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Government AI Playbook must avoid stagnation, says industry



Earlier this month, the UK government published its AI Playbook to provide accessible technical guidance on the safe and effective use of AI, which is apparently “at the heart of the UK government’s strategy to drive economic growth and enhance public service delivery.”

The aim of the guidance is to enhance the safety and confidence with which government departments and agencies can adopt AI technologies and to ensure that public sector innovation can move at pace with its private sector counterparts.

Amongst other content, the playbook contains corporate and technological guidance on whether AI is the right tool for the job, use cases to avoid, user research guidance, and how to buy, procure and implement AI products; as well as the safe and responsible use of AI, including legal, ethical, security and governance considerations.

All well and good – but is the handbook enough to ensure government departments harness the power of a wider range of AI technologies safely, effectively, and responsibly? Particularly given that the

government has also recently toned down its emphasis on AI safety, having changed the name of the ‘AI Safety Institute’ to the ‘AI Security Institute’...

“To paraphrase Geoffrey Rush in Pirates of the Caribbean: “The playbook is more what you’d call ‘guidelines’ than actual rules.” In what is a complex space, it serves as an important guide for government departments, providing clear and practical insights into how AI technology can be harnessed with appropriate checks, balances and human intervention. It is a balanced approach which acknowledges that using AI is not a quick short-term fix,” says Russell Crampin, Managing Director Axians UK.

The government’s AI Playbook is a solid step towards the UK harnessing advanced AI technologies, notes Nick Ewing, Managing Director, EfficiencyIT, “but the real challenge lies in building the right IT and data centre infrastructure foundations to support them. From our perspective, government departments need high-performance, scalable infrastructure – equipped with GPUs or other accelerators, robust cooling, and stringent

security controls – to handle the complex demands of AI. By pairing the Playbook’s best-practice guidance with a strategic approach to HPC and AI resources, and upskilling staff, organisations can create an agile, secure, and sustainable critical environment that truly realises AI’s potential.”

All of which is easier said than done considering the current challenges in securing adequate grid power for infrastructure, efficient cooling technologies capable of making large-scale AI use possible without draining the entire UK’s water supply or securing the right staff to manage such a monumental task amidst a global skills shortage.

Indeed, “while the landscape of AI will undoubtedly continue to shift, this playbook offers a strong foundation for ensuring that the use of AI remains ethical and aligned with public interest in the context of government,” asserts Crampin. “It is important that guides like this do not become stagnant and are updated appropriately as AI itself evolves. For right now it’s a crucial resource in balancing innovation with the need for thoughtful regulation and oversight.” ■

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Manor Lodge School modernises with Hitachi Vantara

Hitachi Vantara has announced its collaboration with Manor Lodge School in Hertfordshire, UK, to modernise the school's IT infrastructure using the Virtual Storage Platform (VSP), aiming to eliminate downtime and enhance educational delivery.

The initiative follows a detailed evaluation process, in which Manor Lodge selected the VSP system, implemented by Qual and TD SYNEX, to address the persistent IT outages that had been disrupting school operations.

"Our previous outdated IT system at Manor Lodge caused bi-weekly outages, disrupting lessons for more than one hour at a time and impacting our teachers, students, and administrators alike," said Matthew Clackett, IT and Digital Services Manager at Manor Lodge School.

With the VSP installed, these disruptions have been eliminated, ensuring 100% data availability and a seamless learning experience, according to a statement from the school.

"With the new infrastructure from Hitachi Vantara, our IT system just works. Our teachers are now excited to integrate technology into lessons, confident that it will perform flawlessly. This transformation empowers us to be more ambitious in enhancing learning outcomes," said Clackett.

This infrastructure not only supports daily operations but also enables the integration of advanced technologies such

as AI, robotics, and 3D modelling into the school's curriculum.

"Manor Lodge's concerns reflect a larger issue affecting schools and organisations striving to meet evolving educational and technological demands. Manor Lodge School's success highlights how reliable, modern solutions like VSP can empower institutions to eliminate downtime, improve security, and focus on delivering exceptional learning outcomes. By investing in resilient IT infrastructure, schools can confidently embrace digital transformation and future-proof their operations," said Octavian Tanase, Chief Product Officer at Hitachi Vantara.

The implementation of VSP at Manor Lodge has not only addressed the immediate concern of frequent outages but has also enhanced IT efficiency, allowing the school's IT team to focus on strategic projects rather than constant maintenance. This shift enables the incorporation of new technologies like coding, augmented reality (AR), virtual reality (VR), and artificial intelligence (AI) into the learning process, thus enriching the educational experience for students.

Complementing these developments is an emphasis on improved cybersecurity measures. Modern security features integrated into the VSP ensure that sensitive information, including student records, is protected against potential cyber threats, complying with evolving data protection regulations. ■



Jaguar Land Rover opts for Private 5G from Ericsson

Jaguar Land Rover has deployed Private 5G at its Solihull plant in the UK with the help of Ericsson, via the West Midlands 5G Innovations Regions (5GIR) project.

This project is led by WM5G Limited and funded and awarded by the Department for Science, Innovation, and Technology (DSIT), to drive economic benefits in the manufacturing sector.

Ericsson's network will support production of Range Rover vehicles at the plant with vision systems, IoT sensors, and production tools. The 5G network can deliver real-time data transmission to ensure that Jaguar Land Rover's manufacturing processes are not only connected but also agile and efficient, leading to streamlined operations.

"Ericsson Private 5G provides a robust foundation for a connected, agile, and data-driven manufacturing environment. This positions us to enhance automation, digitalization, safety, and sustainability across our operations," said Stephen Mason, product manager of manufacturing, and global IT at Jaguar Land Rover.

"Private 5G is transforming manufacturing by supporting the complex connectivity needs of Industry 4.0. We are thrilled to partner with a luxury automotive leader like Jaguar Land Rover, providing a network solution that elevates their global manufacturing capabilities," said Manish Tiwari, head of enterprise 5G & enterprise wireless solutions at Ericsson. ■

Schneider Electric and on365 deliver mission critical infrastructure for Markerstudy Group

Schneider Electric has worked with its EcoXpert Partners, on365, to deliver a series of data centre and critical power projects to Markerstudy Group - one of the fastest growing providers of general insurance services for more than eight million customers across the UK.

Working together with on365, a provider of resilient and energy efficient critical physical infrastructure and utility services, Schneider Electric and its longstanding EcoXpert Partners devised an upgrade and consolidation strategy for Markerstudy's electrical infrastructure, data centres and networking systems. Equal consideration was given to the need for increased reliability, security, and energy efficiency, while helping the organisation to better manage and scale its distributed systems.

Markerstudy Group chose to standardise on key components from Schneider Electric's EcoStruxure for Data Centres portfolio, including its Galaxy V-series three phase UPS's and APC Smart-UPS RT single phase UPS, EcoStruxure Row Data Center solution, InRow DX cooling units and Chilled Water systems, APC Racks and PDUs and EcoStruxure IT Expert DCIM software. Additionally, on365 secured a strategic five-year, Managed Service Level Agreement (SLA) to manage and maintain all critical power and cooling infrastructure on behalf of the insurance group - helping not only to improve the efficiency and resiliency of its

systems, but to reduce its carbon emissions.

By working with on365 and Schneider Electric, Markerstudy has been able to establish greater control over its IT and network environments. This has enabled it to monitor and manage them for better efficiency and to lower the emissions associated with data processing and storage, as well as those associated with its IT and data centre services.

"The Markerstudy board has consistently supported our investment in more efficient data centre physical infrastructure, enabling the IT Team to improve the PUE of our data centres, and accommodate our technology requirements as the company continues its growth trajectory," said Nick Ovenden, Chief Technology Officer at Markerstudy Insurance. "Working with on365 and Schneider Electric has been central to the execution of our digital infrastructure and upgrade strategy, as well as meeting the sustainability ambitions for our IT services."

"Today's data centres and IT technologies are vital to support the UK's thriving enterprise sector" said Mark Yeeles, Vice President, Secure Power division, Schneider Electric UK and Ireland. "Our work together with on365 showcases the important role of data centres as critical national infrastructure and demonstrates how our ecosystem can ensure customers like Markerstudy remain at the forefront of UK Insurance services while achieving their sustainability goals." ■

Claranet partners with CompTIA on cybersecurity skills

Claranet has partnered with CompTIA, Inc. to bolster its cybersecurity workforce across the UK.

This collaboration is driven by Claranet's commitment to building and growing a robust cybersecurity team equipped to tackle the challenges of a rapidly evolving digital landscape.

By integrating CompTIA's industry-recognised certification programmes, Claranet aims to enhance its training and development initiatives, providing its workforce with access to certifications such as CompTIA Network+, CySA+, Security+, PenTest+, and the advanced CompTIA SecurityX (formerly known as CASP+). By aligning with CompTIA, Claranet seeks to draw in top talent who possess the critical skills and certifications needed to excel in cybersecurity positions.

