A successful route to Life Sciences 4.0

Creating a secure, sustainable digital journey for the sector



Introduction

As the life sciences sector focuses increasingly on delivering a patient-centric experience of healthcare, it's realising the importance of a swift and effective digital transformation. Meeting patient expectations of tailored care depends upon a combination of intelligent data use and innovative technology - and this is only possible with strong digital foundations that support a standardised, centralised approach.

Leading life sciences organisations are looking hard at those innovative technologies and harnessing their capabilities. From using the Internet of Things (IoT) to build partner ecosystems and adopting 5G-enabled Augmented Reality (AR) to offer real-time alternatives to in-person consultations, to using Artificial Intelligence (AI) and Machine Learning (ML) to unlock new ways of working – they're open to all possibilities.

But it's critical that these

possibilities - and every step towards digitalisation – are protected, so that moving to a more data-driven operation isn't compromised by the increasing cyberattacks the sector is facing.

Leading life sciences organisations are bearing this in mind, and are taking the opportunity to build both cybersecurity and sustainability into their digital journey. They're recognising that this is their moment to address the sector's unenviable status as a greater polluter than the automotive industry.

Our role is to deliver solutions that meet these challenges. I hope you find this paper a useful read in planning your digital strategy.

Do get in touch if you'd like to discuss anything further. ①



Peter Zimmers Director, life sciences, BT



case studies of life sciences transformation.

What's happening in your market

The concept of 'digital transformation' has been around for a while, yet we haven't seen a universal uptake in the life sciences sector. However, three key market developments are increasing the urgency for life sciences to go digital.

Transformation driver #1 – a market shift to a data-driven patient-centric operation

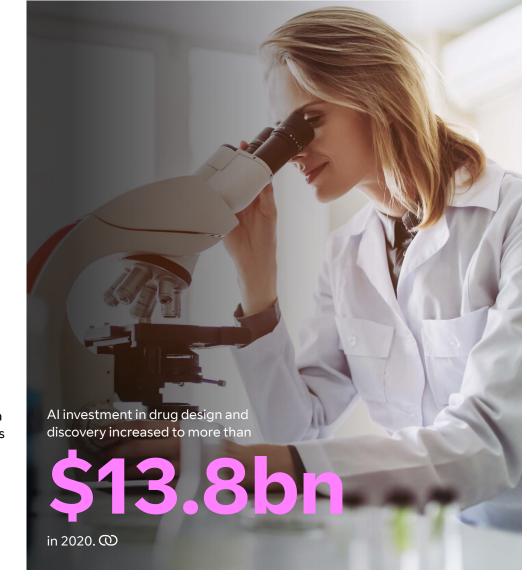
Personalisation is sweeping through life sciences, making digitalisation the essential basis to leverage the data that lies behind personalised medical treatments like gene therapy. Our bodies are one of the most intricate data platforms in existence, holding the insights that can lead to more efficient, tailored healthcare solutions.

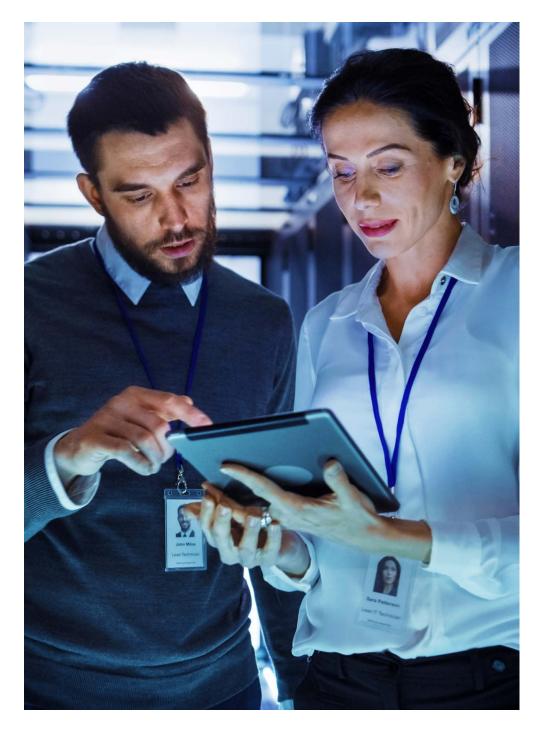
But the implications of this are vast. Harnessing the data to this level means life sciences organisations must pivot to become technology experts as well as care providers. Those that haven't digitalised will be hampered by dependence on traditional systems that restrict their ability to mine meaningful data insights and respond flexibly to them. Without achieving a full and effective digital transformation, companies will be unable to use Life Sciences 4.0 technologies to optimise operations, develop innovative new therapies, reduce costs, and keep up with patient expectations for individualised treatment and better outcomes.

