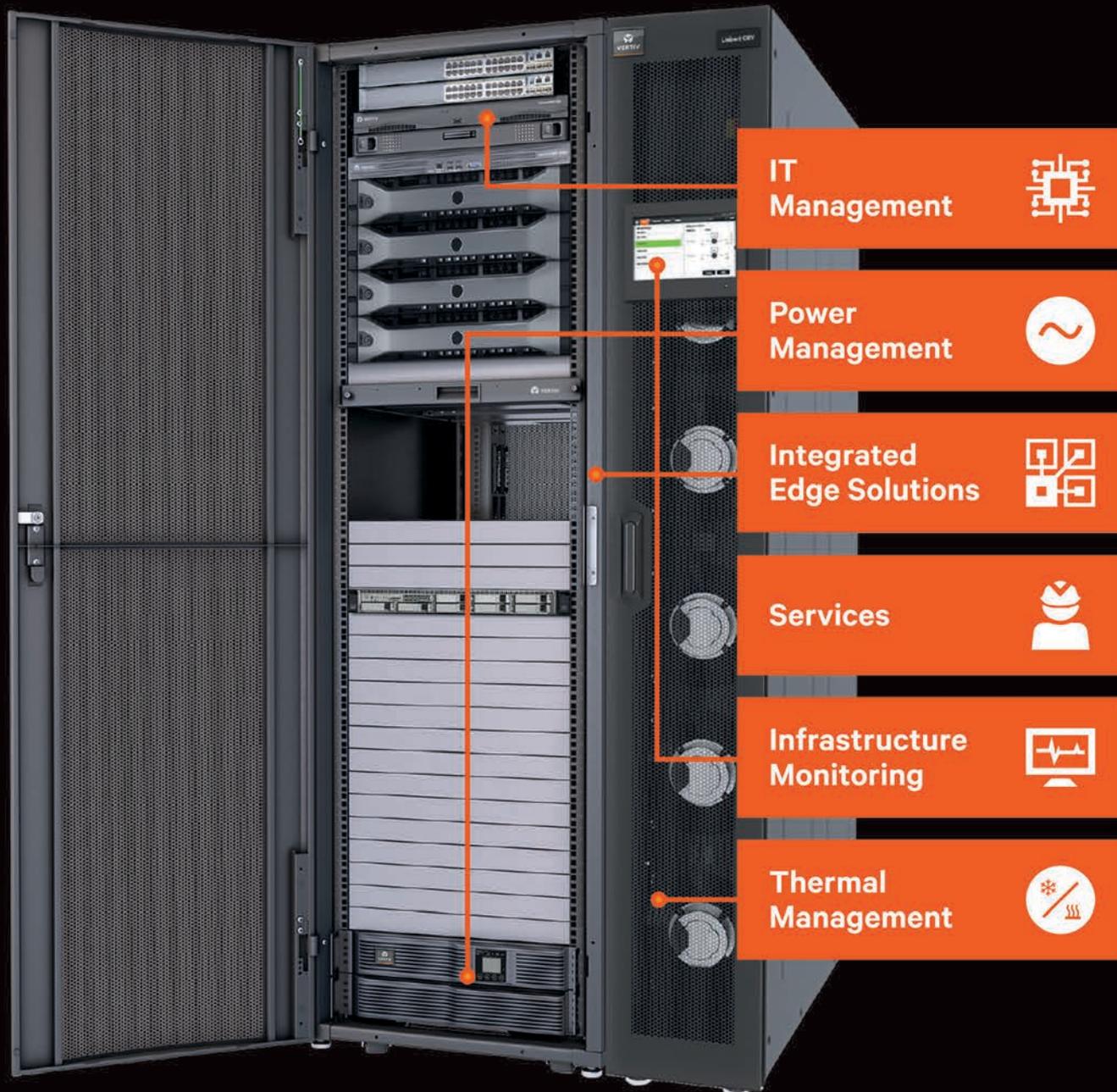
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Planning for a healthy future

Trusts and hospitals get much-needed connectivity boosts



Providing touch to patients, visitors and staff alike

Somerset Partnership NHS Foundation Trust provides a wide range of integrated community health, mental health, learning disability and social care services to people of all ages.

