

# Inside Networks

## Hitting a brick

HOW CAN THE DATA CENTRE SECTOR  
ESCALATING CONSTRUCTION

## Written guar

THE IMPORTANT  
PROGRAMS AND  
NO HIGH STAND  
GOOD DISCIPL

## At

HOW ED  
LATENCY  
NEARER



Black wall

DO YOU RESPOND TO  
CLOUD COSTS?

When  
warranty

THE NATURE OF WARRANTY  
AND WHY THERE IS  
NO STANDARD WITHOUT  
A FINE

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EDGE COLOCATION IS SOLVING THE  
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SIEMON WHITE PAPER

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## 6 ROB'S BLOG

Here we go again...

## 9 NEWS

All that's happening in the world of enterprise and data centre network infrastructures



## 14 MAILBOX

The pick of the recent emails to Inside\_Networks



## 17 QUESTION TIME

With data centre construction costs escalating rapidly, industry experts examine the effect this is having on the sector and how it should respond

## 30 CHANNEL UPDATE

Moves, adds and changes in the channel

## 32 COPPER CABLING SYSTEMS

Stuart McKay of Panduit looks at the latest developments in copper cabling technology and the impact of Single Pair Ethernet (SPE)

## 36 COPPER CABLING PRODUCTS AND SYSTEMS

A selection of the very best copper cabling products and systems currently available

## 40 COPPER CABLING SYSTEMS

Christophe Hinet of Molex Connected Enterprise Solutions explains the importance of warranty programs



44

**QUICK CLICKS**

Your one click guide to the very best industry blogs, white papers, podcasts, webinars and videos

46

**COLOCATION DATA CENTRES**

Darren Watkins of Virtus Data Centres looks at why the colocation data centre sector is thriving and the five things to consider when choosing a provider

50

**COLOCATION DATA CENTRE PRODUCTS AND SERVICES**

State-of-the-art colocation data centre products and services profiled



54

**COLOCATION DATA CENTRES**

John Hall of Proximity Data Centres explains how edge colocation is solving the latency conundrum and bringing data nearer to end users

58

**PROJECTS AND CONTRACTS**

Case studies and contract wins from around the globe



60

**PRODUCTS AND SERVICES**

The latest network infrastructure products, systems and services



63

**FINAL WORD**

Jon Healy of Keysource looks at why the need for security and sustainability means the data centre sector is facing its greatest challenges yet

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# Off to a flying start

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Given what we've experienced over the last few years, it would take someone very brave to second guess how 2023 will play out for the enterprise and data centre network infrastructure sector. That said, given how the industry has weathered recent storms, there's a lot to be positive about.

Supply chain issues, material shortages and costs, and a lack of skilled labour are significantly affecting data centre construction all over the world – just at a time when our reliance on these facilities has never been greater. In this issue's Question Time a panel of industry experts discuss the impact is this having on the sector as a whole and how should it respond.

Despite some suggestions that demand for colocation data centres is set to diminish, all the evidence suggests that this couldn't be further from the truth. Darren Watkins of Virtus Data Centres look at why the colocation data centre sector is thriving and the five things to consider when choosing a provider, while John Hall of Proximity Data Centres explains how edge colocation is solving the latency conundrum and bringing data nearer to end users.

Also in this issue we focus on copper cabling, with two excellent articles on the subject. In the first, Stuart McKay of Panduit looks at the latest developments in copper cabling technology and the impact of Single Pair Ethernet (SPE). Stuart is joined by Christophe Hinet of Molex Connected Enterprise Solutions, who explains the importance of warranty programs and why it makes sense to pay attention to them.

Finally, Keysource recently published its State of the Industry Report 2022, which gathered the views and insights from over 250 IT directors in the UK and Europe. The company's Jon Healy highlights some of the key findings and looks at why the need for security and sustainability means the data centre sector is facing its greatest challenges yet.

With lots more besides, I hope you enjoy this issue of Inside\_Networks and if you'd like to comment on any of these subjects, or anything else, I'd be delighted to hear from you.

**Rob Shepherd**

Editor





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# 79 per cent of IT decision makers cite the energy crisis as a future sustainability blocker

79 per cent of IT decision makers believe that the energy crisis has created issues for their future sustainability strategy, according to research commissioned by Telehouse. As a result of the turbulent geopolitical and economic climate, 86 per cent of IT decision makers have already altered their current business plans to minimise the impact on operational costs and ensure profitability.

These findings add to the concerns currently experienced by decision makers, who despite the energy pricing pressures have to ensure the successful delivery of green initiatives. 87 per cent are confident that their IT infrastructure can deal with climate change

impacts now, but this drops to 67 per cent when looking ahead over the next five years.

Some businesses are yet to achieve their current sustainability goals, as 34 per cent haven't made progress on their objectives or haven't yet defined them. 57 per cent aren't yet fully optimised to contribute to net zero targets and 52 per cent aren't using renewable energy sources.

Mark Pestrige, senior customer experience director at Telehouse, commented, 'Our latest

research reveals a perception gap among organisations that sustainability drives decision making, when practical steps haven't been taken to enable this in reality.'



Mark Pestrige

## Siemon LightVerse passes third-party 400Gb/s IEEE testing with considerable margin

Siemon's new ultra-low loss singlemode multi-fibre termination push-on (MTP) cabling system exhibits considerable margin over IEEE 400 Gigabit Ethernet channel limits, as proven through third-party testing. Intertek Testing Services tested Siemon's LightVerse in IEEE 802.3bs 400GBASE-DR4 and IEEE 802.3cu 400GBASE-FR4 applications.

Siemon's singlemode ultra-low loss component specifications provide a maximum insertion loss performance of 0.30dB for MTP connectors, 0.50dB for MTP-LC modules and 0.20dB for LC BladePatch cords. The

channel testing showed actual results well below the maximum specifications.

'With emerging technologies driving widespread 400 Gigabit Ethernet adoption in hyperscale data centres and enterprise data centres gearing up to deploy these next generation speeds, data centre operators need to be confident that their cabling systems can reliably support current and future 400 Gigabit Ethernet applications,' explained Gary Bernstein, global data



Gary Bernstein

centre solutions specialist at Siemon. 'Third-party testing of our ultra-low loss singlemode MTP cabling system delivers that confidence.'

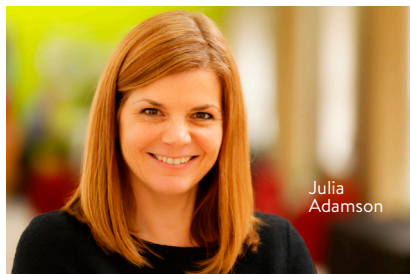


## New scheme enables disadvantaged young people to access careers in tech

A new programme to allow young people from disadvantaged and underrepresented backgrounds to access digital opportunities has been launched by BCS, the Chartered Institute for IT. The My Digital Future programme aims to tackle digital inequality by providing one to one support, resources and bursary funded training to young people who wish to pursue a career in technology.

The programme seeks to engage students aged 16-24 from socially and economically disadvantaged backgrounds, underrepresented racial and ethnic groups, as well as encourage young women in computer science. The BCS 2022 Diversity

Report showed that only 22 per cent of IT specialists in the UK workforce are female. Participants will be paired with a coach who will be a source of counsel and inspiration to empower young people who wish to pursue digital careers.



Julia Adamson, director of education at BCS, the Chartered Institute for IT, said, 'We know that access to education and training can be influenced by an individual's social and economic

circumstances, and that's true for digital skills too. There is also evidence of barriers to acquiring digital skills among girls and young women, particular ethnic groups, or people with disabilities.'

## Juniper Networks survey outlines the need for sustainable network infrastructure transformation

Juniper Networks has conducted a survey of 650 IT decision makers and 1,200 office workers across EMEA to gauge confidence in sustainable networking transformation within business. It found that a knowledge gap remains when it comes to understanding the real imperatives, issues and opportunities around sustainable IT networks.

83 per cent of those surveyed work for organisations that have implemented or are currently implementing a sustainable network infrastructure policy. Furthermore, 86 per cent of IT decision makers and office

workers agree that they want to see more positive action from their organisation's leaders regarding IT/networking

sustainability in the next two to five years.

'The disconnect between leadership and employees when it comes to understanding the importance of sustainable networking highlighted by this research actually offers a unique opportunity for many of our partners and customers that do already operate with sustainability



in mind,' said Gos Hein van de Wouw, vice president of enterprise EMEA at Juniper Networks.

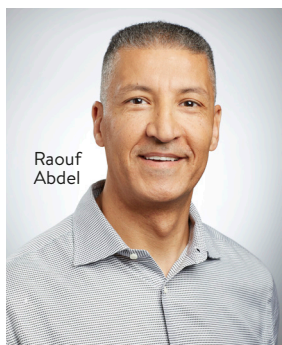
## Equinix 'adjusts the thermostat' to optimise data centre energy use

Equinix is increasing operating temperature ranges within its data centres. It will begin to define a multi-year global roadmap for thermal operations aimed at achieving significantly more efficient cooling and decreased carbon impacts. Over time, this initiative is expected to enable thousands of Equinix customers to reduce the Scope 3 carbon emissions associated with their data centre operations.

As a part of this new efficiency initiative, Equinix expects to operate its facilities closer to 27°C (80°F), aligning operating limits across its global data centre portfolio with the globally accepted boundaries

of the A1A standards from the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE). When combined with existing Equinix initiatives such as optimising the use of outside air temperatures to cool its data centres, this new initiative will contribute to the overall sustainability of its data centres.

'Our cooling systems account for approximately 25 per cent of our total energy usage globally,' said Raouf Abdel, executive vice president global operations at Equinix. 'With this new initiative, we can intelligently adjust the thermostat in our data centres in the same way that consumers do in their homes.'



## Iceotope and Meta reveal efficiency of precision immersion liquid cooling for high density storage

Iceotope has completed a study with Meta that confirms the practicality, efficiency and effectiveness of chassis level liquid cooling technology. It confirms that it meets the cooling requirements of high density storage disks increasingly being deployed and utilised by hyperscale data centre service providers.

It also suggests the advantages of improved thermal management, reduced vibration and equalised temperature, which leads directly to lower failure rates and costs for data centre operators. The

hard drive systems supplied in a rack form factor in chassis drawers are an ideal fit for precision immersion cooling technology.

Neil Edmunds, director of innovation at Iceotope, said, 'As demand for data storage continues to escalate, so will the solutions needed by hyperscale data centre providers to efficiently cool the equipment. The study demonstrated that liquid cooling for high density storage successfully cools the drives at a lower, more consistent temperature for

fewer drive failures and lower total cost of ownership.'



## Improving employee retention is key to tackling tech's diversity problem

Wiley Edge's new Diversity in Tech 2022 report has revealed that 64 per cent of UK businesses admit to struggling to retain employees from underrepresented backgrounds. Although 65 per cent stated that they work hard to foster an inclusive company culture, 18 per cent said that they had received complaints related to diversity and inclusion from current and former employees.

Positively, 55 per cent of businesses have a mentorship programme for younger employees to support their professional and personal development. Just 25 per cent of businesses have an onboarding process that takes into account exit interviews and historical feedback from employees.

The research indicates that failing to create a truly inclusive, welcoming environment contributes directly to poor



retention rates on tech teams. When asked why they had ever left or wanted to leave a tech role, most commonly cited reasons amongst those aged 18-24 were a lack of sense of belonging (27 per cent), biased treatment from managers (22 per cent), lack of support

for additional need (21 per cent), and a company culture that made them feel unwelcome or uncomfortable (16 per cent).

Rebecca Roycroft, senior director of global emerging talent at Wiley Edge, commented, 'It's not enough to attract and hire candidates from a broader talent pool. If we are to make any meaningful, long-term change when it comes to diversity in tech, businesses must also have effective strategies in place to retain employees from all backgrounds.'

### NEWS IN BRIEF

Vantage Data Centers is constructing a second campus (JNB2) in Johannesburg, South Africa. The JNB2 Isando campus is strategically located in Ekurhuleni, the greater Johannesburg Metropoli's trade and industry hub, and approximately 17km from Vantage's growing JNB1 Midrand campus.

ECA recently took home the CO2onstruct Zero Partner Of The Year award from the Construction Leadership Council..