Since the first cohort completed in 2019, Claranet actively hired individuals who have undertaken the Cyber Ready programme, which has been supported by the UK government's National Cyber

Strategy. This initiative underscores the importance of protecting and promoting the UK online while building a wider cyber landscape in communities across the nation.

"Partnering with CompTIA is a strategic move to strengthen our cybersecurity capabilities and attract skilled professionals," said David Schorah, head of learning, development and capability at Claranet. "The demand for skilled cybersecurity professionals is higher than ever, and by offering CompTIA's vendor-neutral certifications, we are ensuring our team is well-prepared to protect our clients' digital estates."

"The Cyber Ready programme equipped me with the skills and confidence needed to excel in my role at Claranet. The partnership with CompTIA further enhances our ability to stay ahead in the cybersecurity field," said Saf Shetwan, a Cyber Ready alum currently working at Claranet as a cyber essentials plus assessor. ■

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JetCool and Flex: Scaling Liquid Cooling Solutions Globally

As artificial intelligence (AI) and high-performance computing (HPC) workloads push the limits of traditional data centers, the need for scalable, efficient cooling has never been greater. Flex, a global leader in manufacturing and supply chain solutions, has strengthened its position in the liquid cooling market with the acquisition of JetCool, a leading liquid cooling provider specializing in its patented direct-to-chip microconvective cooling® technology. Together, Flex and JetCool deliver end-to-end liquid cooling solutions for AI-driven computing environments at a global scale.

The demand for liquid cooling is surging, with analysts predicting the server cooling market will grow from \$4.1 billion in 2024 to \$10.6 billion by 2026, a 60.7% compound annual growth rate. High-power processors like Nvidia's Blackwell GPUs are driving this shift, making heat, power, and scale bigger challenges for data center operators than ever. Flex and JetCool provide the solutions needed to meet these challenges.

JetCool's microjet impingement technology sets it apart from traditional cold plates by using fluid jets to target processor hot spots, improving thermal performance by 24% over microchannel cold plates, as verified by third-party testing. JetCool's scalable solutions range from cold plates cooling 3kW Superchips to high-capacity Coolant Distribution Units (CDUs) that support 300kW per rack and scale up to 2.1MW in row-level configurations. For companies transitioning to liquid cooling, JetCool's self-contained systems require no plumbing or piping, making adoption seamless while delivering immediate efficiency gains.

As a Flex company, JetCool's direct-to-chip liquid cooling is now manufactured and deployed at an unprecedented scale through Flex's global footprint. This vertical integration removes traditional supply chain bottlenecks, reduces lead times from months to weeks, and enables rapid deployment anywhere in the world. With advanced liquid cooling solutions now available at scale, backed by global manufacturing and supply chain expertise, data centers can accelerate the adoption of liquid cooling and support the next generation of computing infrastructure.

BT Group eyes enterprise opportunities

BT Group has broadened its partnership with Optiva to implement innovative B2B and B2B2X BT network communication services using Optiva's latest state-of-the-art Application Server.

Central to this initiative is Optiva Charging Engine, a cloud-native, open-architecture service creation platform featuring Optiva's Open API framework. The advancement will enhance BT Group's ability to grow cutting-edge services and create new revenue opportunities.

In January 2024, Optiva announced BT Group's selection of Optiva for its next-generation Application Server upgrade. The platform upgrade allowed BT Group to evolve from legacy technology, modernize services and increase 5G network coverage penetration with a fully flexible service creation environment. The new platform's rapid design, testing, deployment and integration capabilities support BT Group's partnerships across various industries.

Optiva implemented new interfaces and technologies to transform the traditional network into a next-generation network. Enterprise applications are essential for BT Group's B2B services and cutting-edge consumer applications, which must be modernized in parallel with the network's evolution. Furthering their joint vision, Optiva and BT Group will advance the platform to the next level by integrating B2B services to enhance and deliver their network convergence capabilities with unmatched flexibility.

The network evolution enabling the modernization of B2B applications is supported by a convergent network communication suite to handle any type of core network; enrichment enabled by modern APIs; and enablement for autonomous deployment and operations to provide an unmatched B2B experience. ■

UK businesses look to managed security services

Research conducted by Six Degrees reveals that UK small and medium-sized enterprises (SMEs) are set to increase their reliance on managed security services in 2025.

According to the 'Mapping the UK SME Cyber Security Landscape in 2025' report, two-thirds of SMEs plan to be more reliant on these services over the coming year, with 80% viewing this trend positively. A minority of 13% anticipate lesser dependency, while 19.5% expect to maintain their current level of reliance.

The research identifies that the primary reasons for SMEs purchasing managed security services include a lack of specialist skills to handle increasingly complex cybersecurity challenges (37%), and the necessity to meet various compliance demands such as legal, industry-specific, and regulatory requirements (36%).

These drivers surpass the motivations to combat the increasing volume and sophistication of cyber-attacks at 34%, to handle spikes in cybersecurity activity at 31%, and the need for 24/7 support at 28%. Notably, over 20% of SMEs engage managed security services to shift responsibility to third parties. ■

GL Telecoms accelerates growth with Depotnet platform

GL Telecoms, a UK turnkey supplier of fibre optic network services, has recently implemented an end-to-end contract and job management system from Depotnet, providing a centralised platform to manage all aspects of the business.

Management realised that relying on paper forms, spreadsheets, and email/messaging would not support further growth, prompting the search for a digital solution. The new system seamlessly connects the back office with field teams, enhancing operational efficiency and improving the management of core services, commercial operations, and compliance.

GL Telecoms particularly values several key Depotnet features, including progressive safety assurance and the 'gate check' functionality. The mobile app guides operatives through a step-by-step process to ensure all safety procedures are completed correctly on-site. Work cannot proceed until these steps are verified, ensuring compliance.

"Safety is paramount; it's our top priority. Depotnet ensures that everyone follows the correct procedures and flags any issues that need attention. We're now achieving 99% engineer accreditation in job role compliance, and Depotnet has been central to that success," said James Gildea, Operations and Business

Development Director at GL Telecoms.

The system has also been instrumental in managing commercial operations, particularly when the scope of work or materials required differs from initial estimates. Backed by photos and videos, engineers can report issues directly from the site, allowing all stakeholders to review and quickly secure client approvals for additional work. For telecoms projects, Depotnet integrates seamlessly with Openreach, providing full real-time visibility of all ongoing work.

Depotnet's data-rich reporting capabilities, along with its integration with tools like Power BI, have enabled GL Telecoms to make data-driven decisions, improve operational efficiency, enhance compliance, and support business expansion. The company is now exploring new opportunities within the utility sector, with Depotnet serving as a key differentiator in securing new business, particularly in energy and traffic management.

"Depotnet has delivered a significant return on investment for GL Telecoms," said Gildea. "Since its introduction, we've doubled both our output and the size of the business. Depotnet has played a crucial role in this success — its ability to streamline operations is indispensable." ■



Word on the web...

Why modernising legacy IT isn't the solution enterprises expect

Jonathan Dedman,
Director, Cloudhouse

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Enterprise-wide IT automation: a strategic imperative for UK businesses

Nimit Shishodia, Network Automation Engineer, CACI Ltd

UK businesses find themselves at a pivotal moment. Enterprise-wide IT automation is emerging as a critical enabler of competitive advantage, operational agility, and innovation. With the UK leading Europe in adoption, automation is no longer a supplementary tool — it is the foundation of future-ready enterprises.

A recent survey highlights that 27% of UK businesses have achieved enterprise-wide automation, outpacing Germany (18%), Spain (16%), and France (12%). This leadership reflects the UK's status as a global financial hub, with its industries leveraging automation to integrate Fourth Industrial Revolution technologies such as AI and IoT.

Benefits driving automation adoption

Enhanced strategic creativity is one of the primary benefits, with 36% of UK businesses citing strategic and creative freedom as the top advantage of enterprise-wide IT automation. By automating repetitive tasks, teams can redirect their focus to high-impact, innovative initiatives.

In the face of escalating cyber threats, automation enhances security protocols, ensuring swift responses and robust defences. 28% of UK IT leaders identify automation as critical to mitigating cyber risks.

Organisations are adopting automation to enhance workflow efficiency, minimise downtime, and achieve operational excellence. For instance, NHS Digital implemented automation to streamline patient data management, significantly reducing administrative workload and improving patient care. Similarly, Tesco utilised robotic process automation (RPA) to optimise supply chain operations, resulting in faster restocking and reduced waste. These examples underscore the transformative impact of automation across various sectors.

Automation has also enabled companies like NatWest to deploy AI-powered assistants, improving customer service and engagement through real-time responses.

What's holding businesses back?

Despite the benefits, several challenges hinder the widespread adoption of automation. 29% of UK businesses cite a lack of skilled talent as the top barrier. Bridging this gap requires not only upskilling existing teams but also fostering a culture that embraces technological change.