The Trust employs 3,838 staff, has a turnover of £158m and provides services from 13 community hospitals across the county. It also delivers mental health inpatient services on nine mental health wards.

The Trust wished to provide a safe and secure Wi-Fi internet solution for their service users to access whilst in their many locations. This was to be provided on its existing Ruckus network infrastructure, avoiding costly network uplift. The locations were to present a bespoke NHS landing page, in keeping with their corporate identity, extending the Trust touch points with the service users.

It was also important to the Trust to look towards the future and what functionality could be offered to enhance the service user's experience.

With non-app dependent welcome messaging and proximity detection functionality, Yo Wireless was selected to provide a solution for the present and for the future.

By working closely with Ruckus wireless access points were managed by using the 'Zone Director' controller. As Yo Wireless is integrated with both the hardware & software controllers, it was a simple process to direct the Guest Access users to the NHS branded landing pages. Here they logged in to the WiFi internet access using either their email address or social media credentials.

This functionality was grouped across all of the Trust locations, so no matter which hospital or clinic they visit they were recognised as a part of the Trust digital connectivity family. Using the Yo-Wireless dashboard, the Trust gained useful insights into the usage of the Wi-Fi.



The Queen Elizabeth Hospital treats patients to free WiFi

The Queen Elizabeth Hospital, part of the University Hospitals Birmingham NHS Foundation Trust, only had publicly accessible Wi-Fi in a privately run coffee shop at the entrance area of the hospital, which meant that people couldn't use the service when on the wards or in the waiting areas.

Nowadays, patients expect a Wi-Fi connection in hospital as they like to be able to stay in touch with friends and family during their treatment. The Queen Elizabeth Hospital felt that free connectivity was particularly essential in their Roxburgh Children's Centre, as young patients and their parents like to be able to stream videos and access interactive websites during their stay.

The hospital discussed its Wi-Fi connectivity for patients with a number of providers. However, when they were introduced to Purple's solution the team was highly impressed by the functionality and possibilities available to them. Not only would they be able to deliver seamless connectivity across the whole site, but they would be able to distribute important information and updates to those accessing the Wi-Fi. Whether that be a simple reminder for visitors to wash their hands and control infection whilst on site or distributing emails about winter flu vaccinations post visit.

The fact that Purple could be installed using existing IT infrastructure was another benefit that the trust found appealing and more cost effective. In just over two weeks the Wi-Fi service was live and accessible via a dedicated splash page where patient's login via a simple form. The solution was widely publicised around the hospital and on their website to ensure patients and visitors were fully aware of the brand-new service.

To date, the hospital's free guest WiFi has proved very popular, with almost 23,000 visitors accessing it since installation.



Hospital operates with new telephone system

Set in 52 acres close to Bath city centre, the Royal United Hospital (RUH) serves a population of 500,000 and has 759 beds.

With 4,500 staff, the hospital is operated by the Royal United Hospitals NHS Foundation Trust.

It sought to replace the hospital's 30-year-old telephone system with a VoIP system and specified that the replacement must have the same features and more. With equipment space at a premium, the trust said any new hardware had to be kept to a minimum.

To protect its existing investment, a new system had to be capable of interfacing with applications such as paging and auto attendant.

Another requirement was that 91 "red" emergency analogue telephones should not rely on LAN connectivity.

The trust awarded the contract to Cinos Communications Systems (CCS) which used its Stellaris system with Cisco Unified Collaboration, plus products from Gamma and Aculab.

RUH wanted to ensure that the switch to the 3,000 new Cisco IP handsets could be carried out at its own pace – so CCS says it designed a simple process so that anyone could change their handset.