Transformation driver #2 – growing demand for innovative technology solutions

Leading organisations are expanding the frontiers of Life Sciences 4.0 technologies. Advances such as robotic surgery, 3D bioprinting of human organs, and patient monitoring and diagnostics driven by AI will be setting new standards for healthcare outcomes and dynamic service provision in the near future.

Patients are getting behind this driver, too. The adoption of wearable devices is pushing a trend towards prevention, and connected healthcare initiatives are funnelling data towards accurate diagnosis and tailored medicine. Technology is the key to optimising value from this data – whether that's through partnerships that co-create healthcare solutions, or by capturing today's increasingly consumer-style patients.





Transformation driver #3 – an increase in cyberattacks and risk

Life sciences organisations are prime targets for cyberattacks. Their vast amounts of patient data, sensitive research and development (R&D) information, and their essential function in society make them highly attractive to cybercriminals. The pandemic heightened their vulnerability, as bad actors used the digital and cloud-based connectivity that supported remote working as ways to access sensitive patient data. In the race to create an effective vaccine, trade secrets were another prime target, and even nation state actors worked to obstruct the vaccine roll-out by disrupting temperature sensors across the supply chain. \bigcirc

The nature of how a life sciences organisation works often results in a collection of individual projects operating independently and this also introduces risk. It's not uncommon, for example, for a small, independent lab to have a research breakthrough and then seek funding and start collaborating with a major pharmaceutical on ongoing R&D. But this collaboration means data has to move across disparate, often unsecured systems between the two organisations, opening up the attack surface even wider. What's more, it's difficult for large life

sciences organisations to identify all devices on the network, so creating a standardised security approach is a significant challenge. And many devices run on old operating systems, lack basic security controls, and have overlapping standards and protocols, which create security blind spots. With decades of R&D and patents at risk, these gaps create opportunities for cybercriminals which can have devastating repercussions.

A ransomware attack against Merck and Co affected **30,000** computers and disrupted **7,500** servers.

Our point of view

Waves of change are sweeping through the life sciences arena, driving organisations to rethink how they operate. A combination of rising customer expectations and significant steps forward in technological innovation have created an environment where knowledgeable consumers want a patient-centric experience of healthcare.

For life sciences organisations, thriving in this market means bringing together data management and technological expertise within a flexible organisational model. It involves sharing data and collaborating with partners in new ways, breaking down the traditional isolationist approach where each site works independently. Only by embracing a new way of operating can organisations unlock the benefits of Life Sciences 4.0 to pull ahead of the competition.

However, many organisations are struggling to reach this point. They've rushed to implement the latest digital solutions and innovations but have done so as local projects without a centralised, homogenous infrastructure. As a result, different localities often get stuck at the pilot stage, unable to scale because their underlying infrastructure isn't up to the job. This means they can't use the data the pilot has produced – so they fail to see meaningful business improvements. The local approach also affects how sensors, IoT devices, connectivity and data are deployed – leading to departmental silos that are unable to collaborate effectively.

Successful life science organisations take a more holistic approach. They recognise the importance of tailored solutions for different areas and operations, but also the need to adopt global standardisation and governance in their approach to digitalisation and its purpose. They have found that reducing complexity and focusing on developing repeatable, scalable digitalisation initiatives is the most effective route to realising the benefits of Life Sciences 4.0 and increased market share.

Investing in a secure, resilient network is the basis of this transformation, making sure all other building blocks – from AI to robotics to cybersecurity – are optimised and offer 24/7 availability. Robust and securely federated partner networks also help organisations to avoid supply chain vulnerabilities. An ongoing challenge, this issue was particularly acute both during, and in the aftermath, of the pandemic, with glitches hitting various links in the supply chain, particularly the export of pharmaceutical elements from India. As organisations grapple with increasingly volatile and disrupted supply networks, it's vital to safeguard operations, digitally optimising each link to create real-time visibility across the end-toend supply chain in order to achieve Supply Chain 4.0. @

And running throughout the shift to digital life sciences are the business imperatives to improve security and increase sustainability. Any advances need to be secure and take into account growing consumer consciousness and regulation around sustainability. Digitalisation is the key to more innovative, secure and sustainable forms of production.