Lenovo has reached a new milestone in becoming the number one entry storage provider in EMEA for the first time in revenue, according to the IDC Enterprise Storage Systems Tracker Q3 2022. The new rankings reveal Lenovo leading the Price Bands 1-4 category.

Equinix has announced plans to enter the South African market with a \$160m data centre investment in Johannesburg that augments its current footprint on the African continent in Nigeria, Ghana and Côte d'Ivoire. The new data centre is expected to open mid-2024.



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# Mitigating network mana

Hi Rob

Modern business IT requirements have led to the development of the borderless network, which fundamentally changes how network management and security must be approached. Being aware of the new environment complexity and some of the most common network management security issues/challenges will help network and security pros secure the key defences.

The adoption of cloud, bring your own device (BYOD), work from home and the increased use of hosted solutions have led to a larger proportion of enterprise services being outside the direct control of IT. This means that internal enterprise services must be logically colocated with external services, in many cases creating additional risk.

Operations teams often spend a significant amount of time just figuring out where the root cause of network performance issues is sourced from. This limits the amount of time they have available to spend on strategic work. Complexity is also fuelled by the adoption of cloud and new application architectures that drive agility and time to market, but also add more moving parts that must work

together and be monitored in context.

To manage risk properly, it is more critical than ever to have clear insights on the nature of network communications, dependencies and a method for identifying early indicators of security exploits. Successful security exploits and breaches are typically the combined sum of several small wins by a threat actor, so it's essential

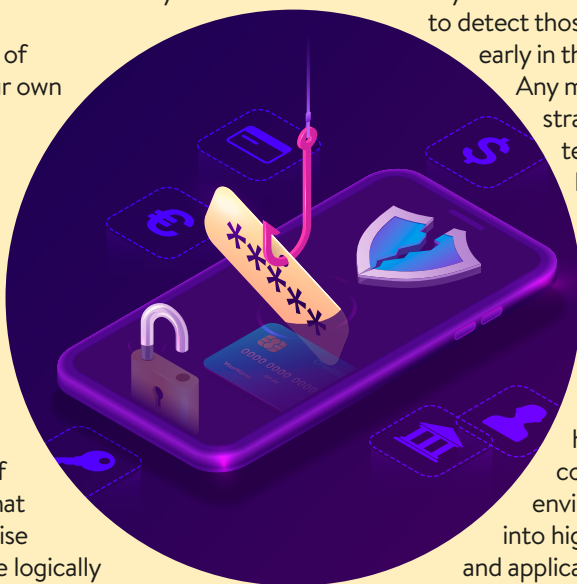
to detect those small events early in the attack chain.

Any mature security strategy must include technologies that leverage a range of detection methods that allow for the correlation of seemingly unrelated activity.

A contextual understanding of how independent components in the environment abstract into higher level services and applications is also

important for any visibility and observability solutions that operations teams evaluate. By deploying infrastructure management solutions that embody this hierarchy, operations teams gain greater empathy with the business users they're serving and achieve a better understanding of the implications of incidents that occur in the environment.

For enterprises, the surface area available for threat actors to target will continue to expand. The key drivers are the growth of data and of the interfaces that must





# Management security issues

be made available for access. Combined with this, security operators must plan for threats targeting newer, less battle tested technologies. Additionally, many of the recent high profile security breaches were predicated on privilege escalation via systems that were not directly under attack. This trend is expected to continue given its effectiveness and misdirection.

There is no one single technology or product that can be implemented to automatically solve all problems in this domain. Enterprises therefore require a comprehensive security operations technology stack and management framework that uses

in-context visibility and spans across prevention, detection and automated response.

**Jason Dover**  
Progress

## Editor's comment

Identifying the source of network performance issues and keeping data secure can be a major headache for IT teams. As Jason suggests, in order to mitigate any threat at the earliest opportunity, having the best possible insight into a network infrastructure is imperative.

15

## Inside Networks

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### Indoor Simulator Competition

The cost of a 4-ball team will be £750 (+VAT).

There will also be discounted accommodation at Hanbury Manor Hotel & Country Club, which will include breakfast and use of the extensive leisure facilities. Price to be confirmed.

As in previous years – teams will be asked to provide a raffle/auction prize on the day in support of the charity.

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### Playing the Hanbury Manor PGA Championship Course:

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The event will ask for 4-ball teams to compete in a 'best 2 from 4' full handicap Stableford competition over 18 holes (with a 2-tee start from 10:30am).

Live Scoring sponsorship is available.

Golf will be preceded by tea, coffee and bacon rolls at registration and will be followed by a 3-course private dinner and prize giving with charity raffle.

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### MADE TO CONNECT



# From the ground up

With data centre construction costs escalating rapidly, [Inside\\_Networks](#) has assembled a panel of industry experts to examine the effect this is having on the sector and how it should respond


▶ Given that costs are rising across every other aspect of life, it should come as no surprise that data centre construction is facing record breaking inflation. According to research from Turner & Townsend, the average cost to build data centres has increased by 15 per cent on average across global markets.

Supply chain issues, material shortages and costs, and a lack of skilled labour are all having a massive effect on the ability to construct these facilities, just at a time when demand for data centres and the services that they provide couldn't be higher. 95 per cent of those

surveyed by Turner & Townsend agreed that global materials shortages have impacted construction timescales, with most citing delays of over 12 weeks. Meanwhile, 92 per cent of respondents reported that they are struggling to meet construction demand due to a shortfall of experienced site teams.

So with data centre developers facing a perfect storm of construction issues, Inside\_Networks has assembled a panel of experts to examine the impact this is having on the sector and look at what it can do to respond and continue to thrive.

17



ACCORDING TO RECENT RESEARCH, THE COST TO BUILD DATA CENTRES HAS INCREASED BY 15 PER CENT ON AVERAGE ACROSS GLOBAL MARKETS. WITH DATA CENTRE CONSTRUCTION FACING A PERFECT STORM OF CURRENCY FLUCTUATIONS, A RACE FOR TALENT FROM OTHER ADVANCED TECHNOLOGY SECTORS, AND MATERIALS DELAYS AND SHORTAGES, WHAT IMPACT IS THIS HAVING ON THE SECTOR AS A WHOLE AND HOW SHOULD IT RESPOND?



# NANCY NOVAK

CHIEF INNOVATION OFFICER AT COMPASS DATACENTERS

To paraphrase Charles Dickens, for data centre providers it is the 'best of times and the worst of times'. The demand for data centre capacity has never been higher and shows no signs of abating in the foreseeable future.

Through the internet we can perform a variety of functions ranging from selecting the groceries we want delivered to receiving a medical examination from our doctor via a telemedicine application. If anything, Covid-19 has only accelerated the degree of reliance on internet delivered capabilities and the data centres supporting them.

To help meet the demand for data centre space, we are seeing new market entrants in the form of large real estate investment trusts (REITs) and private equity firms, as well as new start-up companies seeking to turn megawatts into dollars. As desirable as these events are from a revenue perspective, they also have highlighted issues impacting provider's ability to build the new data centres required to meet escalating capacity requirements.

From a generic perspective we can lump rising costs, currency fluctuations and even a shortage of personnel necessary to effectively cover the myriad of active job sites across the globe under the umbrella of supply chain obstacles. Every provider is in competition for a scarce pool of resources, and it isn't unreasonable to

ultimately expect an uptick in mergers and acquisitions, as the companies that have best adapted to the current situation on the ground absorb those that haven't.

Situations like the one we are experiencing now in the data centre industry can't be considered black swan events when you look across the history of various industries. The critical element defining those companies who have survived these inflection points is their ability to see past the initial difficulties of the obstacles in their

path and view them as opportunities for innovation.

Shortages of materials and manpower will require companies to adapt the way they've been doing business. These changes will impact virtually every supply chain related area – from procurement to process optimisation to the way they perform job site scheduling. All of these will require a degree of nimbleness many existing providers are not capable of achieving. We may be in the middle of a perfect storm but adaptability will define those companies that survive it.

**'WE MAY BE IN THE MIDDLE OF A PERFECT STORM BUT ADAPTABILITY WILL DEFINE THOSE COMPANIES THAT SURVIVE IT.'**



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## ED ANSETT

FOUNDER AND CHAIRMAN AT I3 SOLUTIONS

Data centre design is facing the same short-term headwinds and medium-term to long-term systemic challenges as all infrastructure sectors where multiple disciplines and resources combine. In the short-term, the data centre sector's multi-year lead times may provide some buffer from immediate supply chain constraints. While there will doubtless be some projects that are negatively affected and delivery times extended, from a power infrastructure equipment perspective the possible danger of major supply issues is probably two or three years down the line.

Solutions for the sector start with a shift in thinking. Uncertainty and volatility in raw material costs are universal and this includes areas such as energy storage. If lithium batteries are in short supply consider alternatives that are less risky both from capital cost and whole of life perspectives. For example, rapid developments in sodium-sulphur (NaS), sodium-nickel-chloride (NaNiCl), nickel-cadmium (NiCd), vanadium redox flow battery (VRFB) and zinc bromine flow battery (ZBFB) means they now make viable alternatives and can help address sustainably concerns.

Beyond the immediate component level supply chain issues, medium-term and longer-term challenges can only be

addressed in shifting how we think about design. This means accepting the new macro realities of both security and cost of energy supply, possible planned power cuts and tougher carbon regulatory regimes.

Starting now, power chains in data centres must be designed to not only respond to signals from the IT load but also to grid event driven utility signals. This will mean data centres not just being designed to run autonomously, but also to export power to the grid in the form of both operating reserve and frequency response.

The upsides for the sector are the reduction in operational expenditure due to additional income from demand response schemes and a reduction in national carbon emissions, which of course need to be recognised by government carbon accounting methods.

Another design consideration that should soon gain traction in data centres is combined heat and power (CHP). Installing co-generation plant at a site enables waste heat to be harvested and exported for use by local municipal or commercial stakeholder communities.

**'STARTING NOW, POWER CHAINS IN DATA CENTRES MUST BE DESIGNED TO NOT ONLY RESPOND TO SIGNALS FROM THE IT LOAD BUT ALSO TO GRID EVENT DRIVEN UTILITY SIGNALS.'**



# CARRIE GOETZ

PRINCIPAL AND CHIEF TECHNOLOGY OFFICER AT STRATEGITCOM

This question refers to a perfect storm of challenges that will lead to ingenious innovation, lift and shift, and the adoption of cool things that are just waiting in the wings. Beginning with cost increases – these are not going away and are likely to worsen, while inflation is out of control and supply is not meeting demand. To complicate matters, logistics issues are compounding challenges globally.

To get around these problems, I think we will see some buildings that were left vacant or largely vacant after the coronavirus pandemic repurposed. Distributing loads into already built and provisioned spaces may prove quicker and less expensive than new construction, or used as a stopgap.

Reconfigurations may just be the catalyst needed to spur the adoption of higher density technologies that don't require as much power, like immersion cooling. I also believe these issues will catalyse edge builds as smaller edge data centres are easier to build sustainably and renewably. Containers and modular should be on your radar – think resiliency versus redundancy and trim the fat.

Of course, we still need to work on the supply side for our equipment. We simply need more manufacturing in more locations to circumvent shortages. Aftermarket suppliers, IT asset disposal resources and the circular economy will prove invaluable, as will 3D printing.

As to the human supply chain, we simply cannot sustain this industry by poaching competitors' talent. We need to attract more talent into the industry and raise

awareness of it. Even today, people fall into the industry rather than intentionally having it as a career path.

I firmly believe there is room for all – skilled trades, apprentices, interns, certified workers, willing learners and degreed folks. People learn in different ways, and people consume tech in different ways. We need to meet people where they want to work and we need to grow our

human resources too. Drop the degree requirements for any job that doesn't specifically require one.

We need to highlight the many diverse paths into the industry, directly and through our supply chains. It takes all kinds, all abilities, and all brilliant ideas to make the data centre world tick and innovation thrive. Innovation will save us.



**'WE NEED TO ATTRACT MORE TALENT INTO THE INDUSTRY AND RAISE AWARENESS OF IT. EVEN TODAY, PEOPLE FALL INTO THE INDUSTRY RATHER THAN INTENTIONALLY HAVING IT AS A CAREER PATH.'**



# OZGUR DUZGONOGU

HEAD OF ENGINEERING AT TELEHOUSE EUROPE

I would suspect that for many organisations the 15 per cent increased cost figure cited by Turner & Townsend is in fact higher. Not only is the industry witnessing price rises associated with the purchase of materials and equipment, but also increased delays in delivery. This is creating additional programme risks. What used to potentially take eight months to arrive may now take up to 12 months, with data centre organisations likely to be purchasing equipment from overseas in North America and Europe.