CCS says the core telephony is installed in two data centres and uses secure VPN connections over the hospital's existing N3 – the NHS England broadband network – to access call control, voicemail, presence, contact centre and switchboard services.

And, says CCS, the system is capable of providing services to the entire RUH campus if connectivity to both data centres and the local LAN is down.

The trust's ICT assurance Manager, Mike Holcombe, said: "We now have a platform which enables us to offer additional digital services to the trust and patients alike. At the same time, the reduction in fixed line and call costs that we have achieved has been significant."



Procuring and deploying Wi-Fi

The Pennine Acute Hospitals NHS Trust decided to procure a fully managed solution via Wi-Fi Spark using a dedicated internet circuit and allowing the supplier to install their network equipment (Gateway and router etc.) within its segmented secure network environment (DMZ).

This solution is available across all of the trust's hospital sites, providing an overall wireless coverage of approximately 80% to 90%. However, all patient care areas have Wi-Fi coverage. The free Wi-Fi service has access to a 100mb internet dedicated internet circuit ensuring enough bandwidth is available for users to access a basic internet service.

To ensure that patient and public Wi-Fi is easy to access to all users, the trust has a 'click and connect service'. The user is required to accept some terms and conditions, including an acceptable user policy that directs the user to the local trust webpage. There is a filtering capability to prevent access to known unacceptable sites and cyber security methods in place via the supplier Wi-Fi Spark.

Ahead of rollout of Wi-Fi for patients and the public, The Pennine Acute Hospitals NHS Trust worked closely with the communications team to keep everyone informed at all times of progress ensuring non-technical terminology was used.

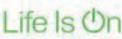
The Wi-Fi service has been introduced as a fully managed service to reduce/remove the impact on care settings.

It provides full segmentation of corporate and patient access to the trust network and Internet, reducing the threat potential for both the trust and patients. In addition, it has provided extra capacity for the trust employees to use their own devices, reducing the delays currently caused in network access by clinical and corporate users, reducing clinical and corporate risk.

Improved availability and reliability of the Wi-Fi network has resulted in clinicians and practice staff using it more.



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Keeping track

Fleet tracking solutions can now deliver the detail and insights needed

When Martin Caddick joined the Bradfords Group as head of transport, based in Yeovil, Somerset, the company already had a telematics system in place, but found that it wasn't comprehensive enough.

"The previous system did not provide the key metrics we required, and was difficult to use," he says. "The lack of user friendliness made the system virtually unworkable."

Because of this lack of simplicity, Caddick says it was difficult to monitor the company's vehicles. Knowing the precise location of vehicles is essential for communicating delivery status to customers or retracing a vehicle's movements. Caddick also wanted to uphold the Bradfords brand by monitoring and minimising non-compliant driving behaviours such as speeding.

The company, established in 1770, is a progressive organisation with over 40 branches throughout the South West of England, including Herefordshire and Worcestershire. It currently operates a fleet of 700 vehicles that range from forklifts to cars to pickups and Large Goods Vehicles (LGVs).



Bradfords has over 40 branches throughout the South West of England and currently operates a fleet of 700 vehicles that range from forklifts to cars to pickups and Large Goods Vehicles (LGVs)

A transition from the previous telematics solution to Geotab was also informed by Caddick's experience implementing a telematics solution for a previous employer – so he knew what to look for when choosing the right fit for Bradfords.

Ultimately, it was the combination of Geotab's capabilities and the reseller's customer service that convinced Caddick and his colleagues that it was the right choice.

The company implemented Geotab in 2018 and Theresa Heal, transport manager for the Bradfords Group, says it was a painless process.

"For anyone who has been less than positive about it, we've explained that it's a level of protection to them as well, and I think they buy into that once they've seen it. Generally, telematics has been in the UK market for quite some time," Heal says. "So, every single driver who is qualified in the UK will be aware that it's just a thing that you learn to accept in a company. Maybe 10-years-ago, there was a lot of push back about having a tracker. But the reality is its pretty non-existent now and everyone is quite open to it."