The key roadblocks to digital transformation in life sciences

In our experience, global manufacturers and pharmaceuticals often face similar challenges when trying to achieve digital transformation, and the same concerns and attitudes regularly emerge. Recognising what's holding Life Sciences 4.0 back allows organisations to address the roadblocks interrupting digital transformation journeys.

1. A highly regulated and risk averse approach to modernising production

Organisations worry that any transformational change could adversely affect product quality and patient safety. A complex, validated manufacturing environment that's widely subject to good practive (GxP) means software, tools and production must meet high safety regulatory requirements. But the cost and time required to revalidate changed processes means in-house manufacturing can be particularly reluctant to transform its outdated platforms, holding back moving from manual processes to continuous / predictive monitoring. What's more, a complex path from factory to patient, involving multiple intermediaries, creates lots of touchpoints for data sharing that remain largely manual, lacking tracking capabilities and digital optimisation.

2. Difficulty getting compute capability where it's needed

When it comes to drug and equipment manufacturing in life sciences, the starting point for digital transformation is often an older network that's both disjointed and non-standard. This forces organisations to plan and implement on a factory-by-factory basis, which is time consuming, labour intensive and complicated – and moving compute to the edge where it's going to be essential is a complex process. There are often concerns about transparency too – as there can frequently be hidden costs for moving large quantities of data.

3. The struggle to effectively scale digital pilots

Money is flowing into digital transformation investments across life sciences, but progress lags. Al investment in drug design and discovery increased to more than \$13.8bn in 2020, but general adoption of AI lingers at less than 40% across the healthcare and pharmaceutical industry. Often there are difficulties in building internal credibility by demonstrating Return on Investment (ROI) on use cases. Organisations are piloting multiple IoT technologies from different vendors but are unable to quantify ROI guickly enough and don't have the infrastructure to scale these projects beyond pilot stage.

The key roadblocks to digital transformation in life sciences

4. Difficulties coordinating devices and data to drive valuable insights

The trial-and-error approach to pilots and inability to scale means many organisations are left with a myriad of different IoT sensor models, all collecting data in different formats which are then hard to combine into actionable insights. Sites eagerly push ahead with local projects, but the centralised infrastructure isn't in place to extract value from all the data generated. For many organisations, their data is incompatible, stuck in silos, or even paper based. There's little continuous monitoring across production lines, which leaves vital data sets incomplete and unusable.

5. Tackling expanding cybersecurity risk and managing the security estate

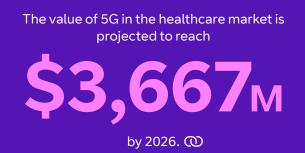
Already a prime target for cybercriminals, digitalised life sciences calls for increased connectivity, which can potentially increase cyber vulnerability. Across pharmaceutical manufacturing in particular, expansion of IT into Operational Technology (OT) opens the door to the wider internet across a huge variety of devices, introducing more entry points for cybercriminals. High-profile cyberattacks on pharmaceuticals have significantly increased boardroom concerns, particularly given the industry's exacting safety standards and high volumes of sensitive patient data.



Innovations to drive your digital transformation

5G is, without a doubt, the technology of the moment across all digital industries. However, we see it as a facilitator for other innovations rather than as a standalone technology. 5G offers a step change in bandwidth, offering up to a 100-fold increase on 4G, bringing the lower latency and increased reliability essential for underpinning large volumes of IoT and automated technologies. It provides consistent connectivity without the dropouts that can happen with 4G. This combination of low latency and high reliability minimises the likelihood of a safety failure and opens the way for new advances.

Here are three innovation areas that are critical to digital transformation in life sciences:

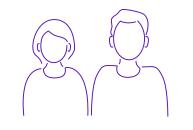


1. IoT-enabled partner ecosystems

Life Sciences 4.0 leverages huge amounts of IoT data to drive innovative treatment development and create more flexible supply chains. A key part of this is a secure data exchange system across the cloud ecosystem of partners. Ideally, as soon as high-quality data is captured by IoT sensors and enters the ecosystem it can be leveraged across the value chain, giving all parties access to real-time information. These data-sharing supply chains and development collectives are fundamental to coordinating alobal R&D efforts.



of organisation leaders will be leveraging digital platforms and ecosystem capabilities to adapt their value chains to new markets, industries and ecosystems. @