With 28% of respondents reporting inadequate IT infrastructure, many businesses struggle with integrating automation into existing systems. Upgrading tech stacks is essential to unlock the full potential of automation.

Over 90% of IT leaders acknowledge employee reluctance as a barrier to implementing automation. Transparent communication about the benefits of automation and active involvement of teams in the process are key to overcoming this resistance.

Strategic recommendations

UK businesses must adopt a holistic and strategic approach to automation. Establishing a unified platform ensures seamless integration, governance, and scalability.

Cultivating a culture of innovation is crucial. Employees should be encouraged to innovate and adapt, viewing automation as a tool for empowerment, not displacement.

Leveraging APIs and Packaged Business Capabilities (PBCs) enables rapid deployment of reusable automation solutions. This approach has been instrumental for companies like Revolution Beauty and TikTok in transforming their business operations.

Automation in action: a snapshot of success

DWP Digital managed unprecedented demand for social benefits by implementing scalable automation through API integration. Revolution Beauty slashed product launch cycles and

maintenance costs by embracing an API-driven approach. Barclays deployed AI-driven automation for fraud detection, enhancing security and reducing financial losses.

The business mandate

Enterprise-wide IT automation is no longer a future aspiration but a present-day necessity, serving as the foundation for innovation, resilience, and growth. By strategically implementing automation, organisations can streamline operations, reduce errors, and free employees to focus on creative and strategic

tasks that drive competitive advantage. Automation strengthens cybersecurity, ensures operational continuity, and enhances customer experiences by enabling agility and faster responses to market demands. As the digital economy evolves, businesses that lead with automation will not only meet rising expectations but set the pace for industry transformation, futureproofing their operations and positioning themselves as trailblazers in a rapidly advancing world.

Let automation be the catalyst for change — and the bridge to a sustainable, competitive future. ■

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Connecting the NHS

Delivering seamless, hospital-wide connectivity for staff, patients and visitors is no mean feat, particularly amidst rampant digital transformation...

Hospitals have seen massive digital transformation over the last few decades, placing huge and growing demands on network connectivity.

Indeed, “the increased requirement for uninterrupted access continues to create an additional burden on the network in terms of connectivity, latency, and bandwidth,” explains Nigel Cowie, Head of Network Infrastructure, Amillan Limited. “Throw in some additional variables like asset tracking and connectivity for a plethora of other diverse systems on top of access to patient records, remote access and low latency communications for colleague consultation or even remote assistance during a procedure.”

“Hospital networks have to handle more traffic, and that puts pressure on connectivity,” adds Tim Morris, Technical Consultant, Full Control Networks. “Hospital staff work increasingly via mobile devices and tablets, to access patient records and take part in video calls. Meanwhile patients expect access to online services and streaming during their visit or stay. All these requests demand more bandwidth and more coverage, and a more reliable service. The answer to this is better WiFi connectivity across hospital locations, so that clinical staff and patients alike are not faced with gaps in signal and connectivity drops.”

86% of NHS staff surveyed in Virgin Media O2 Business’ ‘Bridging the Digital Gap in UK Healthcare’ report said that technologies such as electronic health records and IoT devices for monitoring vital medicines could significantly reduce the burden on frontline staff and decrease patient waiting times.

“While these tools offer huge benefits to staff, maximising their potential depends on robust, high-speed network connections,” says Mark Burton, UK Health & Social Care Lead, Virgin Media O2 Business. “Reliable connectivity ensures that patient data can be shared in real-time, allowing healthcare professionals to make more informed decisions – the outcome of which is faster diagnoses, greater coordinated care, and ultimately, better patient outcomes.”

Connecting the modern hospital

The increasing reliance on digital health technologies, real-time data transmission, and interconnected devices has introduced a range of connectivity issues like network congestion and bandwidth limitations, poor wireless connectivity and dead zones, and latency and real-time data transmission delays.

“Hospital buildings range from very old to brand new; the active switching equipment in a LAN may have a typical refresh window of 5-10 years depending on budgets, while the WiFi might be upgraded in a 3-5 year window - yet the connecting devices potentially change every 1-3 years,” highlights Cowie. “Typically, however, cabling in older buildings has been in place for significantly longer and it’s not unusual to find multiple generations of overcrowded cabling as it has been added piecemeal.”

According to Burton, a piecemeal approach to digital transformation can often create fragmented systems that are tough to manage, maintain, and scale: “this leads to inefficiencies like data silos and poor communication between departments, which ultimately gets in the way of providing timely, high-quality care. Adopting a holistic approach ensures that staff have seamless access to the digital services they need, improving collaboration across departments and making administrative tasks easier. Investing in a scalable, well-designed network infrastructure isn’t just a technical upgrade, but a strategic move.”

“A concern I see in the future is the cabling itself. In upcoming designs, the layer 1 distribution network needs to form an important part of any re-design or upgrade,” adds Cowie. “For example, it would not be uncommon to see 10-

30 WiFi Access Points (APs) all cabled to one or two switches in one location - in the past, they would have 1-2Gbps connectivity each, but with WiFi6E and WiFi7 having multi-Gb connectivity (and with the predicted release of WiFi

8 in 2028 requiring multiple high GB connections per AP) the backbone of the network needs to be suitably upgraded to support edge capabilities.”

Meanwhile, Morris believes that with so much demand for connectivity, the issue is how to manage traffic requests. Today’s patient traffic volumes are much higher, and patients and visitors alike expect to be able to stream their favourite shows or take part in video calls.

“More coverage and capacity are needed across the network, which means looking at the APs that you have in place, their signal coverage and how much traffic they can support. Managing overall bandwidth into a Trust is not the issue; it is getting that capacity delivered to where it is needed across large estates that can have traditional building environments that block signals or degrade access,” says Morris.

Burton notes that challenges also exist when transferring data between hospitals in different regions due to inconsistent digital infrastructure and varying levels of technological maturity. 85% of hospital staff surveyed in London, Belfast, and Edinburgh reported that current connectivity solutions effectively support efficient patient care, but this drops to just 65% in the Southeast, Southwest, and Yorkshire and the Humber.

Moreover, “the issue extends beyond hospitals to GP practices and mental health institutions, where inadequate connectivity can create backlogs and disrupt the seamless sharing of patient information,” shares Burton.

The ultimate future-proof hospital network

Creating a future-proof hospital network requires planning for scalability, security, and performance to meet the demands of rapidly evolving healthcare technologies.

“We have seen firsthand how replacing legacy tech has enabled hospital trusts to meet the needs of their community. As the NHS continues to evolve and innovate, the speed of technological advancement will

only increase,” warns Burton. “To keep up, healthcare professionals must focus on integrating tools, maintaining transparent communication, and strategically investing in technology.”

Cowie believes that the following components are key to future-proofing hospital networks: a modular environment with solid layer 1 diverse infrastructure; intelligent, scalable, active equipment capable of layer 7 data analysis while delivering layer 2/3 connectivity; an integrated management platform; and RF active monitoring technology.

Additionally, “WiFi will play an ever-growing requirement within any network. The additional frequencies initially deployed in WiFi6E added to most enterprise APs having configurable radios will allow deployments to circumvent highly dense radio environments and potentially mitigate the negative effects of appliance interference,” opines Cowie. “While WiFi7/8 will yield extra speed, capacity and capability, I believe the most important benefit to a WLAN network is that deployment be configured to suit the RF environment. Default or auto-choosing wide 80MHz or higher channels throughout may yield higher per client bandwidth, but it will eat up all the available RF space. Vendors advertise their technology as being intelligent but it’s often not efficient in its auto configuration - you don’t need to deliver 1Gbps to WiFi clients in a corridor or storeroom and the channels would be better deployed to wards or meeting spaces.”

Today’s clinicians want access to patient records from their tablet or mobile devices so they can provide care where the patient is, rather than being stuck to one location. As such, there’s a much greater requirement for better wireless coverage and speed.

And, as always, healthcare network projects generally come down to budget - what are you going to prioritise and why, says Morris: “for hospital teams looking at how to evolve their networks, getting the right guidance on where to update their existing systems and where to implement new infrastructure is essential.” ■

NDR: the critical missing component in XDR solutions

Bill Munroe, Head of Partner Success and Product Marketing Owner, WatchGuard

In the evolving landscape of cybersecurity, Extended Detection and Response (XDR) has emerged as a powerful approach to consolidating security tools, improving visibility, and automating threat response. Yet, for all its advantages, many XDR solutions lack a crucial element: Network Detection and Response (NDR). Without NDR, XDR platforms fail to detect and respond to attacks that have bypassed endpoint or identity defenses and are operating undetected inside the network.

NDR is unique in that it is the only effective method to monitor activity occurring inside the network (on-premise, cloud or hybrid) to uncover and surface attacks that are in the command and control, lateral movement, privilege escalation, internal network reconnaissance, data staging, and data exfiltration stages. As threat actors refine their tactics, leveraging lateral AI and encrypted traffic, an effective security posture must include NDR to provide true extended detection and response.