The Geotab solution has been installed on all of the fleet's commercial vehicles – vans, pickups and LGVs and Caddick believes it may be some time before he'll be able to fully quantify all of the benefits the company has netted from using it. However, with his experience using telematics and managing fleets, he can make some educated predictions about other benefits the company can expect.

"I would expect that we would see some reduction in brake wear because of the reduction in harsh braking," he says. "This is because people are driving the vehicles differently and they know they're being monitored. In terms of what else have we actually experienced, it's hard to say because we haven't got that much data behind us, but I know what we are going to experience and that will be a reduction in cost and, hopefully, fewer incidents."

O2 rolls out first UK LTE-M network for IoT

O2 (Telefónica) said the first 50 sites are already live on its new 4G mobile based UK LTE-M (Long Term Evolution for Machines) standard, a Low Power Wide Area Network (LPWAN / LPWA) service tailored to connect Internet of Things (IoT) devices.

The mobile operator said that this is the first such LTE-M deployment in the United Kingdom, although Three UK appears to already be conducting a pilot of similar technology. At present LTE-M networks can deliver a peak symmetric speed of 1Mbps via just 1.4MHz of bandwidth, although in fairness most IoT kit (e.g. traffic lights, parking / environment sensors, smoke detectors, waste monitoring etc.) will not require more than 0.1Mbps.

The latest Release 14 standard for LTE-M has the potential to go up to 4Mbps download and 7Mbps upload via 5MHz of bandwidth. This offers a useful alternative to existing and significantly slower 2G based mobile connectivity.

With 50 UK cell sites already live with the technology and a national rollout planned to complete in 2020,

some battery-powered IoT sensors may be able to connect to this network and continue running for up to 10 years with no need to charge.

"IoT technology has the potential to transform the way the UK does business, so to become the first UK network operator to roll out an LTE-M network is a major milestone for us here at O2," said Paul O' Sullivan, O2 director of wholesale and commercial. "We know that businesses looking into IoT solutions want answers now, not in five to ten years."

He added that introducing a nationwide LTE-M network in 2020 will help unlock low-power use cases "we haven't seen before": from asset tracking and public sector applications like sensors on signage and traffic lights, right through to parking sensors and soil monitoring. "We're looking forward to partnering with UK businesses to bring these use cases to life," O'Sullivan continued.

Businesses interested in trialling or developing LTE-M applications via the new network should contact O2 Business for more information.

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Growing securely: the role of resilient networks in driving expansion

Andrew Halliwell, product director, Virgin Media Business

Hacks. Data breaches. GDPR fines. These terms (sadly) continue to dominate the technology headlines – not surprising given cyberattacks more than doubled in 2019, with UK businesses facing more than one online attack every single minute last year, ranging from ransomware to DDoS attacks.

Worryingly, too many businesses aren't taking action to protect themselves or their customers. Research published last year found over a fifth of IT security professionals admit they do not carry out security testing on all products before they are launched. And shockingly, nearly a third (31%) said their organisation has marketed a product they knew contained security vulnerabilities to get ahead of the competition.

Too often, inadequate cybersecurity is blamed on a lack of awareness or negligence but often there's a more important factor at play – a pressure to grow at all costs. This is pushing enterprises into racing ahead with growth initiatives without having resilient foundations in place.

Getting carried away

Six in ten businesses plan to grow their customer base in the next five-to-ten years according to a recent report. That's absolutely something we should celebrate, especially as a recent McKinsey study spanning 32 years and 3,000 companies found that "growth trumps all" when it comes to financial success.

But a rush for growth can force businesses to find quick fixes or workarounds that allow them to keep pace, especially when their existing technology was never designed to support rapid expansion and change.