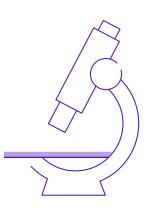


2. Artificial Intelligence (AI) and Machine Learning (ML)

Computer vision is fast approaching human levels of performance in restricted visual tasks and it's unlocking new avenues across life sciences. Already used to increase diagnostic accuracy across CT scans, MRI images and X-rays, AI can detect a wide range of conditions. It's also speeding up drug manufacturing, helping with every stage of development, including analysing vast quantities of available data to identify good target proteins for new medicines. By increasing efficiency and accuracy, it's giving industry leaders a competitive edge in the race to get new solutions to market. The AI healthcare market is expected to grow at a rate of



annually. 🔘



3. Augmented Reality (AR)

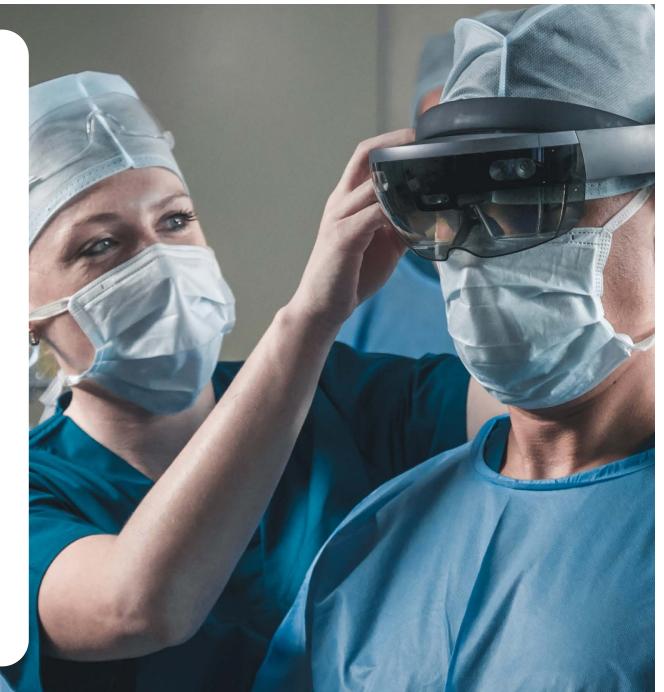
When the pandemic grounded expert teams that would typically provide on-site assistance in factories and R&D labs, life sciences organisations turned to AR instead. Often supported by a private 5G network that delivers dedicated, ultra-reliable, ultra-low latency connectivity that's tailored to business needs, AR offered a viable, real-time alternative to an in-person consultation or fix. It allows local operatives to carry out guided maintenance or other functions with the remote support of experts who can guide them on unfamiliar equipment or configurations. It's a cheaper, more environmentally friendly alternative to shuttling experts around the world, and headsets can even give the wearer access to pre-loaded, up-to-date and accurate information.

The success of AR within healthcare organisations is also driving its roll-out as a product to customers, too. For those with access to 5G's low latency, it's possible to use AR to enable remote surgery or even to support paramedics with their emergency response.

Worldwide, almost



jobs could be using AR and VR by 2030. ①



Addressing sustainability through digital life sciences

A significant producer of carbon emissions, pharmaceuticals alone are a greater polluter than the automotive industry. While life sciences generate emissions across all three scopes – direct, indirect and associated - a significant proportion are direct, scope one emissions created by organisations themselves. This direct control over scope one emissions means there's strong regulatory and public pressure to cut energy usage to increase sustainability.

How can you manage if you can't measure?

Accurate, centralised data is the foundation of reducing energy use and increasing sustainability. Life sciences is becoming increasingly proficient at capturing essential information about energy use, operations and productivity, but crunching the numbers to generate actionable insights remains a challenge. Without useable, up-todate data, organisations won't be able to understand why it's taken more energy one day to produce the same amount of medication or healthcare equipment as the day before.

How to reduce your energy bill

Efficient energy usage depends on achieving the optimum mix of factors such as the quality of raw materials and machinery settings, and AI and ML have a significant role to play here.

Al looks at past operations, modelling the best outcomes, and giving recommendations to achieve an efficiency 'sweet spot'. It can then provide predictions and recommendations for specific production runs, suggesting optimal operational parameters and indicating how much could be saved in cost and carbon consumption. Every time the AI's used, it learns, continually refining its recommendations. And when you've learnt to trust it, the AI can make adjustments automatically, within defined safety limits, becoming a closed loop solution to optimise energy and carbon emissions.