This development is causing major delays across entire build projects. Further costs are then incurred as designers, contractors and other supply chain partners need to continue to be paid across those extra months as the project rolls on. The total budget then rises above the amount set by management teams at the outset.

Supply chain disruption was a trend that began during the Covid-19 pandemic and has continued since. What the industry needs to do now to reduce this pressure is work closely with designers, contractors, procurement teams and preferred suppliers from the beginning of the design process.

What this means in practice is that procurement teams, for example, will need to complete orders from manufacturers

earlier in the design process to try and reduce the lead time to delivery. This will help to keep delivery delays to a minimum. Taking these steps will also provide

greater assurance to contractors when they come on board to define the construction process. Every detail will need to be captured as soon as possible to ensure that construction project timescales can be met and data centre facilities opened to customers at the soonest date.

People working across these disciplines need to have the right skills to navigate delays and disruption. Picture a project where multiple data centres are being built in locations around

the globe. It's up to organisations to ensure that they have those key skills in each location to keep the project on track.



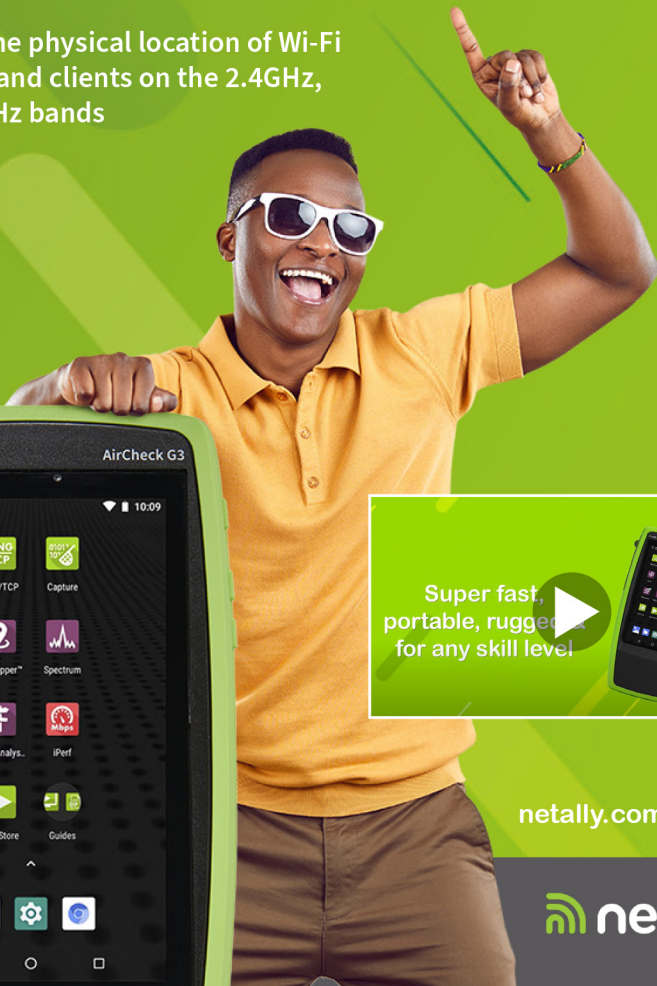
**'I WOULD SUSPECT THAT FOR MANY ORGANISATIONS THE 15 PER CENT INCREASED COST FIGURE CITED BY TURNER & TOWNSEND IS IN FACT HIGHER. NOT ONLY IS THE INDUSTRY WITNESSING PRICE RISES ASSOCIATED WITH THE PURCHASE OF MATERIALS AND EQUIPMENT, BUT INCREASED DELAYS IN DELIVERY.'**

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# STEPHEN BOWES-PHIPPS

SENIOR DIGITAL INFRASTRUCTURE CONSULTANT AT PTS CONSULTING

I've spent a lot of time this year looking at construction schedules, critical asset procurement timelines and talent shortages. Data centre construction has experienced double digit compound annual growth rate from the mid-2000s onwards.

The building of capacity worldwide is relentless and, apart from power related constraints in certain countries and regions, looks to continue for the foreseeable future. It is now expanding into the so-called Tier 2 regions such as Milan, Madrid, Warsaw, etc. There are essentially two drivers of growth for this – hyperscaler demand and the digitisation agenda.

Growth is unabated but we see the hyperscalers preferring certain data centre providers over others. Construction is increasingly speculative in order to attract this market.

With the digitisation agenda, enterprises are consolidating much of their IT estate on a hybrid paradigm of cloud and on-premises/colocation. However, ask any data centre consultant how many full data centres they see and the answer is likely to be very few. Whole data halls are emptying and cabinet space demand is falling, with much of the business moving to cloud providers, which generally provide capacity with far greater consolidation of processing and storage.

The sector continues to experience

delays, where sites are acquired but construction is yet to start (until they've signed an anchor tenant). Build schedules have needed to adapt – lead times for critical assets have required general contractors and data centre owners to place orders long before construction

begins, to be certain that they will arrive on time. Another strategy is to transfer assets from one location to another until the new ones arrive – only possible of course if you own multiple locations within a country/region.

I know of one data centre provider, sensing

that they may have an issue recruiting talent, signing an arrangement with a facilities management company to manage and run their data centres until they can recruit. Costs for recruiting the right people are escalating and is a direct result of our systemic failure to attract sufficient talent into the industry.

**'I KNOW OF ONE DATA CENTRE PROVIDER, SENSING THAT THEY MAY HAVE AN ISSUE RECRUITING TALENT, SIGNING AN ARRANGEMENT WITH A FACILITIES MANAGEMENT COMPANY TO MANAGE AND RUN THEIR DATA CENTRES UNTIL THEY CAN RECRUIT.'**





## JOE MCCAFFREY

MANAGING DIRECTOR AT DUKE MCCAFFREY

Historically low interest rates, high levels of productivity and availability of resources within the construction industry gave it an unprecedented chance for growth. However, 2022 has brought about a complete reversal of fortunes and a stark movement of inflation from as low as one per cent in 2020 to 6-7 per cent in 2021 and 2022, taking many by surprise.

As a standalone issue inflation is indeed only catching up on years of low increases. However, there are other challenges that our industry faces.

While global banks are announcing increased interest rates and preparing us for the long haul of currency fluctuations and volatility, in the shorter-term this may quell inflation but, in fact, could adversely affect the long-term profile of bespoke investments.

This, combined with an energy crisis, Brexit, ongoing covid issues and supply chain issues with materials delay and shortages, have dealt us a hand like no other. As an industry, we are, however, exceptionally resilient to these issues and the speed and scale of adaptability has been remarkable. Engineering has come alive and collaboration is born again. Our industry is finding solutions to alternative fuel sources for main and back-up power generation to handle the energy crisis. Hydrogen and gas power generation on-site is now being implemented on hyperscale sites.

We are developing off-site construction techniques at a faster rate than ever to deal with supply chain issues, with modern methods of construction leading the charge. This is bringing higher levels of quality and speed to construction sites. We are attracting talented individuals from other technology sectors who see the scale of our challenges and want to be part of the solution to deal with the endless demand for data. With a spirit of collaboration between colocation providers and end users, we could be part of the new solution in turning

the somewhat negative image of heavy energy consumers into a positive.

In my view, we cannot keep building big industrial warehouses forever. It is now time to re-use, recycle and refurbish existing facilities, saving all the expensive steel and concrete, and install the latest of digital technology. This will reduce capital and operational expenditure, as well as carbon emissions.



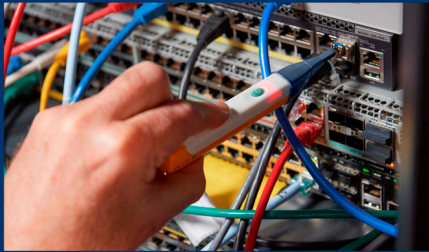
**'WE ARE ATTRACTING TALENTED INDIVIDUALS FROM OTHER TECHNOLOGY SECTORS WHO SEE THE SCALE OF OUR CHALLENGES AND WANT TO BE PART OF THE SOLUTION TO DEAL WITH THE ENDLESS DEMAND FOR DATA.'**

# FiberLert™ Live Fiber Detector

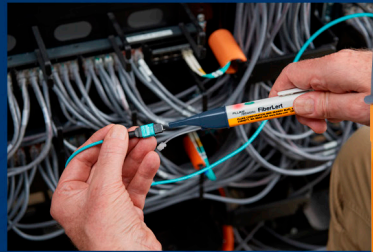
Priced and sized to fit every pocket

Stop guessing. Quickly verify fiber activity, polarity, and connectivity with the FiberLert™ Live Fiber Detector.

Just place in front of the fiber end face or port and a light and tone indicate an active fiber—no setup or interpretation required.



Is this SFP working?



Is this trunk live?



What's the polarity?

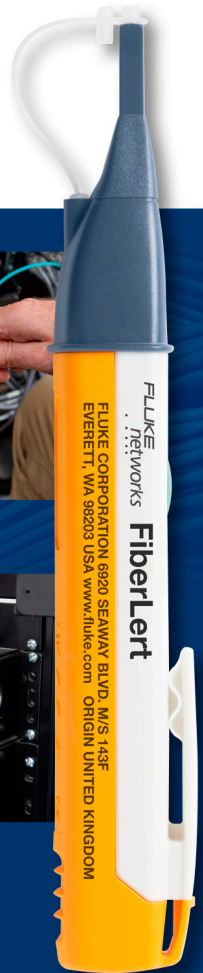


Is this port in use?




Stop guessing.  
Get FiberLert

[www.flukenetworks.com/fiberlert](http://www.flukenetworks.com/fiberlert)



# The advantages of small diam

For over 20 years Leviton has been a leader in the design and manufacture of sma

 In 2007, Leviton became a patent holder in small diameter cable, demonstrating the company's drive to innovate and lead the industry in twisted pair cable technology. Smaller diameter cable has many advantages, enabling a variety of IT managers and directors to better manage their networks, without sacrificing performance or bandwidth needs.

## Key points

Smaller diameter cable has three main advantages:

- **Smaller diameter cable improves cable management**

It translates to a higher density of cable within cable management trays or baskets. Higher cable density in cable containment enables the use of less or smaller containment. This reduction in containment reduces cost, improving return on infrastructure investment.

- **Smaller diameter cable helps improve airflow**

Airflow is critical to keep active equipment cool in high density applications like data centres. Smaller

diameter cable creates more airflow in data centres, allowing for cooler conditions and greater energy efficiency.

- **Smaller diameter offers better space utilisation**

Smaller diameter cable supports enterprise IT directors who need to balance increased bandwidth requirements with day-to-day needs like reducing clutter and accommodating tighter spaces. .

## Made to perform

To manufacture smaller diameter twisted pair copper cabling without performance loss, Leviton developed Precision Twist Technology. This process precisely controls the cable's twist, enabling high performance in a much smaller form factor.

Leviton has created a variety of small diameter solutions, such as the industry's smallest family of Construction Products Regulation (CPR) rated U/FTP zone cables, specifically design to enable high density applications with shorter channel requirements, for example, in data centres. The Category 6A small OD 28AWG patch cords have a 4.7mm outside diameter, and premier performance Category 6A UTP

SST cable has an incredibly small outer diameter of 6.9mm.