That pressure can lead businesses to invest in a red herring that appears to boost productivity and support growth, but that doesn't offer any resilience or protection in the form of multi-layered authentication or tokenisation, for example.

With equal danger, they might gamble on a radical overhaul of their foundational technology in a way that is negatively disruptive, ripping out parts of their existing infrastructure and leaving networks exposed to a cyberattack.

Clearly, businesses can't afford to stick with outdated infrastructure that harms their growth prospects, but equally they can't risk implementing tech that isn't properly protected or ripping out systems entirely.

Striking the balance

But what if there was a way to upgrade the infrastructure in a way that drives growth and bolsters resilience? And all without making the head of security wince and disrupting the day-to-day business in a way that leaves it exposed.

Software Defined Networking, or SD-WAN, gives network managers more power and control over their corporate networks, providing them with a scalable, secure and resilient system that supports rapid growth aspirations. Giving enterprises the ability to quickly connect-up in new locations, create and roll-out new services, respond to opportunities and expand into new markets, it's a prime example of how investing in infrastructure can power future growth by transforming customer and employee experiences, and ultimately, help boost the bottom line.

Because the technology is software based, businesses don't need to make expensive and disruptive wholesale changes at once. Instead, they can choose where and how they upgrade their infrastructure, safe in the knowledge they can scale and adapt as they go. And if they've got the right partner, they can benefit from strategic consultancy on where exactly these evolutions

should take place across their network.

Then there are the security benefits. Network security used to be about protecting data centres with multiple layers of security before connecting them to a small number of sites. But with the advent of cloud services, remote working and the huge increase in the number of portable devices which need network access, security challenges and needs have evolved. In an age of apps and services, networks and data flows have become far more complex and traditional tools either slow

growth or leave organisations vulnerable.

SD-WAN responds to the new landscape by providing end-to-end data encryption as standard for all customers. Organisations can authenticate every user against every app, providing system managers and business leaders with the reassurance they need to focus on growth and scale up securely.

Rapid, protected growth

Maintaining business growth while keeping networks secure is a challenge

businesses can't afford to ignore. With companies that fail to protect their customers' personal data risking fines of up to 4% of annual turnover, as well as losing customer confidence, quick-fix shortcuts threaten to bring unsustainable growth crashing down.

While fast growing businesses typically focus on acquiring new customers and launching new products and services, investing in everyday networks and infrastructure is vital to long-term success.

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Wondering about wireless? Check these top tips and devices that deliver

Paul Routledge, country manager, D-Link

1 Before delving into router options and technologies, first identify what you intend to connect and how this will change over time.

Are you a technical wizard wanting advanced network reporting in an enterprise environment; a security boffin, requiring the latest systems to ensure your storage data is safe? Or are you simply looking to connect a few devices (one or two laptops, iPads or mobile phones)?

Answer as honestly as you can – there are lots of routers and gateways to choose from.

2 Consider your current wireless performance, focus on where you would like to use wireless. If you require wireless

connectivity while moving around, think about the distances to cover and walls and windows that might be in the way. Taking the time to find key areas of usage will help with positioning of access points.

3 Think about where the internet connection enters the building. It can be troublesome to move this location, so making the most of its placement can be essential, for example, a router with a very large broadcast.

If the internet point is far away from users – maybe two floors down – an alternative is a simple modem or router and add access points at key areas, instead of broadcasting your signal.

4 The type of internet connection you

have bought can change the topology of your network. Many still use ADSL (copper cable to the exchange) and some use VDSL (fibre to the cabinet and then copper to the building). Some are lucky enough to have fibre to the premises. In order for these types of services to work you need to consider the end point. Some of these end points cannot be swapped easily, some are more difficult.

Clearly, for ADSL or VDSL to work it must have a modem. Your ISP will supply a router with a built-in modem or provide both a modem and a separate router.

In some cases it's possible to use an ISP's router and turn off all of the features other than

the modem. This way, you can keep your end point but still plug in a router of your choice to improve your network connection, such as a mesh gateway or more advanced router.