Only NDR can detect vulnerability and credential compromises inside the network

Endpoint Detection and Response (EDR), Identity Access and Management (IAM), Cloud Security Management (CSM), and email security are all critical components of an XDR solution.

Attackers increasingly use living-off-the-land (LotL) techniques, where they exploit legitimate credentials or misconfigurations rather than deploying traditional malware. NDR fills this gap by continuously monitoring north-south and east-west network traffic the dataflows inside the environment and across firewalls to identify suspicious behaviours, policy violations, and expansion techniques utilised by attackers.

Attacks often bypass traditional defenses by using compromised credentials or exploiting misconfigured services. Since these activities do not trigger endpoint-based alerts, an XDR solution built around an EDR core will be blind to these attacks. For example, if an attacker gains access to an internal system using

stolen credentials, IAM and EDR solutions may not immediately flag this activity. However, an NDR platform would recognise anomalous access patterns, unusual privilege escalation attempts, or lateral movement attempts toward high-value assets.

Cloud and on-premise coverage

The modern enterprise operates in a hybrid world, with applications, data, and users spread across on-premise, cloud, and multi-cloud environments. Attackers take advantage of this complexity, exploiting misconfigured cloud permissions, API vulnerabilities, and unmonitored network segments to infiltrate organisations.

Many security solutions focus on either on-premise or cloud environments, but NDR is uniquely positioned to provide unified visibility across both. By analyzing network traffic via netflows and packets and complementing that data with log data from SaaS applications and cloud environments along with logs from identity platforms, NDR can identify indicators of compromise (IoCs) regardless of where they originate.

NDR enhances security by:

- 1. Cloud workloads:** Monitors east-west traffic within cloud environments, identifying anomalous API calls, unusual user behavior, unauthorised data transfers, and misconfigured storage access.
- 2. Hybrid networks:** Detects unusual connections between on-premise and cloud infrastructure, flagging data exfiltration or compromised VPN credentials.
- 3. Zero Trust environments:** Supports Zero Trust implementations by continuously providing overwatch and analyzing all network traffic for policy violations and unauthorised access attempts.

Since XDR without NDR lacks deep network visibility, it creates dangerous blind spots, especially in hybrid environments where

attackers can pivot between cloud and on-prem networks undetected.

Many XDR solutions omit NDR

Despite the rise of XDR as a preferred cybersecurity solution, many vendors do not integrate NDR capabilities natively. Instead, they rely primarily on EDR with agents deployed to as many different types of devices as possible.

The risks of XDR without NDR include:

- 1. Missed insider threats:** Malicious insiders and compromised accounts remain undetected without network-based behaviour analytics.
- 2. Ineffective lateral movement detection:** Attackers can move between systems undetected if no network-level visibility exists.
- 3. Incomplete cloud security:** API abuse and cloud misconfigurations go unnoticed without traffic analysis at the network layer.
- 4. Ineffective supply chain attack detection:** Vulnerability-based attacks are the single most devastating attack method in the adversary toolkit and will continue to be until NDR is widely deployed.
- 5. Slow incident response:** Without NDR insights, XDR platforms may only detect threats after damage has occurred, leaving mean time to respond (MTTR) times in the weeks and months and allowing ransomware to continue its successful exploitation of companies around the globe.

Many organisations assume that their EDR-based XDR solutions are comprehensive, but the absence of NDR creates a major detection gap.

An operational revolution

Historically, NDR solutions required expensive hardware appliances and significant on-premise deployment efforts. This barrier made

adoption difficult for many organisations, leading them to rely solely on endpoint and log-based security solutions.

Today's modern NDR platforms leverage cloud scalability, AI-driven analytics, and machine learning to provide real-time detection without the need for costly hardware appliances.

Benefits of cloud-based NDR include:

- 1. Affordable and Scalable:** No need for costly on-prem hardware, with pricing models that scale with usage.
- 2. Faster Deployment:** Can be deployed quickly across hybrid and multi-cloud environments.
- 3. AI-Driven Detection:** Machine learning enhances anomaly detection, reducing false positives and increasing accuracy.
- 4. Seamless XDR Integration:** Cloud-based NDR solutions can integrate with existing XDR platforms, providing the missing visibility layer.

This shift makes NDR accessible to organizations of all sizes, ensuring that network-level threat detection is no longer limited to enterprises with massive security budgets.

NDR is no longer optional

As cyber threats evolve, XDR solutions must move beyond just endpoints to incorporate full network visibility. NDR provides the only effective way to detect compromised credentials, lateral movement, and insider threats within hybrid cloud and on-prem environments.

Organisations relying on XDR without NDR are exposed to significant risk as attackers increasingly evade traditional detection mechanisms. With the rise of affordable, cloud-based NDR solutions, integrating network detection into XDR is no longer a luxury it's a necessity.

For a truly comprehensive security strategy, NDR is the missing piece that XDR cannot afford to ignore. ■

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Don't lose your data centre cool

As compute workloads heat up (pun intended), the pressures placed on data centres are expanding exponentially. Liquid cooling stands to offer a scalable, efficient cooling solution supporting data centre operators in a sustainable manner into the future...

Liquid cooling technology has been around since the 1960s but is now playing an increasingly crucial role for data centre cooling.

"The rapid evolution of processing power and the exponential growth of AI are pushing the boundaries of what air-

cooled systems can handle. Air cooling is increasingly becoming insufficient for effectively dissipating the immense heat generated by modern servers and high-performance computing (HPC) systems," notes Matthew Thompson, Managing Director Europe, Airsys.

Today's data centres are tasked with powering AI and HPC applications, which generate far more heat.

"Traditional forms of cooling — particularly air-cooled systems — are simply unable to handle these thermal loads, making liquid cooling a necessity

to manage the immense amount of heat generated. Liquid cooling, including both direct-to-chip and immersion approaches, is a powerful solution to meet these demands, offering significantly higher heat rejection capabilities than conventional air cooling," explains Angela Taylor, Chief of

Staff, Head of Strategy, LiquidStack.

Andy Young, CTO, Asperitas, elaborates that "immersion cooling, where IT hardware is fully immersed in a dielectric fluid, offers a scalable, high-performance, and sustainable solution. Unlike traditional air cooling methods, immersion removes the need for traditional air-cooling infrastructure, significantly reducing energy consumption, footprint, and overheads."

According to Chris Carreiro, Chief Technology Officer, Park Place Technologies, as clusters of servers work together and with close proximity stacking, these high-powered systems in a single cabinet make it challenging for facilities to cool the servers.

"AI workloads perform better when you can cluster GPUs together in close proximity, which increases the challenge of capture and removing the heat that is produced," adds Lucas Beran, Director of Product Marketing, Accelcius.

"For example, a rack with 10x 1000W servers could need 500-600 CFM total airflow. The server exhaust feels too hot, and airflow (or CRAC/CRAH units) may be insufficient. This creates hotspots," outlines Carreiro. "Liquid cooling alleviates this problem for dense racks (10-15kW), where air cooling solutions would struggle. The liquid exchanges that heat somewhere outside of the rack and even out of the data centre itself."

"Liquids, due to their significantly higher thermal conductivity compared to air, offer a much more efficient solution for heat removal," adds Thompson. "This makes liquid cooling not just a viable, but a necessary technology for maintaining optimal operating temperatures."

Indeed, while CPUs in conventional servers typically have a TDP of 250-350W, AI accelerators such as Nvidia's GB200 reach 1.2kW per GPU — compared to just 700W for a traditional dual-CPU server. These extreme power densities demand more effective thermal management. As such, Bernie Malouin, Founder and CEO of JetCool Technologies, says that "liquid cooling is no longer a luxury — it's an industry necessity. It enables greater performance, reduces energy consumption with some liquid cooling solutions eliminating the need for ancillary water-intensive infrastructure like evaporative coolers and chillers."

Forward thinking

With AI and high-density chips resulting in unprecedented power demands, alongside grid capacity limitations and competition for power, data centre deployments are being delayed across the UK, sometimes by years, reports Malouin. Indeed, the International Energy Agency (IEA) anticipates data centres to double their energy usage by 2026, forcing the industry to rethink its approach to efficiency.

"Liquid cooling directly addresses these challenges by significantly reducing power consumption, eliminating water consumption, and enabling higher density computing without overloading existing grid capacity," shares Malouin. "Unlike traditional air cooling, which accounts for nearly 40% of a data centre's total energy use, liquid cooling removes heat more efficiently at the source, allowing AI and HPC workloads to run at peak performance with lower power draw. By reducing reliance on energy-intensive chiller infrastructure and enabling the use of high-temperature coolant for heat reuse, liquid cooling also aligns with the UK's net-zero goals, allowing data centres to repurpose waste heat for district heating or industrial applications."

"The UK's regulatory push towards net-zero data centres makes immersion cooling a future-proof solution. It significantly reduces energy demand, maximises economisation hours and so reduces power consumed by fans and compressors and water for adiabatic coolers and water towers," notes Young.