# meter cabling



all diameter cable

## World class

The Category 6A UTP SST cables form part of Leviton's new MILLENNIUM™ global Category 6A systems. These global systems allow network managers to streamline their networks throughout the regions they are deploying in. SST is featured in these MILLENNIUM™ Category 6A systems:

- **ATLAS™-X1 SST**

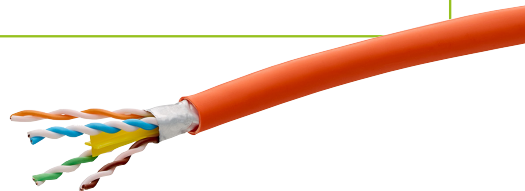
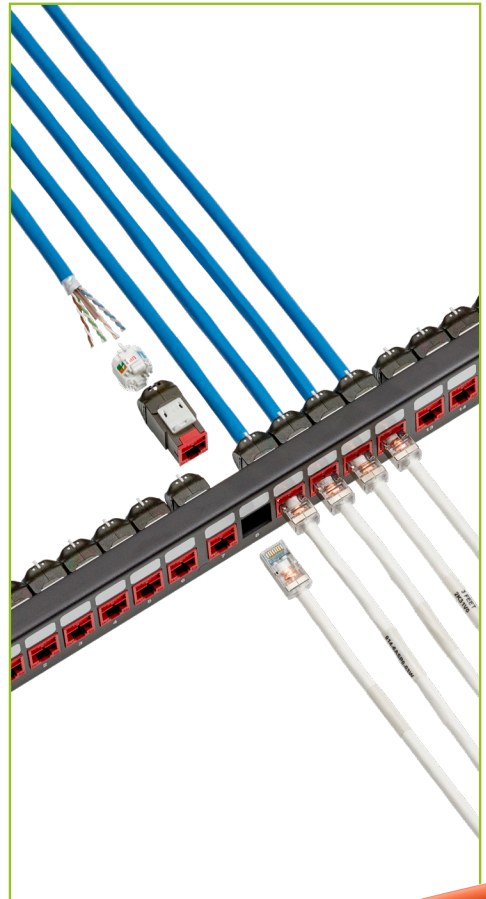
The premier global Category 6A UTP structured cabling system features high performing ATLAS™-X1 connectors and SST cable, ideal for mission critical applications such as public safety, automotive, healthcare, data centre, defence and finance where reliable high performance is required – and downtime is not an option.

- **EXTREME™ SST**

The enhanced global Category 6A UTP structured cabling system features EXTREME™ connectors and SST cable, ideal for enterprise, government or smart building applications where time-tested connectivity and cabling provide performance reassurance for network managers with an eye on emerging technologies and capabilities.

**CLICK HERE** to learn more about Leviton's innovative products.

[www.levitonemea.com](http://www.levitonemea.com)





## Mayflex to distribute AVA Security from Motorola Solutions

Mayflex has signed a distribution agreement with AVA Security. AVA Security is owned by Motorola Solutions alongside Avigilon, IndigoVision and Pelco, which are also available from Mayflex. Customers can see the AVA Security solution in action at the newly created Mayflex MTECH demonstration suite in Birmingham and at its office in London.

AVA Security provides a scalable, intelligent, cloud based security system that helps you gain real time visibility and



insights from anywhere. Simon Steer, security director at Mayflex, commented, 'AVA Security is a truly innovative cloud solution that we feel has huge potential due to the rapid growth of 5G and general improved internet speeds and coverage. With its advanced analytics and ease of install, the AVA Security solution provides a serious alternative to current systems on the market and can also be

integrated with legacy cameras so that you can take advantage of the revolutionary artificial intelligence capabilities via a hybrid cloud.'

## Young entrepreneur unveils vision to become ICT giant

A teenage entrepreneur is aiming to shake-up IT and telecommunications by becoming an industry giant, as part of a disruptive consultancy service. Techgiant Workplace is spearheaded by 19 year old Oliver Taylor and promises access to whole of market solutions on a global stage, with rapid customer results normally within just a few days.

The ambitious youngster has developed a three year business plan based on annual revenues of over £5m, with further



L-R: Ian Taylor and Oliver Taylor

exponential growth planned to reach £20-£30m in just five years. He is being supported by his father and industry veteran, Ian Taylor.

Oliver Taylor commented, 'I accept there may be scepticism in some quarters, however, this is not some naïve pipedream. For me, too often the industry is inundated with copious amounts of sales hype and information overload. It's time to change that.'

# Leviton invests in solar energy to support its Scottish manufacturing facility

Leviton Network Solutions is making a £600,000 capital investment into solar energy at its Glenrothes manufacturing facility, further illustrating its sustainability commitments. The carbon neutral facility serves as Leviton's Europe, Middle East and Africa (EMEA) headquarters, where it manufactures high performance fibre optic and copper cabling and make to order pre-terminated cable assemblies.

The investment is part of a multimillion pound development project at the Glenrothes site, including new production equipment and a customer showroom. Ian Wilkie, managing director at Leviton Network Solutions Europe, said, 'The



ability to generate solar energy on-site will help us offset soaring energy costs in the UK and supports our commitment to reducing carbon emissions, developing clean, renewable energy and reducing our carbon footprint. Upon completion, the solar panels will help reduce the company's annual energy needs.'

## CHANNEL UPDATE IN BRIEF

Ivanti has appointed Michelle Hodges as senior vice president global channels and alliances, and John Beuchert as vice president global partner programs and strategy.

Cohesity has appointed James Blake as field chief information security officer (CISO) for Europe, the Middle East and Africa (EMEA).

Veeam has appointed Larissa Crandall as vice president of global channel and alliances. Crandall will draw on her vast industry experience to drive Veeam's 100 per cent partner driven ecosystem strategy, as it continues to accelerate its enterprise presence.

Superior Essex Communications has joined the Association for Passive Optical LAN (APOLAN) to support the education and adoption of optical fibre based networks.

# We've come a long way

Stuart McKay of Panduit looks at the latest developments in copper cabling technology and the impact of Single Pair Ethernet (SPE)



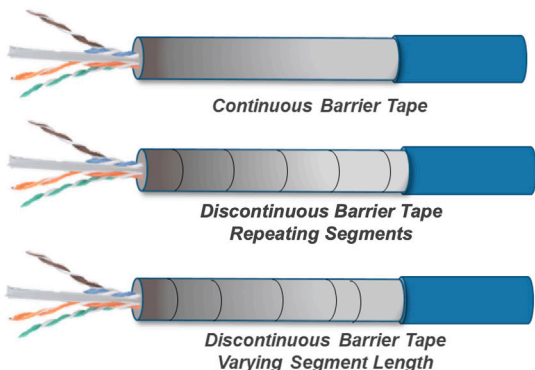
▶ The latest evolution in Ethernet data communications is extending its capabilities, with SPE allowing building automation systems and legacy industrial networks to migrate to Ethernet technology whilst delivering power and data to and from edge devices. And it's not simply office and plant floors that are benefiting, as data centre convergence continues, so do the demands placed on the physical infrastructure.

## DO THE TWIST

Twisted pair is enabling high speed data transport (HSDT) systems to provide a broad range of end to end solutions, offering maximum flexibility and control in data centre design, layout and deployment. Increasing demands on automation

infrastructure interoperability means that SPE is future proofing the enabling platform that allows the migration from various legacy networks to one universal physical Ethernet layer. Smart buildings and Industry 4.0 are a step closer to being delivered through a single technology from the edge sensor and plant floor to the corporate desktop.

SPE expands the resource of the internet of things (IoT). It provides the accelerator for organisations to migrate to Ethernet based operational technology (OT), offering common communications protocols compatible with the information technology (IT) network. This expansion encompasses end to end solutions including, switches, valves, cables and sensors.



‘Compared with terminating four pair cable to TIA-568A/B standards, field terminating one pair cable with an LC style connector is fast and simple.’

and



## LET'S GET PHYSICAL

Enterprises are increasingly enabling their physical infrastructures with up to 10Gb/s capacity to support smart buildings, consolidation, switch-up links for parallel processing and the convergence of backbone applications. Helping to drive this evolution is the deployment of Category 6A copper cabling. However, there can be challenges to using this type of cable including larger, heavier cables that restrict airflow and create stress on cable pathways.

The latest generation Category 6A cabling supports emerging technologies including voice over IP (VoIP), high definition video, power over Ethernet (PoE) and desktop virtualisation. Various suppliers' systems feature innovative and advanced connector compensation techniques in cable and patch cords. These include full 100m solutions, smaller cable diameter, optimal 10GBASE-T solutions and channel bandwidth performance above industry standards, as well as reduced cost of ownership. The small size improves energy efficiency and airflow management, allowing easier installation due to reduced diameter whilst supporting advanced PoE++ applications.

Panduit Cat 6A  
8 Cables

Competitor  
Cat 6A  
5 Cables



## SIZE MATTERS

Today there is a Category 6A cable solution that matches the size of standard Category 6 cable. This makes it the smallest and lightest Category 6A solution and therefore a like for like replacement for standard Category 6 cable. At 5.84mm diameter and 23AWG, it allows an upgrade to Category 6A to use existing pathways and cable trays, while its small bend radius offers more flexibility for in-situ furniture raceway and wall socket applications.

Size isn't everything, however, and it also guarantees headroom over the standard best in class alien crosstalk mitigation, as well as the level of electromagnetic interference immunity available in an unshielded twisted pair cable. This is achieved using patented varying segment length discontinuous barrier tape.

## EASY MIGRATION PATH

From office environments, telco rooms to data centres, highly engineered, end to end cabling infrastructure and connectivity solutions are transforming business and public organisations. Business critical data is now collected automatically and seamlessly flows to where it is needed. SPE has



become the standard across IEEE, IEC and TIA to become a foundation stone of the next stage of digitalisation.

The capabilities of SPE increase the opportunity for an all Ethernet networking solution, while advances are making the network easier for organisations to implement and manage. The single protocol network will provide for data transparency and increased security.

The reduced number of pairs used for communication allows for a reduction in cable and connector size, while the technology delivers both power and data to edge devices within a single connection. Integrated power and data eliminate the need for local batteries or power supplies and saves on transformers and circuit protection, while reducing installation time and simplifying maintenance.

### SINGLE LIFE

Compared with terminating four pair cable to TIA-568A/B standards, field terminating one pair cable with an LC style connector is fast and simple. Using common tools, an electrician or network engineer can perform an SPE termination in half the time taken for a four pair termination. It also utilises 18AWG cable, offering lighter, smaller cables. The SPE connector termination will also be less prone to error, minimising any rework. Given the decreased weight and size, more cable runs can be pulled together to simplify implementation.

The importance of data and power over SPE to remote devices cannot be overstated. The IEEE 802.3bu standard provides remote DC power over the SPE connection, called power over

data line (PoDL). PoDL is akin to PoE technology.

Ethernet networks are faster, offering enhanced techniques like time sensitive networking (TSN) and software defined networking (SDN). And while four pair Ethernet is already well established supporting higher levels in industrial networks, it is not cost effective for many lower value edge devices. SPE provides increased bandwidth, allowing higher data rates at the edge, with up to 10Mb/s transmission speeds up to 1,000m distance. Consider that against legacy protocols based on RS-485, where the link speed is only 31.2kb/s for the same 1,000m. That is 300 times faster!

### CONVENIENCE STORE

SPE's convenience, cost and relative functionality provide low cost access for either migration or incremental deployment of SPE within an industrial environment. The technology cost aligns with extending data capture capabilities out to multiple edge devices, where previous access was cost prohibitive.

Expansion of IoT is dependent on cost effective technology coupled with inexpensive sensors to drive scale. High volume automation products are likely to change first, while specialised legacy protocol devices will take longer to replace. Once organisations understand the market advantage they can



‘SPE has become the standard across IEEE, IEC and TIA to become a foundation stone of the next stage of digitalisation.’

gain from SPE, the implementation of associated devices will increase dramatically. This, in turn, will reduce complexity of the network as it converges on Ethernet.

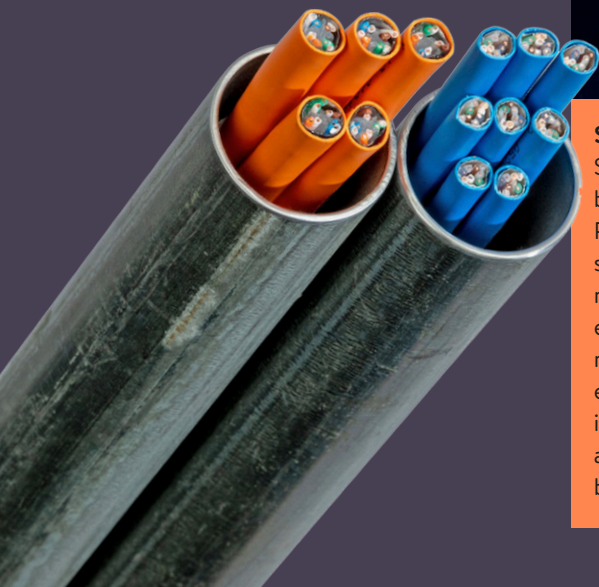
### MORE THAN MEETS THE EYE

Twisted pair Ethernet is a transformative technology for manufacturers and building and plant facilities. The manufacturing space and other market segments such as rail transportation and building automation will increasingly adopt SPE networks in the ensuing years. As for Category 6A, the need for higher bandwidth to incorporate the growing number automation systems and devices within buildings and organisations, as well as the end to end capabilities of high speed data transport, requires the capabilities that it offers to create effective and efficient data infrastructures. ■



### STUART McKay

Stuart McKay is a highly experienced business development manager for Panduit EMEA, defining and implementing sales strategy within the enterprise market segment. He has demonstrable expertise in the electrical and electronic manufacturing industry, and is skilled in enterprise and data centre infrastructure implementation. McKay is the author of a number of white papers on intelligent building and PoE infrastructure.