5 With access points, think about how you will both manage your network and power the devices. Many APs can be powered by the same switch used to connect its data, called PoE (power over Ethernet).

Cloud solutions allow you to manage not just APs, making installation easy, but also the switch itself. Keeping management of your devices in the cloud can also make it easy to control, manage and monitor for an enhanced set-up experience and top performance. 

I Designed to keep ahead of the bandwidth demands of Wi-Fi 6 access points and ensure maximum power for devices, two multi-gigabit switches have been introduced by **EnGenius**.

The ECS2512FP and ECS2512 each have eight 2.5G ports that automatically detect speeds needed by end devices and support 120Gbps switching capacity. The ECS-2512FP supports one of the latest PoE standards, 802.3bt, for the growing demand of higher-powered devices like Wi-Fi 6 wireless access points that support over 1Gbps speeds and power devices that exceed 30W, including AV controllers, PTZ cameras, digital signage as well as lighting.

They also come with four 10Gbps SFP+ slots that extend connectivity via fibre for uplinks, redundancy, failover and to connect floors and buildings at extreme distances and speeds. And they use EnGenius' free-subscription cloud service which includes real-time system metrics, analytics, troubleshooting and displays the network topology.



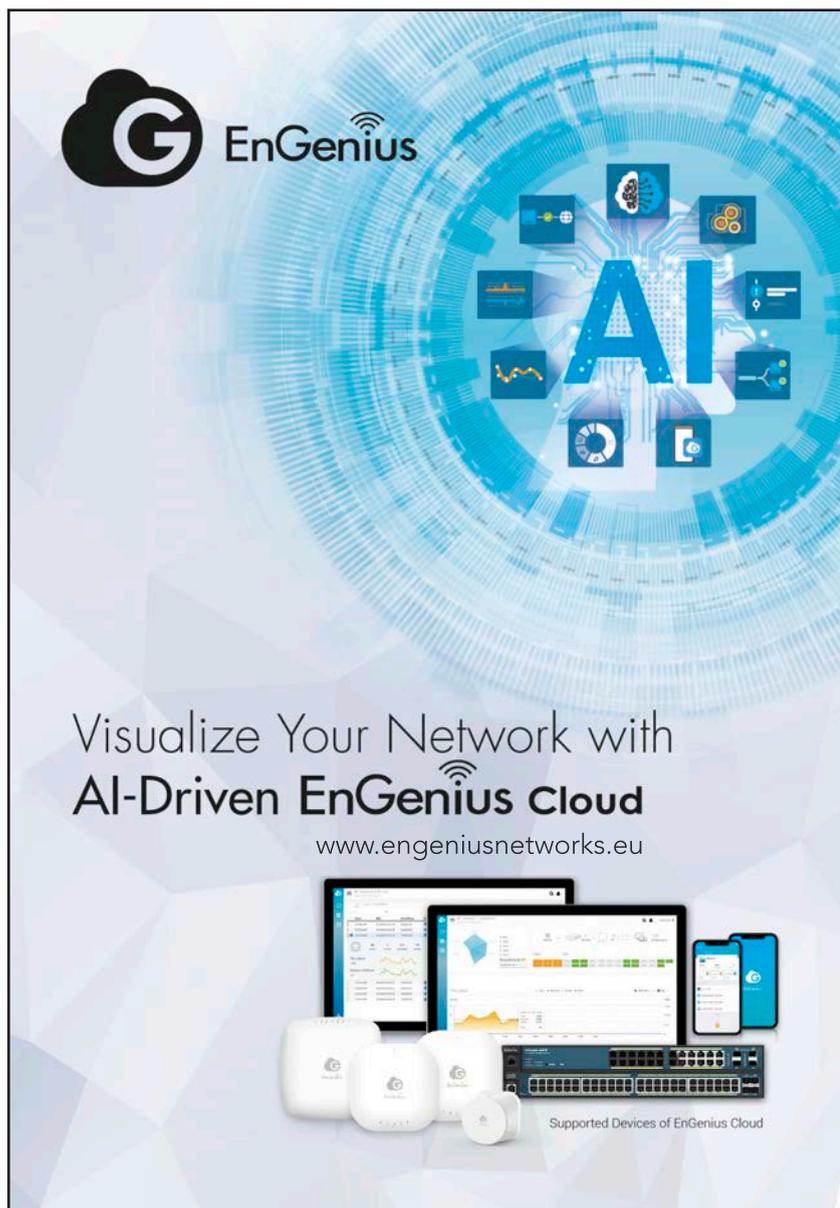
I Two new Wi-Fi 6 access points – the first in a range from **Lancom** – promise to deliver reduced latency and up to 25 per cent greater throughput per Wi-Fi client. This, says the company, makes them suitable for high performance wireless LANs and networks with a high number of end devices.