The IT sector is no different to any other industry in the sense of its responsibility to the sustainability and carbon reduction targets set by the UK government.

"Liquid cooling is a necessary shift in the data centre paradigm to work towards these targets whilst also being mindful of the evolving landscape of the IT sector and its ever-deeper integration into our commercial and personal worlds," says Karl Lycett, Product Manager – Climate Control, Rittal. "Liquid cooling is significantly more efficient at transferring heat energy than air and thus, when coupled with the soaring heat loads being seen due to new technologies, must be one of the key tools in our arsenal to ensure data centres have maximum uptime to support our 'always on' lifestyles."

Moreover, as well as the energy-saving benefits, liquid cooling also wins for versatility.

"The underlying infrastructure can be adapted to facilitate future improvements in cooling technology and the expansion

data centres will choose to implement a hybrid approach, which outlines the needs of their installation and will then work with a supplier to choose the right cooling technology for their, in some instances this may be zoning off the environment

"Unlike traditional air cooling, which accounts for nearly 40% of a data centre's total energy use, liquid cooling removes heat more efficiently at the source, allowing AI and HPC workloads to run at peak performance with lower power draw."

of server capacity," explains Sam Evans, Associate Director, Excool. "Essentially, you don't have to swap out the infrastructure as you continue to update your chillers. As rack densities will only increase in the future, we need to find the best cooling solution to reduce temperatures in the quickest and most energy-efficient way — that's what liquid cooling does."

"There's also the question of resilience in a warming climate," highlights Paul Mellon, Operations Director, Stellium Datacenters. "The UK may be mild compared to some parts of the world, but summertime heatwaves and rising average temperatures mean air-cooled data centres often have to crank up the fans to cope. Liquid cooling can be a more stable, predictable solution, regardless of seasonal fluctuations."

Technological approach

With multiple liquid cooling approaches available, there are yet more options for the data centre operator to consider.

"The different methods are suited to different applications and who, how and what the data centre has been designed to do. For example, this is a colocation facility catering to the needs of multiple vendors? A bleeding edge research firm performing computational research? Or a company specific build to support their internal network and more routine operations?" asks Lycett.

"In my experience, it seems that many

into a 'normal' load level zone and a more specific HPC environment for more intensive applications."

Taylor agrees that there isn't a single winner in liquid cooling: "the type implemented depends on the data centre's needs, workloads, and infrastructure. That said, as a result of Nvidia making direct-to-chip the standard cooling method for their GB200 NVL72 product, we are seeing a heavier adoption of single-phase direct-to-chip in AI data centres. Direct-to-chip provides a good balance of cooling capacity, ease of deployment, and compatibility with existing data centre



Bernie Malouin, JetCool

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infrastructure.”

“At present, direct-to-chip holds the largest market share, particularly in hyperscale data centres, due to its direct adoption by major server suppliers and the well-established ecosystem supporting DLC deployment. However, it typically requires a larger upfront investment and more extensive infrastructure. This robust ecosystem, combined with strong industry standardisation,

infrastructure, server upgrade expectations, infrastructure adaptability, budget constraints, energy recovery feasibility and long-term operational efficiency,” adds Thompson.

“For data centres running the latest and most advanced processors, like GPUs for AI, direct-to-chip (DTC) liquid cooling is leading the pack, with analysts highlighting its dominance as the preferred approach for AI

“By implementing a flexible infrastructure, operators can gradually shift workloads to liquid cooling as technology advances without overcommitting to a single method too soon. This approach ensures compatibility with both current and future IT hardware, prevents unnecessary CAPEX spend, and allows for a phased transition based on actual demand.”

accelerates its adoption despite some material and thermal limitations that may arise with next-generation chips,” notes Thompson.

Other liquid cooling solutions, such as immersion and liquid spray cooling, are more agile and scalable, allowing the cooling infrastructure to grow alongside the data centre.

“They cater to different customer needs such as existing cooling

workloads,” shares Malouin. “While multiple liquid cooling technologies exist, including direct-to-chip, rear-door heat exchangers, and immersion cooling, the best choice depends on a data centre’s specific needs, constraints, and long-term strategy.”

Decisions, decisions

Implementing liquid cooling in data centres can be highly beneficial, but it requires careful planning and consideration.

“It’s important to remember that the data centre industry is a mission critical industry, with downtime being exceptionally costly,” highlights Beran. “At the same time, the cost of AI servers has skyrocketed, with costs up to \$3 million per rack of IT. This means that any failures should be considered a risk.”

“Implementing the right solution is about more than just cooling — it requires a strategy that prioritises scalability, reliability, and long-term cost savings,” notes Malouin. “One of the key considerations when adopting liquid cooling is scalability. Many providers struggle to scale beyond pilot projects due to limited manufacturing, service, and warranty capabilities.”

Indeed, Taylor says that operators should look for technologies that meet current and future demands and integrate with

existing or planned facility designs: “they should also prioritise vendors with a strong track record in scalability, and a diverse network of supplier relationships, as the industry is likely to face supply chain constraints in the near term from increased demand.”

“Data centre operators should seek scalable solutions that address server adaptability and provide the flexibility needed to grow with demand,” agrees Thompson. “Ensuring a strong return on investment (ROI) is crucial, so prioritising a cooling solution with a low Power Usage Effectiveness (PUE) is essential. Additionally, the ability to recover waste heat for hot water and heating applications can transform the data centre into an energy producer, further enhancing its value and sustainability.”

Meanwhile, Lycett suggest that it is vitally important to conduct a thorough assessment of the current installation and understand not just what you need now but look ahead as much as is reasonably possible.

“Additionally, it may be important to consider compatibility,” adds Lycett. “If you are wishing to implement a new system, how well will this integrate with your existing architecture and data centre design?”

Carreiro warns of vendor lock-in with proprietary solutions: “many liquid cooling providers offer proprietary technologies that only work within their ecosystem. This can lead to limited compatibility with future hardware upgrades; dependence on a single vendor for servicing, spare parts, and expansion; higher long-term costs due to expensive proprietary components; and inflexibility in scaling as the business needs evolve.”

“When evaluating liquid cooling solutions, operators must be cautious of systems that do not scale effectively or lack long-term service and warranty support. Many liquid cooling providers do not have the capability to support deployments at scale, leaving operators without reliable service or access to critical maintenance,” warns Malouin. “Solutions that still rely heavily on air cooling should also be questioned, as they may fail to deliver the full efficiency and density benefits needed for AI and HPC workloads. Additionally, rigid, one-size-fits-all approaches can be problematic, particularly for legacy data centres that need a phased transition strategy rather than

a complete infrastructure overhaul.”

According to Evans, as the liquid cooling industry is still in its early stages, a hybrid approach that combines both air and liquid cooling is the most practical solution, allowing data centre operators to adapt to changing client requirements while maintaining efficiency and cost control.

“By implementing a flexible infrastructure, operators can gradually shift workloads to liquid cooling as technology advances without overcommitting to a single method too soon. This approach ensures compatibility with both current and future IT hardware, prevents unnecessary CAPEX spend, and allows for a phased transition based on actual demand,” says Evans. “A well-designed hybrid system integrates controllable air and liquid cooling loops, enabling operators to fine-tune cooling efficiency depending on workload density. By monitoring real-time IT loads and heat distribution, cooling strategies can be dynamically adjusted to optimise performance. Hybrid cooling not only offers resilience but also positions data centres for long-term sustainability. It reduces reliance on energy-intensive air cooling, while taking advantage of liquid cooling’s superior heat dissipation as adoption scales. This balanced approach ensures that data centres remain agile, efficient, and ready to support evolving client needs.” ■



Chris Carreiro, Park Place Technologies



Karl Lycett, Rittal

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How UC is powering the modern workplace

Sat Sanghera, CEO, IPI

Unified Communications (UC) is now an instrumental part of how we work. No longer a luxury afforded to large enterprises, UC has become a critical factor for success across all business sizes. Cutting-edge technologies like AI, 5G, and cloud solutions are empowering UC systems with unprecedented flexibility and scalability.

While larger companies have long recognised the strategic value of UC, a significant paradigm shift is underway. Small and medium-sized enterprises (SMEs), traditionally constrained by budget and resource limitations, are now enthusiastically embracing UC. The emergence of affordable and adaptable solutions, perfectly tailored to their unique needs and operational scales, has fuelled this widespread adoption.

As we head into 2025, and businesses brace for the challenges ahead, it's clear that a sound UC strategy will be pivotal.

1. Moving towards the next generation of UC

The decommissioning of BT's analogue services means that organisations are having to seek alternative solutions. Forward-thinking businesses will embrace next-generation UC platforms that enhance productivity and customer experience.