## HellermannTyton

HellermannTyton Connectivity offers a complete copper system as part of its LAN product range. In 2022, the UK manufacturer launched a brand new range of Category 6A and Category 6 products to simplify and streamline its product portfolio.

The Category 6A solution includes the Cat6A Jack, patch panels, cable and patch leads. The Cat6A Jack is designed to be toolless and does not require any specialist termination tools, while the Cat6A panels come in both flat and flat angled versions.

The new field termination plugs are used to create modular plug terminated



links (MPTL) on-site for direct connection to fixed location devices. The MPTL is also a toolless product, providing engineers with a quick, flexible on-site solution. Along with the Category 6A products, HellermannTyton has also introduced a new range

of Category 6 panels and outlets, along with a selection of LC and Euro modules, faceplates and backboxes.

All of the new products from HellermannTyton are supplied in plastic free packaging where possible, so the company can do its bit for the environment and planet.

**CLICK HERE** for more information.  
[www.htdata.co.uk](http://www.htdata.co.uk)

## Trend Networks

The enhanced PoE Pro tester from Trend Networks is the premier data cable verifier and PoE troubleshooter with cloud reporting. The updated PoE Pro connects to the new Trend AnyWARE Cloud app using Bluetooth to store tests on a phone. Users simply create a job folder in the app, connect the tester to a cable and send the result to the app. There is also an option to add a photo to each test result for complete documentation of the installation.

From here, users simply hit 'upload' to seamlessly transfer the results to the Trend AnyWARE Cloud web based test management system. The test results can then be organised into an intuitive folder structure, identifying the building, floor, room, rack and panel of each test, ready for high quality PDF reports to be generated. With access to detailed test reports, businesses can easily verify that technicians on-site have completed an installation correctly.

To find out more **CLICK HERE**.  
[www.trend-networks.com](http://www.trend-networks.com)



## Excel Networking Solutions

Excel Networking Solutions offers one of the market's most comprehensive ranges of copper cabling solutions, supplied in **100 per cent plastic free packaging**. Excel has now launched two new tools to help customers measure and promote their sustainability savings when they use Excel products.

Firstly, the **Plastic Free Packaging Calculator** allows users to add in the quantities of each product being used and instantly get an overview of the potential savings of plastic in kilogrammes. The

**second tool** provides Excel partners with a certificate to show how much single use plastic they have saved in any given year. This is perfect for use on their websites, or in any sustainability documentation that they need to create.

The full portfolio of

Excel's copper cabling products is available in the dedicated **Excel Copper Catalogue**. Alternatively, **CLICK HERE** for further details or call our sales team on 0800 757565.

[www.excel-networking.com](http://www.excel-networking.com)



The image shows a tablet displaying the Inside\_Networks website. The website features an article titled 'Emission impossible?' and a section for 'Zone Cabling for Intelligent Buildings'. A call to action box on the right side of the tablet reads: 'GET YOURSELF SEEN BY THE TIME YOU READ THIS YOUR COMPETITORS' ADVERTISEMENTS WILL HAVE BEEN SEEN BY OVER 23,000 READERS OF INSIDE\_NETWORKS. IF YOU WOULD LIKE TO PROMOTE YOUR PRODUCTS AND SERVICES AND MAXIMISE THE POTENTIAL OF YOUR ONLINE ACTIVITIES, CLICK HERE.'

FOR A FREE SUBSCRIPTION TO **Inside\_Networks** [CLICK HERE](#)



## Networks Centre

Purchasing copper and optical fibre network infrastructure products through reputable distribution channels such as Networks Centre gives businesses the opportunity to choose from a variety of brands to suit their specific installation needs.



Networks Centre stocks a wide range of products from multiple manufacturers, allowing businesses to compare features and price points. Furthermore, it provides superior technical support and resources to help businesses make informed decisions about their purchases.

Here is a **success story** that exemplifies this approach. For larger projects

Networks Centre can also flex its **extensive warehousing** to consolidate stock in

advance of delivery and smooth out lead times for project specific needs. This gives customers the opportunity to manage cashflows in line with the project timeline.

Overall, purchasing network infrastructure products through distribution channels offers businesses the opportunity to choose from a wide range of brands and find the best fit for their specific installation needs. This is with the added support and resources necessary to make informed decisions.

**CLICK HERE** for more information, call 01403 754233 or to send an email **CLICK HERE**.

[www.networkscentre.com](http://www.networkscentre.com)

## Comtec

Comtec, an ETC Group company, offers the most comprehensive range of branded copper cabling systems, with solutions from Draka, HellermannTyton, Molex, CommScope, Nexans and Siemon.

Together with our own proven, long established and price competitive Ultima solution, it means we have a cabling system to support every project and every budget. With options for Category 5e, 6, 6A, 7, 7A and 8 there is a copper cabling system to support even



the most demanding application.

Comtec offers everything required for your copper cabling installation including cables, patch panels, patch leads, POD boxes, work area outlets, cabinets and much, much more. With items available for free next day delivery and knowledgeable support staff, Comtec offers

the service you need to deliver projects on time and on budget.

**CLICK HERE** to view the range online.  
[www.comtecdirect.co.uk](http://www.comtecdirect.co.uk)

## Siemon

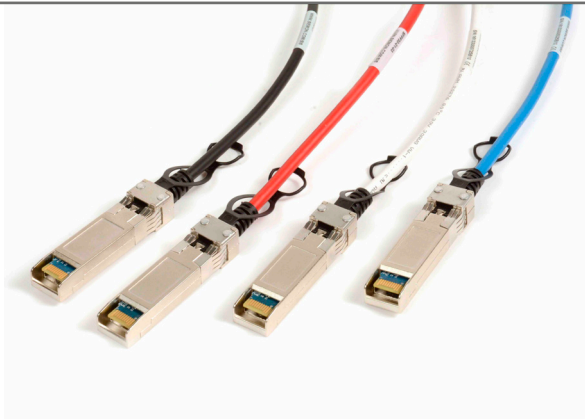
Siemon shines a light on how direct attach cables (DACs) continue to gain adoption in its new blog titled SFP DACs Bring Your Enterprise Server Speeds Well Into The Future. It highlights the benefits of high speed direct attach copper cables in top of rack (ToR) switch to server connections, where emerging technologies and real time applications continue to drive the need for higher speeds.

The blog provides an outlook on how server connection speeds will gradually move from current 1Gb/s or 10Gb/s to 50Gb/s in the near future. It also offers advice on selecting the right high speed DACs to best support these emerging speeds.

Requiring less power per port and

offering lower latency compared to alternative solutions, such as 10GBASE-T, DACs can provide the ideal solution for any future application where latency is a concern, or the flexibility of transceiver based structured cabling isn't required, and can deliver significant power savings in high port count environments.

To read the full blog [CLICK HERE](https://www.siemon.com).  
[www.siemon.com](https://www.siemon.com)



## MISSED AN ISSUE?

CLICK ON THE COVER TO READ MORE



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# Safety net

Christophe Hinet of Molex Connected Enterprise Solutions explains the importance of warranty programs and why there is no high standard without good discipline

▶ Structured cabling is essential to every company with a physical premises. Installing or upgrading it can be a significant expense, but as the current and future performance of an IT infrastructure has a direct impact on the performance of the business, it should not be thought of as an expense but an investment into a strategic asset.

## COMPARE AND CONTRAST

The difference between an expense and an investment is how well it pays you back over time – the longer the asset continues to perform as required, the better an investment it has been. Of course, businesses shouldn't stand still, and neither should their infrastructure be set in stone.

The architecture should be designed and installed with the long-term in mind. This covers two core aspects – potential future bandwidth and data requirements, and the physical durability of the installation. A well installed structured cabling system should last for decades.

## PROTECTING ALL PARTIES

We think of a warranty as a form of insurance designed to protect the end user's asset. However, a well designed and well executed warranty program should protect all parties involved. End users will be protected, because in the event of interruptions or outages, their costs are covered. With some warranties the vendor

will also provide the installers, meaning that the end users won't even have to take the time to find a professional to undertake the work.

Installers will be protected because if the original warranty application was properly evaluated and assessed, they will not be liable for rectification measures. In fact, in the event of a successful warranty claim, they might be paid by the vendor to put things right. The warranty approval process should serve as a safety net, to catch any potential issues that might have been missed by the installers.

Vendors will also be protected because the process of checking designs and verifying test results ensures a network is designed and built to a high standard. Preventing future issues helps maintain their good reputation with the end user and any other parties that were involved – consultants, project managers, builders etc.

## SPOT THE DIFFERENCE

Not all warranty programs are alike. As with any other form of insurance, the devil is in the detail. Knowing exactly what is, and what is not, covered is critically important.





Here are some of the elements to look out for:

#### • Warranty duration

Cabling warranties are typically offered for around 15-25 years. In reality, it is highly unlikely that a warranty claim will be made on a 20 year old cabling system. Buildings often get renovated when they change hands, or they might just be completely rebuilt. What the listed warranty duration does give you is an indication of how confident the vendor is in their system.

#### • Type of cover

A critical differentiator is the type of cover. A product warranty covers the performance of individual components, a system warranty covers the integrity of the installed system, while a system performance warranty promises the system

will continue to deliver the performance that was originally specified. An application assurance warranty assures that the system is able to operate any applications or protocols based on the relevant application or regional standards such as IEEE, ANSI, ISO/IEC and EN.

#### • Plain English

Dense, complex or overlong documents should not be acceptable. Terms and conditions should be clear and straightforward enough that anyone with a basic technical knowledge can make sense of them. There is no reason you should be unsure of exactly what the warranty covers.

#### • High standards

When a warranty application is being submitted, a large number of documents are given to the vendor. These include



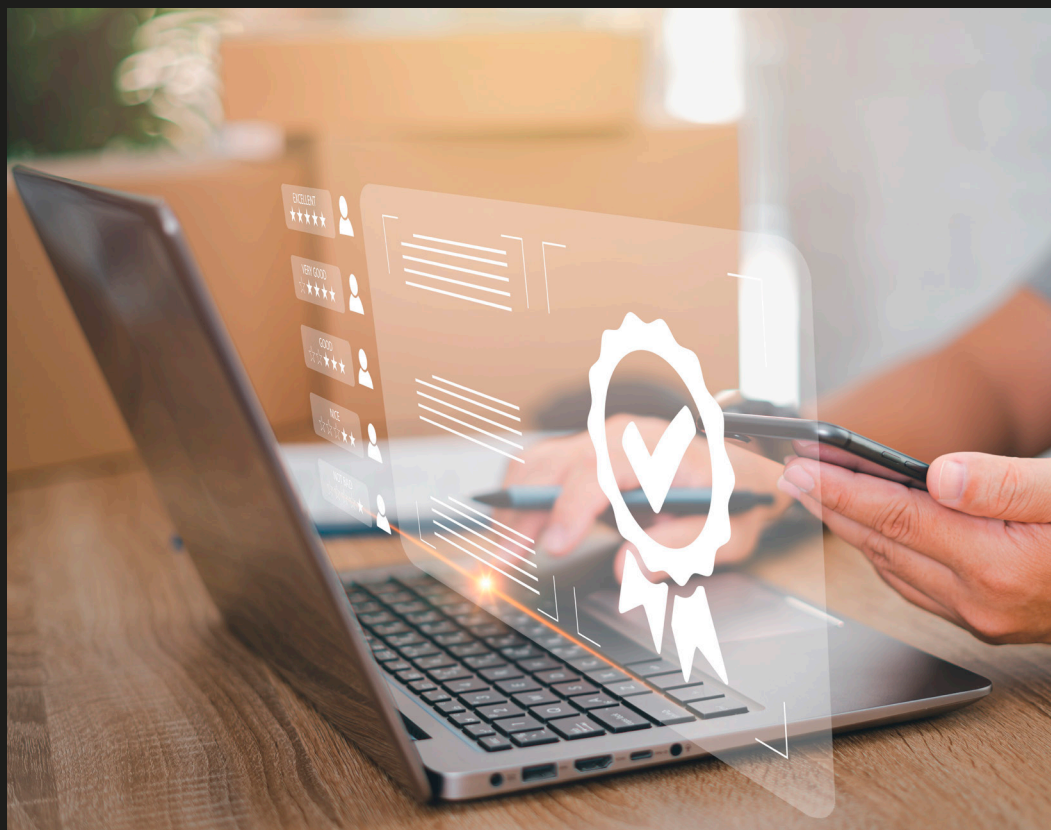
‘Not all warranty programs are alike. As with any other form of insurance, the devil is in the detail. Knowing exactly what is, and what is not, covered is critically important.’

drawings and calculations for the complete design, and test results of the installed architecture. Depending on the size of the installation there can be many hundreds or even thousands of test results.