The LX-6400 has eight 180-degree sector internal antennas; LX-6402 (pictured) has four external dual-band omni-directional antennas.

Each of the antennas has two IEEE 802.11ax radio modules for parallel operation at 2.4 and 5GHz and 4x4 multi-user MIMO (MU-MIMO) for uplink/

downlink.

They work with bandwidths of 20, 40 and 80MHz (with four streams) and 160MHz (two streams). Lancom says devices with two antennas that support 60MHz benefit from data rates to 2,400Mbps in the 5GHz band. With parallel use, 802.11ax delivers 3,550Mbps. Up to 16 non-overlapping channels are supported in the 5GHz band. 



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Supported Devices of EnGenius Cloud

I New from **TP-Link**, the Omada Cloud Controller (OC200) provides centralised management for all Omada devices in a network, including ceiling, outdoor and wall plate access points.

Users, says the company, can monitor



I Mesh systems are taking a growing share of the Wi-Fi market, says **Netgear** as it launches the Nighthawk Mesh Wi-Fi System (pictured). It is supplied with one (MK62) or two satellites (MK63) to provide building-wide Wi-Fi 6 coverage; more can be added.

Set up and managed with a smartphone, it supports dual-band Wi-Fi with up to 1.8Gbps and has two Gigabit Ethernet ports – one for the internet and one for the LAN – while each satellite has one.

At the same time, Netgear introduced: the Nighthawk AX6 6-Stream AX5400

statistics in real-time, view a graphical analysis of network traffic, create a captive portal, upgrade and reboot systems and easily scale a network.

TP-Link says remote network management saves time and the cost of IT staff.

Features include cloud access to manage from anywhere and at any time; PoE (802.3af/802.3at) supported for ease of installation; powerful chipset, durable metal casing and USB port for auto backup; Omada app convenient management; secure guest network with multiple login options (Facebook Wi-Fi, SMS login).

Wi-Fi 6 Router (RAX50), with a 1.5GHz triple-core processor; the AX1800 4-Stream Wi-Fi 6 Mesh Extender (EAX20); and the Orbi 4G LTE Wi-Fi Router, with an integrated cellular modem for use in case of disruption to the wired service. It provides a claimed 2,000 sq. ft of coverage; and units can be added.



I Access points from **Ruckus**, part of **CommScope**, include Wi-Fi 6 indoor and outdoor models.

The indoor R650 (pictured) is a dual-band, dual-concurrent AP that supports six spatial streams (4x4:4 in 5GHz, 2x2:2 in 2.4GHz). It is said to support peak rates of up to 2,974Mbps and up to 512 client connections. It has built-in IoT radios and a pluggable IoT module for new technologies.

The T750, IP-67 rated for outdoor use, is a dual-band, dual-concurrent model that supports eight spatial streams (4x4:4 in 5GHz, 4x4:4 in 2.4GHz). It is said to manage up to 1,024 client connections and, like the R650, has 2.5GbE Ethernet designed to ensure that the backhaul will not be a bottleneck for full use of available capacity.