Cloud-based solutions, particularly Unified Communications as a Service (UCaaS), are central to this evolution. These platforms enable seamless collaboration for hybrid and remote workforces, adapting to dynamic operational needs while reducing infrastructure costs. With integrated features like video conferencing, team chat and omnichannel support, UCaaS systems help organisations deliver consistent and efficient communication experiences.

In addition, we'll see emerging technologies driving the UC market's transformation. AI will continue to play a pivotal role, with features such as automated transcription, sentiment analysis and real-time translation streamlining workflows and improving accessibility.

Cloud computing will also remain a foundational pillar, enabling organisations to scale operations, reduce infrastructure costs, and access continuous updates. Together, these technologies will create more adaptable and innovative UC solutions for businesses.

2. Continued focus on security and compliance

Security and compliance will be paramount. As organisations increasingly rely on digital platforms for critical business operations, they face a growing threat landscape targeting communication endpoints and sensitive data. The proliferation of hybrid work models, with employees accessing systems from diverse devices and locations, exacerbates these security vulnerabilities.

Implementing robust security measures, such as end-to-end encryption, multi-factor authentication, and AI-powered threat detection, is crucial for safeguarding sensitive data and maintaining business continuity. Furthermore, ensuring compliance with evolving regulations, including GDPR and CCPA, is integral, especially as businesses adopt new tools and workflows. Fostering a strong security culture through comprehensive employee training programmes is equally vital to mitigate risks effectively.

3. Relying on specialist partnerships

While established players dominate the UC market, 2025 will see the rise of smaller, specialist providers offering tailored solutions and consultancy services. These providers excel at addressing unique organisational needs, from integrating UC systems with legacy infrastructure to optimising adoption rates.

Leveraging specialist partnerships provides businesses with access to the specialised expertise required to navigate

the complexities of modern UC platforms. By collaborating with these providers, organisations can ensure their UC solutions are strategically aligned with their business goals and deliver maximum value. This approach is particularly valuable for companies seeking customised solutions that address specific pain points and operational challenges.

Embracing change

The Unified Communications market is entering an exciting phase of growth and

transformation, offering unprecedented opportunities for businesses ready to embrace change. To capitalise on this, organisations must invest in scalable, flexible solutions that cater to diverse operational requirements.

Whether leveraging AI and 5G, adopting cloud-based UCaaS platforms, or partnering with specialists, businesses must remain agile to thrive competitively. The year 2025 marks a pivotal moment for the UC industry, and those who evolve with the trends will be best positioned to lead in the years to come. ■

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Kier Group streamlines construction with tailored cellular 5G solution

Kier Group is the UK's largest construction and infrastructure provider. From residential to commercial and public infrastructure, their commitment to excellence drives innovation and sustainability.

Kier Group faced a significant challenge in meeting the evolving connectivity needs at their construction sites. As technology advancements and data demands increased, their existing 3G/4G solution struggled to deliver reliable and high-speed connectivity to users at the network's edge. The need for a modern, scalable, seamless and robust connectivity solution became crucial to support their construction operations efficiently.

Tailored cellular solutions

Kier Group selected UK Connect through a rigorous tender process as its national partner.

UK Connect revolutionised Kier Group's approach to connectivity by leveraging advanced technology to empower construction site operations. The deployment focused on 5G Cellular Broadband, utilising Cradlepoint's E3000 routers.

The E3000 router is 5G optimised to deliver scalable performance and services for all-wireless and hybrid-wired WAN networks. Offering Gigabit-Class LTE connectivity as well as Ethernet and Wi-Fi, the E3000 can integrate into an existing network with standards-based dynamic routing and VPN tunnel support.

Following UK Connect's installation, a rigorous spectrum analysis conducted by Radio Frequency (RF) engineers ensured that the most suitable mobile network operator and external antenna were selected for each construction site. This meticulous approach guaranteed that every site received the highest available bandwidth, enabling seamless connectivity for construction teams.

The installation, which was completed in less than one week, resulted in a maximum of 2Gbps firewall throughput, 5G low/mid-band, Cat 18/20 LTE & 2.5 GbE WAN connectivity, 24/7 real-time monitoring with NetCloud management by Cradlepoint.



Image courtesy of UK Connect

Comprehensive connectivity

Thanks to this collaboration, more than 250 sites experienced transformative connectivity improvements. UK Connect's cutting-edge solutions addressed infrastructure challenges and increased data demands, enabling reliable, high-speed connectivity for construction teams. Leveraging 5G cellular broadband, Kier Group benefited from enhanced communication, streamlined operations, and improved digital workflows.

"UK Connect's innovative connectivity solutions have revolutionised our construction sites, enabling seamless communication, enhanced productivity, and streamlined operations. Their expertise and reliable support have been instrumental

in our digital transformation journey," said Mark Wiltshire, IT Director, Kier Group.

This partnership not only fulfilled immediate connectivity needs but also laid the foundation for future scalability

and growth. UK Connect's managed connectivity solutions positioned Kier Group at the forefront of digital transformation, ensuring a seamless and connected construction future. ■

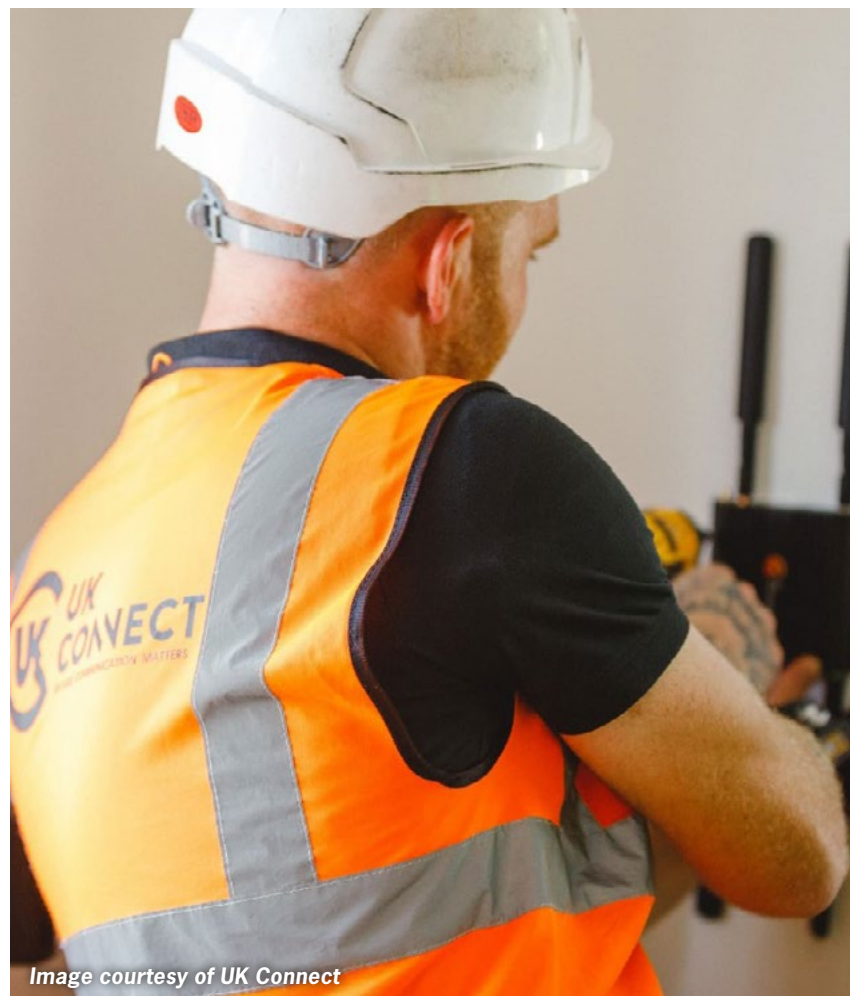


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Interaction bumps up on-site connectivity with versatile 4G/5G WiFi

Interaction is a UK based office design and fit-out company. Interaction put people at the core of their work, building and constructing workspaces fit for the modern era.

Interaction came to Bytes Digital looking for a WiFi solution for their construction sites. With a team of people operating at each fit-out location, Interaction required a business-grade WiFi solution capable of supporting their heavy usage, including video calls, downloading drawings and sending emails. With no fixed broadband line available at their construction sites, the WiFi solution needed to be a portable and flexible solution that they could take from site to site.

Versatile on-site connectivity

With construction sites and fit-out locations across the UK, Interaction required a versatile WiFi solution to enable their site teams to get online and work efficiently.

After the initial consultation with detailing Interaction's connectivity requirements, Bytes Digital recommended a business-grade WiFi solution that utilises 4G or 5G, rather than fixed line broadband for their sites.

The solution featured 4G WiFi routers for each construction site, providing reliable, business-grade WiFi connectivity, without the need for a fixed broadband line. A mixture of plug-n-play and engineer installed WiFi solutions was decided on for the fit-out sites across the UK. 5G WiFi

routers were selected for Interaction's larger sites, where higher bandwidth and faster speeds were required. For all sites, a remote management solution was enabled for the WiFi, complete with ongoing support provided by the Bytes Digital in-house engineering team. Internet connectivity was delivered for site teams to download technical drawings, send emails and make all-important video meetings with clients, while fast cellular connectivity and external antennas were installed for optimal speeds. Moreover, dual-SIM multi-network failover was enabled for redundancy across all of Interactions' construction sites.