With such a volume of data to collate, it would be easy to skip some steps or to make some assumptions to move the process along. The end user wants to move in and get set-up, and the installer wants to get paid. But due diligence is an essential part of the warranty approval process.

Every document or test result has been requested for a reason. If an installer doesn't understand the reason for a particular document, the vendor should be able to explain exactly what they are looking for and why. Test criteria may be based on regional applicable standards, but standards do not stand still and updates may have affected the pass/fail criteria. Some tests are mandatory, while others are only complementary.

Other information may be required



based on the vendor's experience – for example, detailed cabinet layouts will help speed the assessment process in the event of a warranty claim. Diligence in this process is what provides peace of mind for the end user, and what ultimately protects all parties.

## STRATEGIC RELATIONSHIP

The warranty submission and approval process can catch a certain amount of installation irregularities, but it can't cover everything. There are plenty of things that will never show up in test results.

Sending vendor representatives to personally review every site is one possibility, but this can easily add delays to project timelines if the vendor is busy. Another way to ensure quality of workmanship is for vendors to vet which installers they work with. Like other aspects discussed here, vendor certification benefits all three parties – the installers get free training, tools and additional technical support. Meanwhile, the vendor has access to a pool of installers whose quality of work they know they can rely on and the end user knows the installers have met the vendor's standards.

## COVERING ALL BASES

Ensuring a structured cabling system delivers value for money can be a challenge. To achieve this it is vital the system has adequate headroom to accommodate future technology, and that the warranty provides the right type of cover. Not

all warranties are created equal, but by ensuring high standards throughout the process, a good warranty will protect all parties involved. ■



## CHRISTOPHE HINET

As global pre and post technical sales manager, Christophe Hinet leads the Molex Connected Enterprise Solutions global technical support team. He has responsibility for coordinating, engaging and supporting collaboration within the global technical group. Hinet's strategic role sits squarely at the intersection of technical, sales, marketing, supply chain, product management, and research and development. He combines engineering skills, operations management and marketing expertise to support new business development activities.

# Quickclicks

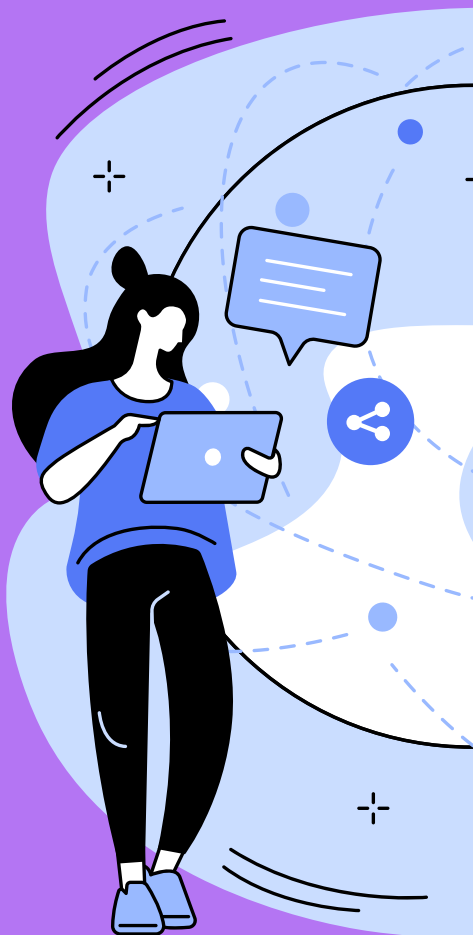
Your one click guide to the very best industry events, webinars, electronic literature, white papers, blogs and videos

**Corning Optical Communications** has published its 10-400G Structured Cabling Guide. [CLICK HERE](#) to download a copy.

**Axway's** 2022 Open Everything Strategy Survey asked nearly 1,000 IT leaders, architects and developers about the top issues that keep them up at night. [CLICK HERE](#) to download a copy.

Troubleshooting Performance In Healthcare Environments is a briefing document from **AEM**. [CLICK HERE](#) to download a copy.

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Options For Testing And Certification Of Fibre Optic Cabling is a white paper from **Trend Networks** that explains the two tiers of field certification and different test limits to determine pass/fail performance. [CLICK HERE](#) to get a copy.

Strengthening The Human-Centric Core Of Industry 5.0 is a survey by **Boyden** that examines how organisations can thrive in a complex world of risk. [CLICK HERE](#) to read it.

Understanding The Tools And Trends For Smarter Network Management is a survey report from **NetAlly**. [CLICK HERE](#) to download a copy.

How IT Leaders Are Responding To Energy And Sustainability Demands is a report from **Telehouse** that surveyed 150 UK IT decision makers within enterprise organisations to gather their opinions. [CLICK HERE](#) to obtain a copy.







# Alive and kicking

Darren Watkins of Virtus Data Centres looks at why the colocation data centre sector is thriving and the five things to consider when choosing a provider

46

▶ A few years ago, some people were proclaiming that ‘colocation is dead’, but it is clear that the predicted demise never happened. In fact, the opposite has transpired and analysts across the industry predict continued growth due to factors such as the coronavirus pandemic, everything as a service and 5G changing workforce operations and business requirements for secure, low latency and high powered technology. According to Straits Research, the global data centre colocation market was valued at \$£50,335m in 2021 and is expected to grow to \$159,852m by 2030.

## TIME TRAVEL

But colocation is not the same landscape as it was 10-15 years ago. 5G, in particular, is enabling advances in augmented reality, virtual reality and artificial intelligence

solutions for businesses and individuals. These technological advancements are a catalyst for change and network transformation, as well as upgrades in computing and wider technology infrastructure, causing enterprises worldwide to move their on-premise data centre operations to colocation providers.

Colocation providers have become the preferred choice for enterprises to host their data centres versus building and maintaining their own. There are many reasons for this, but almost all of them come down to the simple fact that enterprises want to get out of the data centre business because it’s costing them a fortune and hindering their own digital transformations.

## MAKING A MOVE

Colocation is designed to provide

maximum flexibility with total transparency. It requires the same skills needed to run servers in-house, but the provider takes responsibility for the physical environment, the state of the network cables, power availability and physical security. Even the level of cleanliness is their responsibility.

Many organisations have found that by moving on-site IT infrastructure to a colocation provider they can reduce costs, scale up or down when needed, benefit from more uptime and mitigate security and compliance risks – all without any detrimental effect on performance. And today's high speed network connections between a company's premises and its data centre ensures rapid access to servers and storage, as if they were installed on a customer's own site.

## FINANCIAL TIMES

Colocation offers an attractive business model for enterprises. Over the past couple of years, circumstances have led organisations to implement flexible working policies, both in terms of working hours and location, providing the opportunity to reimagine how work is done and redesign office space in innovative ways. In many cases this has led to downsizing and moving on-premise data centres or server rooms into colocation premises has enabled businesses to free up physical space for more people, more storage or more meeting areas. This, in turn, means organisations are able to save on the costs of expanding or relocating to new premises.

Businesses rely on critical applications and core software systems in order to operate at peak performance. But it's not as simple as it appears. Power outages happen, uninterruptible power supply (UPS) back-ups run dry, servers can fail

and technicians may fall victim to human error. By collocating to a shared data centre, organisations benefit from a professionally managed environment and an expert team whose job it is to keep facilities up and running.

## ENVIRONMENTAL BENEFITS

Data centres need power, but colocation providers offer substantial sustainability benefits. Not only are colocation providers committed to working towards environmental sustainability, shutting down thousands of independent, on-premises data centres and consolidating them in new, modern infrastructure facilities can result in a dramatic reduction of an organisation's carbon footprint.

But what's important when it comes to choosing a colocation provider? Here are the top five things to consider:

### • Location

Businesses today expect low latency and reliability from colocation providers, with zero tolerance for downtime. Smart providers chose optimal locations combining ample space and power for hyper-efficient data centres with low cost availability of broad and rich connectivity. These facilities are far enough from city centres for disaster recovery purposes and avoid expensive city centre premiums, but they are close enough to deliver the application performance that local and international businesses demand.

### • Security

Security is one of the primary reasons that some large organisations have traditionally preferred to build their own data centres. As this is becoming financially unviable, providers must demonstrate that the security of their customers' IT

infrastructure is one of their highest priorities. Both external and internal security are paramount.

#### • Connectivity

Businesses use public clouds for access to huge amounts of data and massive compute capability for on demand computing when needed, or simply for storage. However, organisations still maintain their own private clouds as a way of processing and adding value to the sensitive data that they collect and to handle complex computations.

Connectivity to the right carriers is critical for cloud computing and colocation providers are designed to be connected to carriers. Those data centres that own a fully diverse optical fibre duct infrastructure make every other possible carrier or related supplier just a cross connect away, providing limitless connectivity, cost effectively.

#### • Flexibility

Overly rigid long-term data centre contracts are no longer palatable for many global cloud and digital organisations, where the fast pace of business and technology can require them to change

direction quickly. Flexible contract options provide true commercial and technical agility, which benefits enterprises. Providing the ability to flex the contracted power and space and time of the service at any point allows businesses to take



full advantage of the differing costs per compute as they increase or decrease IT density.

#### • Total cost of service

Committing to a colocation contract that enables organisations to scale up or down according to their needs gives businesses the ability to fix and control costs for the term of that contract. Today, one of the biggest concerns for organisations



‘Organisations that have on-premise data centres or server rooms are limited in their ability to protect themselves from energy price increases. Moving into a colocation facility can help to control these costs.’



is increasing operating costs – in particular rising energy prices.

Many colocation providers have already secured favourable fixed energy prices with providers, which means that customers often choose to sign-up to a fixed contract term. This enables them to plan ahead knowing what the monthly cost will be to their business and is a big advantage at a time when energy costs are fluctuating (mostly upwards). Organisations that have on-premise data centres or server rooms are limited in their ability to protect themselves from energy price increases. Moving into a colocation facility

can help to control these costs.

### TAKING THE ADVANTAGE

Colocation clearly offers compelling advantages in terms of IT management and business continuity. However, colocation providers aren't complacent. They are continually adapting to emerging technologies to be able to support the scale and functionality needed by today's businesses. Responding quickly

to new trends and changing customer requirements with resilience, agility and commercial innovation is no longer optional, as businesses require support services to manage hybrid environments and improve latency. ■



### DARREN WATKINS

Darren Watkins is managing director at Virtus Data Centres. He began his career as a graduate military officer in the Royal Air Force before moving into the commercial sector. He has over 20 years of experience in telecommunications and managed services gained at BT, MFS Worldcom, Level3 Communications, Attenda, Colt and euNetworks.



## Excel Networking Solutions

Excel Networking Solutions' **Environ Co-Location (CL) racks** are designed specifically for applications where secure, lockable compartments are required, such as in a cloud deployment or colocation data centre facility. The range is based on the proven and popular Environ ER series chassis and features:

- 600kg load bearing
- A choice of two or four compartments
- Availability in 42U or 47U heights
- A choice of 600mm or 800mm widths
- Segmented vertical cable management
- A choice of black or grey
- Mesh compartment doors
- Brush strip cable entry in the roof and base
- Combination locks on all doors with unique keys



- Removeable side panels with unique keys
- Top and bottom cable entry to each compartment
- Jacking feet and castors that can be fitted simultaneously

When installed by an **Excel partner** as part of a total Excel installation, they can be covered by a **25 year warranty**. Environ – safe and secure, by design.