Ruckus says the unit is suited to dense environments such as airports, convention centres and malls. 

“



Rethinking the power balance

Janne Paananen, technology manager, Eaton EMEA

Businesses and consumers alike increasingly rely on 24/7, 'always on' digital infrastructure. As a result, data centres are being built to handle the surge in data processing required to enable this digital-first lifestyle. Data centres have long been viewed as environmental villains due to their carbon emissions and historically high levels of energy consumption. Yet with one lightbulb moment, a method of turning data centres from a hindrance into a help was created.

The lightbulb moment

In engineering, just as in many other areas of life, the greatest creative solutions are forged under pressure. This was the case in 2013 when in hindsight one of the most exciting breakthroughs of my career took place.

A customer was experiencing peaks and troughs of power flow, with this variable load putting their existing cables under pressure. To avoid re-cabling part of its network, the customer was looking for a way to buffer the energy. This meant trying to hold back power during times of high load and spread the impact more evenly. We quickly ended up moving away from thinking about the energy storage solution which seemed the most natural fit for this request at first. Instead, we considered how a UPS (uninterruptable power supply)

could manage this and provide more value to customer. Eventually, this idea led to EnergyAware UPS solution.

Transforming our power network

Renewable energy sources currently provide 26% of the world's electricity, and this is set to rise. Power systems and markets must therefore become more flexible to compensate for the greater volatility caused by adding more renewables to the grid.

Our EnergyAware UPS solution helps data centres and energy providers balance

sustainable energy demands by working together. It acts as a critical safeguard during potentially damaging power anomalies yet helps to balance the grid and contain mains frequency.

Beyond contributing to the increase of renewable energy sources by stabilising the grid, this EnergyAware solution can be a great value-generating asset. These major UPS users can be financially compensated for immediate adjustments to power consumption that help the grid avoid power outages, without compromising critical loads.

Understanding power balancing

Years of experience in the power generation sector, as well as a long history of application-based engineering, helps to understand the fundamentals of power balancing. Given the drive for a cleaner energy mix, understanding the mechanics behind power balancing is going to be key to our sector progressing as digitisation continues to transform the way we live, work, travel and more.

I am proud to say that I played a part in something truly innovative that will help generations to come as we move away from fossil fuels and create a grid fit for a cleaner future. ”

Camden tops tech table

Camden in London has topped the UK rankings for new business creations as the capital's booming tech scene continues to drive growth down south.

A total of 2,110 net new businesses were created in Camden in 2018, according to figures published today by private equity investment firm Growthdeck.

This was closely followed by Westminster with 2,100, while Hackney ranked fourth with 1,410. The UK average is just 115 new companies per local authority.

The figures mark the continued success of the capital's tech and fintech sectors, with areas such as Silicon Roundabout and East London Tech City in Hackney now well established as start-up incubators.

Tech businesses Transferwise and Monzo both recently opened their first offices in the area, while King's Cross in Camden has also emerged as a thriving tech hub and is now home to fast growing fintech firms such as Monese and Google's own AI company Deep Mind.

"Gaining access to vital investment to fuel growth is a big attraction for tech startups in Camden and Hackney," said Ian Zant-Boer, chief executive of Growthdeck. "The presence of big private equity and venture capital investors in the area means entrepreneurs there are part of a broader network, not just purely a tech cluster."

Although the top 10 was dominated by London boroughs, Liverpool came in third place with 1,495 new businesses.

However, Aberdeen was the worst performing area in the UK, recording a net loss of 3,195 businesses in 2018. A gradual decline in oil prices since 2014 has taken its toll on the local and Scottish economy at large.

"The government should also consider following the Silicon Roundabout model to create tech hubs in other areas of the country, to ensure tech business creation is more evenly distributed rather than being concentrated in the south east," Zant-Boer added.



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