For the Interaction team, ensuring smooth and reliable connectivity on their sites and enabling their site teams to work at maximum efficiency has helped keeping fit-out jobs on track.

The client reports: "really impressed with the service from Bytes Digital. We were looking for a simple and flexible way to get internet access to our construction sites and their 4G router solution has kept our teams connected wherever they may be. If there are any problems, their support team are always quick to respond and help us out. It's been an absolute game changer!"

A game changer

With the construction site's WiFi solution in place, Interaction's teams can work effectively and seamlessly. From downloading drawings to emails, web browsing and even video calls, our 4G



Image courtesy of Interaction

and 5G solutions keep interaction online, even in remote fit out locations.

"We were looking for a simple and flexible way to get internet access to

our construction sites and their 4G router solution has kept our teams connected wherever they may be," said Interaction. ■



Image courtesy of Interaction

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Zoned mass communications for safer events

Josh Dean, CEO, Audiebant

Events spaces have become a target for terrorist activity. In 2017, the Manchester Arena bombing became the deadliest act of terrorism in the UK since the 7/7 bombings in 2005. In the summer of 2024, three Taylor Swift concerts in Vienna were forced to be cancelled following a possible security threat. These attacks have shone a light on the current measures incorporated by venues to help protect the public and staff.

There are new laws being introduced to make our streets and events safer. It's great to see that legislation on the ownership, production, transportation of zombie-style knives and machetes in the UK is being introduced to help protect people. But new regulations can only go so far in keeping the public safe and reducing potential harm.

For too long, lockdown procedures and emergency response plans at events have lacked clear, effective communication to help keep people safe, and this needs to be addressed. The Terrorism (Protection of Premises) Bill, also known as Martyn's Law, will impose requirements on any premises with a capacity of 200 people or more. This will make transformative change no longer optional but essential for the majority of events venues.

Tailored instructions

Event attendees and staff often don't know what action to take during a panicked situation. Unable to differentiate between different floors or areas, the broadcast of one inflexible message may put members of the public in danger by inadvertently directing them towards threats and away from safe exits. The continuous repetition of a single loud message was a feature of the Manchester Arena attack, hindering communication.

Instead, the reality is that the level of threat facing different attendees at a large-scale event is dependent on where they are situated. Tailored communication is key to directing different groups to the safest course of action.

Zoned mass communication systems deliver tailored, calm, consistent and instant instructions to people in the event of an attack. Those in the vicinity of the danger can be told to make their way to the nearest exit, while those further away from the threat can be instructed to stay well away. This aligns with guidance from the National Protective Security Authority and Counter Terrorism Policing about the ability to deliver different messages to different zones.

The technology also meets the requirements of the proposed Martyn's Law to develop anti-terrorism plans, train staff in

terrorism protection and incorporate tools to help protect the public and employees. Technology must go hand-in-hand with training and be part of a more comprehensive and thorough incident response plan that must be constantly rehearsed and tested.

In the event of a terror incident, any number of authorised staff can be empowered to use a software-based app to initiate an instant broadcast via all the available channels, covering audio, screen and mobile, from any portable communication device.

A software-based system enables regular updates to be made to continuously improve performance. Accessibility is driven by a cloud-based HESaaS approach, deploying small-form computer technology. Scalability is advantageous to users, allowing event organisers to adapt to ever-evolving requirements.

Flexibility with different event types

Zoned mass communication systems are ideal for permanent event locations such as stadiums, but they can also be applied to temporary setups as well, such as concerts, festivals, fairs and other public gatherings. Tannoy and PA systems in these situations

suffer from the same drawback of only delivering one message to every attendee, regardless of where they are located. The latest communication technology can allow for live AI-driven text-to-speech and pre-recorded messages to be broadcast instantaneously to multiple zoned areas.

A concern among organisers when it comes to pop-up events is access to a reliable power source for a mass communication system to work. Innovations in technology now allow such systems to be powered by solar energy, even in low-light conditions. Long-lasting battery power is beneficial in that event organisers eradicate any reliance on mains power, enabling an adaptable, resilient and cost-effective solution. The technology can be transported easily to even the most remote location.

Safety is a top priority for event organisers, and not just in terms keeping people protected from potential terrorist attacks. For example, local authorities can deploy zoned mass communication systems to manage parking issues and clear illegally parked cars from certain areas. In certain locations with large groups of people gathering, communications can be directed towards them to encourage dispersal. There are even opportunities to leverage such a solution in non-emergency contexts. Systems can be pre-programmed to play health and safety information, event updates, promotional messages or background music.

Significantly enhancing emergency responses

As threats to public safety at events become increasingly complex, having the right tools and protocols in place is essential. While legislation like Martyn's Law provides a much-needed framework for improving security, it's clear that the adoption of advanced, tailored communication technologies can significantly enhance emergency response.

Zoned mass communication systems offer a flexible, reliable and effective way to ensure that both event attendees and staff receive the right information when it matters most. Whether managing a crisis or maintaining order at large-scale gatherings, these innovations help create safer environments. This demonstrates that proactive planning and modern technology can work hand-in-hand to protect the public. ■



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Choosing a DCIM? Focus on these three outcomes, not features

Bob Hart, Field CTO at Device42

Choosing the right data centre infrastructure management (DCIM) solution is more important than ever so that you can manage growing data centre networks and assets while meeting stringent service-level agreements for performance and reliability. While you can zero in on features immediately, you'll likely make a stronger choice if you use target business outcomes to drive decision-making.

You need strong inventory management capabilities to discover, report, and maintain the accuracy of all IT resources and configurations. A DCIM tool should support:

- **Improving asset management:** Capturing the entire range of assets, including physical, virtualized, software, cloud resources, and business services.
- **Integrating with other tools:** Sharing data and reporting with other solutions to create connected insights that enhance business value.
- **Providing reporting and analytics:** Offering out-of-the-box dashboards and reports, the ability to create custom reports, or both. Nice-to-have features are generative AI-powered report creation, the ability to port information to analytics of your choice, and export/import capabilities for reports team

members have already created.

- **Ensuring scalability:** Ensuring your solution will scale with growth—across assets, resource types, and a larger number of data centres. Inventory management is only as good as the data it collects.

Many organizations are governed by internal, customer, and regulatory requirements, such as GDPR, HIPAA, and PCI DSS, that govern data privacy, security, and sovereignty. As a result, your DCIM solution should create visibility into physical and logical environments, with the ability to monitor, manage, and control configurations and access, as well as audit and report on processes.

- **Enabling monitoring and alerts:** Providing near-real-time updates so you can promptly address issues or report on new configurations or devices in an environment.
- **Providing visualization and floor planning:** Visualizing who has access to components and cabling across assets and verifying that they have redundant power, which is essential for mission-critical workloads.
- **Ensuring security and compliance management:** Delivering built-in rule sets,

reports, and visualizations for specific regulatory and governance standards.

- **Integrating with other tools:** Integrating with audit, log monitoring, and security information and event management (SIEM) solutions for starters. If your DCIM tool provides an open API, you can take advantage of online databases and lists that continually update asset information.
- **Providing reporting and analytics:** Reporting on aggregated asset class and resource information and basic configuration information like firmware, operating systems, and the “last login” to meet some security/risk needs.

If you're seeking to control costs or optimize current investments, you'll want to ensure your DCIM solution supports:

- **Managing and optimizing power consumption:** Prioritizing power draw and balancing to ensure three-phase power isn't wasted. Tie these metrics to resource utilization to analyze and justify power consumption.
- **Planning capacity:** Reporting free power drops, network connections, open rack space, and other metrics, such as virtualization and storage capacity.
- **Integrating with other tools:** Feeding

DCIM data into financial operating (FinOps), IT service management (ITSM), and IT operations management (ITOM) tools to improve cross-functional processes.

- **Delivering reporting and analytics:** Aggregating and correlating data to drive cost and efficiency gains.
- **Providing monitoring and alerts:** Enabling holistic visibility and near-real-time insights so you can react faster to emerging issues and reduce disruptions.
- **Enabling visualization and floor planning:** Gaining rack elevation, wiring diagrams, and environmental factor data such as temperature/humidity to help optimize processes.
- **Supporting disaster recovery (DR) and business continuity (BC):** Revealing all upstream and downstream dependencies, including hosts, network, storage, and applications, to meet DR, BC, and high availability requirements.