**CLICK HERE** to find out more.  
[www.excel-networking.com](http://www.excel-networking.com)

## Proximity Data Centres

Proximity Data Centres' high capacity, scalable and extremely resilient regional edge colocation data centres enable enterprise businesses, content delivery networks (CDNs), cloud and immersive technology providers to maximise competitive advantage through reduced latency, lower data transit costs, enhanced operational efficiency, and more responsive applications and services.

Meeting individual customer requirements – from specific regional data centre services to multi-site rollouts – Proximity's 10 highly connected data centres serve major conurbation areas in the North, North West, Midlands,



Thames Valley, South West and South Wales. Further UK sites will be added to the portfolio during 2023 in line with Proximity's goal of reaching 95 per cent of the UK's population.

Full on-site support, transition and onboarding is provided, along with server migration services and a straightforward contract with a single set of service level

agreements covering one or multiple sites. ISO 9001, ISO 14001 and ISO 27001 compliant, all of Proximity's data centre grid electricity is sourced from 100 per cent renewable providers.

For more information call 03300 250138 or to visit the website **CLICK HERE**.  
[www.proximitydatacentres.com](http://www.proximitydatacentres.com)

## EDP Europe

ServerGuard from EDP Europe is a newly developed in-rack physical security solution that enables clients to achieve or exceed compliance standards. Originally designed for a client needing to secure and manage access to servers that were handling highly sensitive encryption keys, ServerGuard allows customers to provision dedicated access control for individual servers or groups of rack mounted equipment.

ServerGuard features a custom engineered steel subframe with front and rear electronic access control, and a proximity card and biometric reader offering dual authentication. A further option for adding



CCTV is also included within the design.

By physically securing individual systems within a rack, ServerGuard enables clients to achieve their security and compliance

objectives by having full visibility, control and an audit trail of activity across their mission critical systems. ServerGuard can be tailored to an individual customer's needs, manufactured and supplied fully assembled ready to plug and play within a short lead time.

For more information call 01376 510337, [CLICK HERE](#) to send an email or to visit the EDP Europe website [CLICK HERE](#).

[www.edpeurope.com](http://www.edpeurope.com)

## Vantage Data Centers

Vantage CWL1 is Europe's largest and most powerful colocation data centre campus with a 2,000,000ft<sup>2</sup> gross floor area and 148MW via a private 400kV SuperGrid connection that is 100 per cent renewably sourced.

Size, power and scale economies, combined with dense high speed connectivity including diverse optical fibre routes and direct connections to public cloud providers, makes CWL1 an affordable, future proof and low latency out of town solution for customers of all sizes – from hyperscalers and global enterprises to public sector organisations and growing



small to medium sized enterprises (SMEs).

Conveniently located in South Wales, close to motorway links and airports, CWL1 caters for all colocation and hosting requirements, offering highly secure and resilient environments including high density cloud and high performance computing. On-site services include server migration and installation, remote

hands and 24/7 engineering support, plus high quality conference and meeting facilities.

To find out more call 01633 988021 or [CLICK HERE](#).

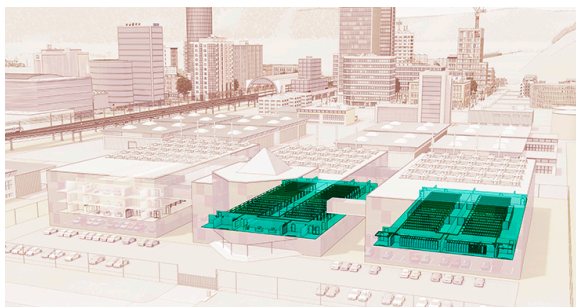
[vantage-dc-cardiff.co.uk](http://vantage-dc-cardiff.co.uk)

## Huber+Suhner

Do you want to make your white space work harder and stay ahead of what your customers need?

With increasing digital transformation and data hungry applications, many companies have turned to outsourcing precious time and resources through the use of colocation data centres. This demand for fast, reliable and customisable set-up means there is now a huge requirement to maximise the white space within colocation data centres.

Huber+Suhner provides optical fibre connectivity solutions to build and maintain an immaculate data centre, which ensures maximum uptime for your customers and quickly scales to offer space to grow. A wide range of reliable and high quality



connectivity solutions delivers optimal performance today and for many years to come. This, coupled with modular and high density structured cabling solutions, enables growth and helps you make the most out of every inch of white space.

**CLICK HERE** to find out more about our colocation offering, or **CLICK HERE** to contact us.

[www.hubersuhner.com](http://www.hubersuhner.com)

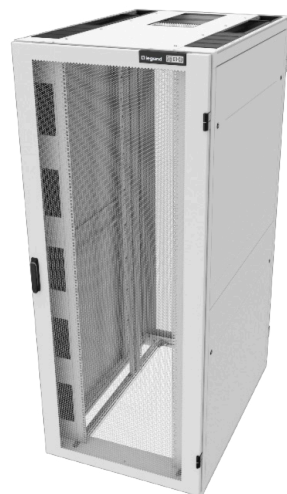
## Legrand

Legrand's Nexpan is flexible, sturdy and secure for housing data centre devices. It provides the scalability and future proof architecture needed to support the rise in digital transitions, internet of things (IoT) connectivity, 5G services, edge computing and artificial intelligence (AI) applications. The Nexpan platform is built on four fundamental values:

- **Smart.** The cabinet's interior is made to be adjusted in three dimensions, with a completely modular roof. This intelligent design provides more space and flexibility for managing top of rack infrastructure.
- **Solid.** The design offers lightweight, solid doors in a frame that easily bears the IT equipment load, with a fully integrated locking and cabling system that is unique to the marketplace.

- **Secure.** Nexpan provides the highest level of security by interfacing with the most secure electronic door locking platforms.

- **Sustainable.** The cabinet is designed to ensure optimal airflow management, resulting in a best in class, energy efficient solution.



To find our more **CLICK HERE.**  
[www.legrand.us](http://www.legrand.us)

## Siemon

Siemon has produced a data centre application and product guide to provide data centre professionals with information for selecting, designing and deploying business critical IT infrastructure in data centres.

Data centre interconnect (DCI) technology, distributed cloud and full mesh switch fabric architectures in highly virtualised environments result in the need for higher density and more complex optical fibre links. Siemon's guide highlights a range of specialised fibre solutions including high density fibre enclosures and smaller

diameter cables and assemblies that help manage these critical connections in tight data centre spaces.

As transmission speeds migrate to 400/800 Gigabit Ethernet, the guide also highlights recommendations on how to migrate to high density fibre channels utilising existing infrastructure. Also showcased within the guide is Siemon's portfolio of data centre infrastructure solutions

including Category 6A shielded copper cabling, pre-terminated and high density fibre patching solutions, and automated infrastructure management (AIM) for remote monitoring.

To find out more [CLICK HERE](https://www.siemon.com).  
[www.siemon.com](https://www.siemon.com)



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# A close call

John Hall of Proximity Data Centres explains how edge colocation is solving the latency conundrum and bringing data nearer to end users

▶ Demand for colocation continues to grow. According to Custom Market Insights, colocation revenue is expected to reach \$57.2bn in 2022 and around \$131.8bn by 2030. Enterprise businesses are realising the cost, productivity and security benefits of moving their IT workloads – either in part or entirely – into colocation data centres.

## MODEL BEHAVIOUR

Apart from offering a secure and reliable base from which to run their IT or host private or hybrid cloud solutions, colocation customers avoid major capital expenditure (CapEx) by funding their immediate and future IT requirements from operating expenditure (OpEx). The colocation model effectively allows the rental of rack space along with the critical infrastructure required such as power, cooling and diverse network connectivity.

Space can be taken in shared or private

data halls and may be scaled up or down, depending on computing and cloud needs. This avoids being stuck with an in-house data centre that is either too small or too large.

Combine these benefits and attributes with high resilience and security for ensuring 24/7 IT availability, and colocation, for many, is a compelling proposition. Furthermore, the ongoing risk of power shortages makes a modern colocation facility even more attractive in terms of the back-up and failover measures in place to mitigate unplanned downtime. And if the worst should happen, tried and tested disaster recovery and business continuity programmes are in place for bringing systems back online as quickly as possible.

## FULL SPEED AHEAD

In a growing number of use cases – driven by cloud, software as a service utilities and





e-commerce – it is increasingly evident that enterprise users and modern software now require lower latency to achieve faster response times. It is also essential

to delivering 5G, artificial intelligence, machine learning, virtual and augmented reality, and a host of other internet of things (IoT) enabled technologies and



‘In the new edge computing paradigm, where low latency is a priority, data centre location must be much more precise. Edge data centre operators are therefore locating sites in proximity to large conurbations and densely populated cities.’

applications such as gaming, remote surgery, smart factories and cities, as well as driverless vehicles.

Faster data transfer between devices and user sites is becoming essential for ensuring a real time/near real time experience. Cloud service providers, content delivery networks (CDNs) and mobile operators have similar needs and concerns.

These requirements are driving edge computing, where compute resources are decentralised to bring data and services much closer to users and devices. Mission critical applications are securely contained within private cloud environments, closer to the network edge with only data that is non-time critical sent back to the public cloud. In turn, this is giving rise to a new category of edge colocation data centres. Regionally located, they act as the latency busting missing links between centralised data centres and the network edge.

### PRECISION LOCATION

In the new edge computing paradigm, where low latency is a priority, data centre location must be much more precise. Edge data centre operators are therefore locating sites in proximity to large conurbations and densely populated cities.

The more strategic these are in terms of location, the better for carriers and internet service providers (ISPs) looking to connect and target new customers. Access to local internet exchanges and public cloud infrastructure via gateways are further considerations for

operators, as are the number of hops and where on the network an edge colocation site will be situated. All these factors will have an impact on a facility’s suitability to meet specific latency use cases and help reduce data transit costs by eliminating the need to send everything back to centralised clouds – often hosted in data centres hundreds of miles away.

### FOLLOW THE LEADER

Edge colocation operators must therefore follow the optical fibre, partnering closely with fibre network providers to ensure they’re on the same page. Liverpool is a useful example of how targeted regional fibre network infrastructure can combine with strategic colocation data centres. There is a population of 1.5 million and over 37,000 active businesses that need access to computing, applications and IT services hosted locally.

A resilient 212km fibre backhaul network is being built by ITS, connecting three transatlantic cables and major economic clusters in each of the six local authority areas. Once completed, the network will enable carriers and ISPs to provision gigabit capable broadband services to local authorities, businesses and consumers. In this scenario, edge colocation facilities in Liverpool and Chester will serve as strategic points of presence (PoP) for providers such as Zayo.

### FURTHER CONSIDERATIONS

In the rush to move data much closer

to users, customers and devices, it is important not to overlook a potential edge data centre's overall credentials. Network latency is obviously key, but so too are factors such as uptime service record, physical and cybersecurity, disaster recovery and business continuity contingencies. Carbon credentials and energy efficiency are further considerations.

Power availability remains a priority for keeping pace with the future requirements of customers, not to mention the more immediate needs of power hungry hybrid cloud and high performance computing (HPC) users. An immersive technology application, such as a 3D virtual reality modelling simulation, will demand considerable power to rack, bespoke cooling and low latency connections. This also brings into focus the level of engineering competence that needs to be on-hand for configuring and supporting such complex environments.

### MIGRATION PATTERN

There are also logistical issues, not least when installing new servers or moving existing ones from elsewhere. This may need to be done quickly and with minimal downtime, and so will most likely require specialist support. Therefore, an operator that provides door to door migration services could be a major benefit, along with the ability to carry out pre-production testing in the data centre to ensure everything works prior to launching.

Straightforward service level agreements and single contracts covering all edge colocation sites in an operator's portfolio will save management time and complexity. Dealing with several smaller data centres owned by different suppliers, all with various terms and conditions, brings hidden costs.

### MOVING ON UP

The colocation market is experiencing strong growth. However, operators need to constantly adapt to meet the changing needs and priorities of customers. With this, strategically located edge colocation data centres are emerging to complement decentralised edge computing models and remove distance related network traffic bottlenecks and response times. ■



#### JOHN HALL

John Hall is managing director colocation at Proximity Data Centres. Responsible for leading customer engagement, he has more than two decades of experience managing sales, marketing and commercial functions in the data centre, IT outsourcing and telecoms industry.



## North secures contract extension with the British Library

Visitors to the British Library's flagship St Pancras premises will now enjoy improved internet connectivity thanks to Wi-Fi 6

technology implemented by North. The move to an upgraded Wi-Fi system is part of a £1.7m contract extension for North from the British Library – a partnership which has been

ongoing for more than eight years.

North has replaced 126 Wi-Fi access points at the St Pancras building. This will allow for faster internet connections under next generation Wi-Fi 6

technology for higher speed and superior performance.

The state-of-the-art upgrade will help to future proof the venue's Wi-Fi network, with North also ensuring that hardware devices and software are updated to the best in class technology available. In

addition to the connectivity improvements, North is also overhauling the British Library's core Wi-Fi network infrastructure to ensure that all equipment exceeds modern day business standards.



## BASEC unveils the first Middle East and Africa specialised medium voltage laboratory for cable testing

BASEC has opened its doors to the first Middle East and Africa specialised medium voltage laboratory for cable testing in Dubai.

The laboratory will significantly increase BASEC's scope of testing to further complement the recent investments made in data communication, compound analytics testing and support manufacturers to verify competitive designs and raw materials to ensure that quality is not compromised.

This facility continues BASEC's roadmap in becoming the preferred testing and

certification partner to the worldwide cable industry. It builds upon other recent investments to add capability, technology and global reach.

BASEC has been working in partnership with cable manufacturers for over 50 years and has a strong heritage of being the mark of quality and safety. The investment and extension into medium voltage testing is another milestone on this journey. The Dubai facility is strategically located to

support the global market and give end users and manufacturers confidence that by using the BASEC mark they can be assured of guaranteed quality and safety throughout the supply chain.



# Nutanix enables JM Finn to lower operational costs and reduce its carbon footprint

JM Finn has slimmed down its data centre infrastructure from 24 to just six equipment racks by migrating legacy data centres to the Nutanix Cloud Platform. The migration has resulted in major implications for both power and cooling requirements, as well as the company's long-term carbon footprint.

JM Finn had previously used the Nutanix Cloud Platform to replace a key legacy storage resource and then rapidly host a company-wide end user computing (EUC) application to support working from home during the Covid-19 pandemic. Performance gains have been widely reported and running costs significantly



lowered, which has enabled JM Finn to halve the number of staff needed to support the new infrastructure. Those displaced have moved into other roles to find ways of better

exploiting new technology.

The required equipment was quickly ordered and installed first in a new primary data centre in Suffolk, then at a secondary site in Hampshire to provide additional back-up and disaster recovery capabilities. Once working, migration was scheduled to take place over successive bank holiday weekends to mitigate against any disruption although, in practice the process proved trouble free.

## PROJECTS & CONTRACTS IN BRIEF

Databarracks has been selected by the Department for Business, Energy and Industrial Strategy (BEIS) to design and build the UK Emissions Trading Scheme environment on Amazon Web Services.

Manchester City Football Club and Cisco have deployed WaitTime at the Etihad Stadium. It makes Manchester City the first Premier League club to implement the technology.

Aston Martin Aramco Cognizant Formula One Team has signed a multi-year deal with Voip Unlimited to provide data connectivity to its new factory under construction at Silverstone.

Construction of a £30m full fibre network has begun in Wigan and is being delivered by O'Connor Utilities (OCU) on behalf of CityFibre. The team will use a range of construction methods by working in close partnership with Wigan Council and local communities to deliver a fast rollout, while managing potential disruption.

NTT has deployed a new digital office in the Krakow headquarters of the Heineken Shared Services Center. Thanks to this implementation, nearly 1,500 employees can now experience a hybrid workplace model.

## R&M



Fibre optic cables for outdoor applications, such as aerial broadband deployments, need to withstand everything from ice, rain and wind to ultraviolet radiation, dust and chemicals. The choice of sheath material is therefore essential. A new blog from R&M looks at the use of polyurethane (PUR) for cable jackets.

This highly developed, halogen free thermoplastic elastomer offers five major advantages over familiar sheath materials – polyethylene (PE), polyethylene with

flame retardant additive (LSOH) and PVC. These range from stability and flexibility to chemical and weather resistance.

According to R&M, aerial deployment will keep becoming more important for fibre to the home (FTTH) rollouts.

A potential 2.5x faster rollout speed helps keep down deployment costs in an environment in which skilled labour is lacking and investment in rural areas remains slow. Planning permission and civil works may also be easier. This requires field proven pre-terminated solutions that don't require special tools and training.

**CLICK HERE** to read the blog.  
[www.rdm.com](http://www.rdm.com)

## NetAlly

NetAlly's family of innovative network test solutions have been helping network engineers and technicians better deploy, manage and maintain complex wired and wireless networks for decades.

For more than 25 years, we have been the number one ally of network professionals worldwide. We began by making the world's first handheld network analyser – the LANMeter – and have continued as industry pacesetters ever since.

NetAlly continues to set the standard for portable network testing. We are

passionate about innovation and motivated by one purpose – to create the best test equipment possible, designed with your success in mind.

Network professionals around the world trust our best in class tools to deliver the visibility needed to get the job done, fast.

To find out more **CLICK HERE**.  
[www.netally.com](http://www.netally.com)



## Schneider Electric

Schneider Electric's APC NetShelter Rack PDU Advanced provides data centre leaders with greater flexibility to meet the new data demands placed on businesses. It enables teams to support up to twice the number of devices with a 50 per cent increase in power needs, while also simplifying installation processes and taking the guesswork out of PDU selection for future IT refreshes.

Understanding the need for layout adjustments or general updates, the APC NetShelter Rack PDU Advanced outlet design avoids costly layout changes. Unlike traditional PDUs with a fixed number of individual outlets, the new 4-in-1



combination outlets – for C13, C19, C15 and/or C21 – simplifies selection, eases and speeds installation and provides greater flexibility to support future modifications.

Additionally, colour coded outlets make the PDU more intuitive and easier to use as the outlet colour matches the upstream circuit breaker. The alternating layout of outlets allows

for greater organisation and power cord management of devices installed in the IT rack, speeding installation and optimising the rack space, resulting in reduced human error and increased airflow management.

**CLICK HERE** to find out more.  
[www.se.com](http://www.se.com)

## Fluke Networks

The award winning FiberLERT from Fluke Networks is the first live optical fibre detector for resolving the cause of communications failure in fibre optic networks. The pocket sized tool enables the effective troubleshooting of invisible near infrared (850nm-1625nm) wavelengths used in fibre optic communication, with the quick identification of failures in a port, polarity and transceivers.

There is no need for complicated set-up or interpretation of the measurement data by technicians and engineers. Simply place the tool in front of an active fibre optic port or patch cord and the tester will emit a continuous light and optional tone if a



signal is present. Key features:

- Detects optical power in singlemode and multimode fibre (850nm-1625nm)
- No set-up or interpretation – light and sound indicate signal
- Non-contact detector reduces risk of contamination and damage
- Suitable for ports and patch cords, singlemode, multimode, angled physical contact (APC) and ultra-physical contact (UPC)
- LightBeat indicates operation and battery status
- Two year product warranty

To find out more **CLICK HERE**.  
[www.flukenetworks.com](http://www.flukenetworks.com)



# All you need to know

Inside\_Networks

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# Our survey says...

**Jon Healy** of Keysource looks at why the need for security and sustainability means the data centre sector is facing its greatest challenges yet

► Sustainability and security were the top concerns flagged by respondents in Keysource's State of the Industry Report 2022, which gathered the views and insights from over 250 IT directors in UK and Europe. This is the fifth year of the report and it showed once again that the data centre and technology sectors continue to flourish, with investment being driven by continued digitalisation, IT transformation and data growth. This is despite the current global economic and political uncertainties. However, in addition to the impact of this ongoing demand, the IT decision makers surveyed stated that they are continuing to shoulder a range of competing challenges and, as a result, over

99 per cent believe 2023 will be a difficult year.

## BROAD SHOULDERS NEEDED

Over half of the respondents see security as the biggest challenge – up slightly from previous years. IT directors and managers will continue to need broad shoulders, taking responsibility for protecting their organisations' brand and reputation against, in some instances, very sophisticated cyberattacks.

Almost one third believe this type of security attack is the biggest risk, with issues surrounding cooling at 15 per cent, which is possibly linked to the heatwave during summer 2022. Surprisingly,



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human error proved concerning for just 11 per cent, despite the fact that history has shown that this is generally a major contributor.

### STAKES ARE HIGH

Whatever the cause, there is no doubt that the stakes are high, as since 2018 the General Data Protection Regulation

(GDPR) and Data Protection Act (DPA) set a maximum fine of £17.5m or four per cent of annual global turnover – whichever is greater. 2022 saw the NHS battling a cyberattack, which disrupted patient referrals, appointment bookings and other operations, while

Cisco said it was the victim of a cyberattack in which a hacker repeatedly attempted to gain access to the Silicon Valley firm’s corporate network. We have also seen an increase in utility companies being targeted globally including water and power supplies.

Data centres continue to be a vulnerable target and, in some cases, are not receiving the same level of attention that a corporate





network would. This may be because third-party data centres are being used and therefore the problem has been passed on. However, with hybrid hosting models using on-site, colocation and cloud solutions, a more targeted strategy will be key to avoiding major damage.

### ARE WE GREENWASHING?

Sustainability came a close second in the list of concerns at 40 per cent. There is some good news in that IT decision makers are firmly at the table when it comes to discussing sustainability, with 86 per cent saying they are regularly involved. The vast majority are also clear on how they and their departments are contributing to the company's sustainability strategy.

However, this is contradicted in subsequent questions that found that

sustainability rarely influences decisions about new IT solutions and services, with just a third of respondents stating that it does. This is up just three per cent on last year and shows disappointingly slow progress. This might be because over half of the respondents admitted to not having a sustainability strategy at all, with 92 per cent experiencing problems that are slowing or stopping their sustainability progress. Reasons include investment, having the data for a business case, lack of advice and stakeholder buy-in.

### MADE TO MEASURE

There also seems to be some confusion around the measurement metrics needed for sustainability monitoring, with less than half doing any capacity monitoring. What is measured is not joined up nor is it





being used to drive progress and action. For example, in response to the question ‘Where, if anywhere, do you think you can make the biggest carbon savings?’, the overwhelming response was a move to using sustainable suppliers. There was a similar response when asked what direct action has been taken to address or improve environmental, social and governance (ESG) policies.

Of course, this may be a quick win but it is also an easy option, which requires little change or effort. A common source of carbon for IT end users is the physical environment of which there can be multiple legacy investments. This should be addressed as a priority.

## POWER RANGERS

This mindset was clear once again in the section about power, in which 92 per cent stated they were concerned about rising costs. For about half of respondents the answer is a move towards renewables and an increase in budget. Less than 50 per cent are looking at reviewing capacity requirements, showing that there is a lack of focus on consumption. After all, we need to address the ‘1’ in Power Usage Effectiveness (PUE).

Of concern is that this approach opens the sector up to possible allegations of greenwashing and paints a picture of an industry that is full of good intentions but lacks the tools and expertise to deliver them. Without a strategy, how can future legislative and regulatory requirements be met? The ability to identify opportunity and confidently make change is key to enabling tactical changes that will make a significant difference. Sustainability targets need to be joined up and aligned throughout an organisation for maximum impact. Procurement plays a key part in ensuring

the solutions and services, along with the provider/s themselves, are also driven to measure, report and improve.

## THE CHALLENGE AHEAD

We are operating in a world with a rapidly expanding social and economic consumption, which relies on data processing and transfer to be both secure and sustainable. Our respondents are under more pressure than ever to carry all this responsibility. As an industry we are used to change and challenges but these might be our greatest ones yet. ■



### JON HEALY

Jon Healy is group operations director at Keysource. With a background in engineering and extensive experience in the data centre and critical environment industry, he has led a range of award-winning solutions and services for a host of companies – from global enterprises to major government organisations.

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