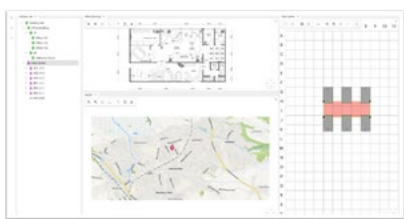
With these tips, you can choose a DCIM tool to meet critical business, technical, and operational requirements, supporting technology growth and performance and delivering more value to your organization. ■

PRODUCTS

InteliPhy net, a DCIM designed by R&M for simplicity, is an easy-to-use solution for asset, capacity and change management.

With R&M's DCIM, the data centre operator can reduce deployment time and ensure high data quality of documentation with great IT infrastructure visualization. Realistic 2D and 3D views of the data centre are enabled, alongside access to information from anywhere with the InteliPhy net mobile application.

InteliPhy net offers accurate real-time inventory of data centre assets, drastically increasing the efficiency of audits. The user can detect any cable connection and get an end-to-end view of the link, and easily document the raceway system, supervise raceway filling and get advice to optimal cable routing. With the software, it's possible to create high-level dashboards with meaningful charts to view the entire data centre situation at a glance, complete with automatic records of the most important performance indicators (KPIs).



Data centre extensions can be planned in InteliPhy net, creating realistic visualizations and accurate material lists. The software offers availability insights on rack space, power outlets on rack PDU, power capacity at rack, network ports with media and connector match.

Constantly supervise critical parameters in the data centre and be alerted on any deviation from normal values with this DCIM, which continuously collects measurement values and status information. These values can be used to generate alerts, forecast trends and to improve efficiency.

Hyperview's Asset Management software allows the data centre operator to gain complete visibility into the entire infrastructure: from operational technologies and rack-mounted IT devices, to VMs and sensors.

Uncertainties are reduced with a digital twin for data centre assets, allowing the user to benefit from real-time monitoring of hardware health, ensuring peak performance and informed decisions

Nlyte's DCIM software lets the data centre manager monitor and automate the management of the entire compute infrastructure, maximizing the value of individual assets, quickly visualizing space for new equipment, improve operating efficiency, and more.

Nlyte's DCIM software is a comprehensive data centre monitoring tool that enables the user to constantly monitor system utilization at the global, location, and room levels to provide complete oversight; identify specific underutilized servers and ‘Ghost Servers’ to raise utilization rate; improve capacity planning and space utilization from a single interface; make more efficient use of existing hardware by balancing workloads and sending alerts when thresholds are

always. The data collector uses popular protocols for a versatile and comprehensive asset overview, eliminating compatibility issues. Agentless auto-discovery provides a continuous inventory of all data centre components without extra software on devices. Hyperview detects and updates changes automatically, keeping asset inventory up-to-date effortlessly.

Moreover, customizable dashboard alerts can be tailored to the unique needs

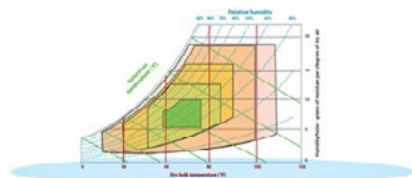
exceeded; and make forecasts based on ‘what-if’ scenarios.

Nlyte System Utilization Monitoring features include dashboard views of server utilization, utilization and connection reports, navigates directly to asset and host cabinet pages in the Nlyte Asset Optimizer, asset management, change management, and audit and reporting.



Raritan's Power IQ® DCIM Monitoring Software enables data centre and facility managers to closely monitor and efficiently utilize their existing data centre power infrastructure.

Data centre health maps, power analytics, cooling charts, and reports alert the user to potential trouble, and help understand real-



time power load, trends, and capacity at all levels of infrastructure. A configurable dashboard provides vendor agnostic views of power capacity, environmental health, and energy consumption. Get single-click access to rack power, cooling, airflow, events, and much more.

Main features include environment monitoring, energy management, power management, vendor agnostic management, centralized rack PDU management, Power Usage Effectiveness (PUE) Gauge and Chart, vendor agnostic power control, real-time dashboards, smart rack view, floor map view, thresholds and alerts, cabinet inspector, and custom reports.

and priorities of the data centre, offering real-time updates on asset health and environmental conditions. Hyperview also offers complete audit trails for easier compliance reporting and operational analysis, enhancing accountability and transparency.

An Asset Tracking RFID add-on can automate equipment tracking, reduce manual errors, save time, and boost accuracy.

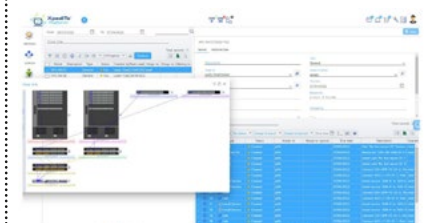
Rit Tech's XpedITE DCIM software helps to reduce costs and run operations more efficiently to achieve maximum uptime.

Offering an accurate and comprehensive view of all data centre assets XpedITE's asset management is one of the critical DCIM pillars providing a reliable digital representation for infrastructure, as well as end-to-end change and service management functionality.

XpedITE gathers, processes and analyses data from the building and IT infrastructure and all inter-dependencies to offer a comprehensive multi-layer capacity utilization displayed in 2D or 3D visual layers, capacity dashboards and reports for intuitive and comprehensive capacity management.

With Rit Tech's DCIM, the operator can create, assign and audit all provisioning and maintenance tasks within a unified tool, and integrate with external ticketing systems to manage changes in an effective way with reduced resource overhead and timeframes.

Moreover, through automation and machine learning, XpedITE turns information into solutions, enabling operators to make informed decisions that boost the bottom line: enhancing availability, streamlining consumption and optimizing reliability and productivity overall.





Please meet...

Richard Brandon, VP of Strategy at RtBrick

Who was your hero when you were growing up?

Well, there were plenty of scientists, which I realise sounds a bit geeky – Faraday, Rutherford and Albert Einstein, of course. And there were a fair few footballers to redress the balance, most notably Aston Villa’s Brian Little. But if I had to choose, then I think I’d have to settle for Bugs Bunny. He was the sort of rabbit I always aspired to be. Smart, funny and always one step ahead of everyone else. Sorry Albert, but Bugs is a high bar to get over.

What was your big career break?

Actually, there was one clear moment. Of course, I like to think I had some talent and worked hard, but sometimes you have to recognise a bit of good fortune. I got mine when I was transitioning from a technical role in fibre optics to product management. Called my General Manager’s office at the time, and I was waiting for him to tell me I’d got the fibre optics product management job. Instead, he told me they needed a product manager for routers. I didn’t know what a router was, and he didn’t either. The rest, as they say, was history, or more accurately... was The Internet. It was quite the ride after that.

What did you want to be when you were growing up?

I always wanted to be an astronaut. I mean, who wouldn’t? I grew up watching the Apollo space missions and had some amazing poster-sized photographs of the early moon landings pinned to my bedroom wall. Sadly, I was somewhat travel-sick as a child, which isn’t a great quality for high G manoeuvres or zero-G space travel. But I’m still waiting for the call...

If you could dine with any famous person, past or present, who would you choose?

I think this is the toughest question on the list. Most people have something interesting to say, and you’d expect the famous ones to have more to say than most. I’d probably go for a historical figure - someone we don’t know as much about as modern celebrities. I reckon Shakespeare would be entertaining, and we know so little about him that I could fill in a few gaps afterwards. Maybe we could work on a movie plot together over the cheese course (see below!).

What would you do with £1 million?

Probably make a low-budget movie, if you can call spending a million pounds on anything ‘low budget.’ What an indulgence that would be!

What’s the best piece of advice you’ve been given?

I’ve had lots of good business advice over the years, but I will go with a piece of parenting advice I was given once, which is that... ‘children are never really yours, they are only leant to you.’ I think it helps you value your time with them when they are young and deal with the challenges of ‘releasing them into the wild’ when they are older.

If you had to work in a different industry, which would you choose?

Certainly one of the creative industries. For a long time, I would have said the music

industry, but Spotify has pretty much finished that off for most creatives, unless you’re Taylor Swift or Ed Sheeran. It’s a pretty tough place these days. I think I’d go for the movie business. I always love the collaborative nature of working with video, even on a corporate level.

The Rolling Stones or the Beatles?

I saw the Stones when they were still only middle-aged – a long time ago. But it has to be The Beatles. For the depth, variety, and amount of groundbreaking things they

did in such a short span of time. I always was a big fan, and I still am. Obviously, there is the Lennon and McCartney talent goldmine, but I have a particularly soft spot for George Harrison’s songs too: “Here Comes the Sun”, “Something”, and “While My Guitar Softly Weeps” - firm favourites!

Where would you live if money was no object?

Well, I love my house and don’t really want to move out. But I wouldn’t mind relocating it to somewhere with better weather. Perhaps


you could move it to Seville for me? Great weather and incredible food!

What’s the greatest technological advancement in your lifetime?

It sounds a bit trite to say The Internet, especially as I was involved in it from its early days. But it’s hard to beat. Its influence hasn’t all been positive when you look at some of the impact of social media, but on the whole, I think it’s been hugely democratising. AI could yet be its equal in both positive and negative regards – we will see... ■

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