Algorithms exist that deliver energy savings of between



within 1-2 months. @



Digital links to reduce equipment and energy use

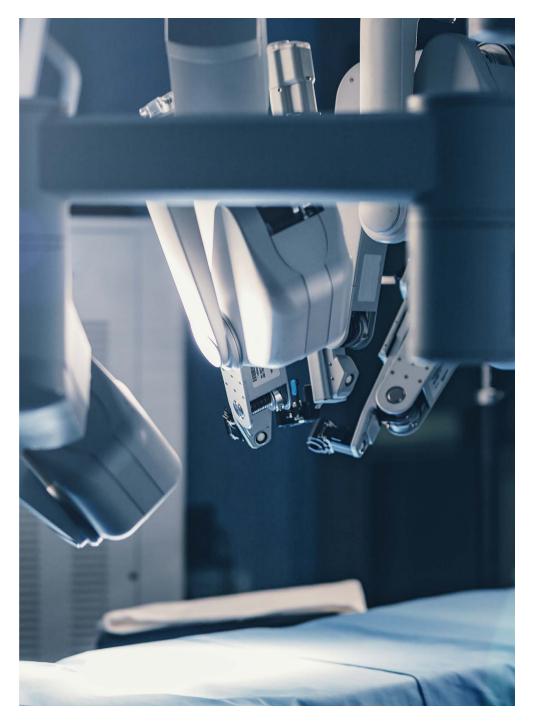
Protective of proprietary research and conscious of the responsibility attached to handling patient data, life sciences organisations have typically approached technology like VPN gateways or the cloud independently. Even where organisations are collaborating closely and using the same network provider, each will build its own secure VPN tunnel, with all the corresponding equipment and energy output. It's more effective and environmentally friendly to cut out the duplication by securely federating these networks to create coordinated, intelligent connectivity.

Sustainability for communities

Social sustainability is also moving up the boardroom agenda in the life sciences arena. The pandemic shone a light on this lesser-known area, particularly with regard to providing access to medicines and treatments in countries with poor and underfunded healthcare systems. Data has a significant role to play in this regard, helping to identify where unused medicines can be redeployed before they expire, and ensuring that products from vaccines to medical equipment can be distributed in an ethical and sustainable way.

Digital transformation can support sustainability by:

- enabling strategic endof-life planning and identifying when it's worth upgrading to more sustainable equipment and when it's better to extend the lifespan of the asset
- reducing travel by using AR to connect experts with workers on the ground
- cutting equipment downtime by using 5G, IoT sensors and highdefinition computer vision and predictive maintenance to spot and fix issues before they stop production
- increasing production efficiency by pooling data centrally, breaking down siloed operations, and allowing best practice to be identified and shared.



How to implement effective digital transformation

Life Sciences 4.0 looks slightly different for every organisation, but starting the journey with a framework is the best way to guarantee success. With structure and governance, it's possible to ensure greater standardisation so that data insights are easier to access and act on. There are seven core principles for effective digitalisation.

1. Where are you starting from?

Your digital journey must start with a thorough understanding of where you are right now. Any strategy needs a baseline to limit the unknowns that could hamper progress later down the line. Look at your infrastructure holistically, starting at R&D labs, taking into account any production facilities and ending at the cloud or data centre - and review everything in between to see if it's suitable. This would include the fixed factory LAN, 5G and other wireless technologies, edge computing, collaboration tools and cybersecurity. The key is to identify your digital maturity where you are on your journey to the ultimate goal of Life Sciences 4.0 - so that you can build a coherent, cohesive strategy to get there.

2. End-to-end cybersecurity

Working out what's connected to what in your factory networks and where there might be gaps is an essential part of successfully connecting OT and IT. The majority of malware that gets into factories comes from the IT world and many current life sciences systems - particularly manufacturing within pharmaceuticals - have vulnerabilities that make them susceptible to cyberattacks. Plus, adding in IoT functionality lengthens system borders and increases the potential attack surface and, once data leaves the lab or production line, you need to know it's distributed and stored securely. To counteract these potential vulnerabilities, it's essential to build cybersecurity into your transformation by design.

3. Getting network-ready

Digitalisation requires a network that's resilient and able to collect and process data locally, as well as sharing data securely across the organisation and into the wider ecosystem. Make sure your local infrastructure is resiliently architected and designed to support the increasing number of connected 'things' on site and the increase in data that will follow. From there, consider what's the right network connectivity for your data. When you're connected to the cloud, consider private connectivity services for that critical, latency sensitive data. And to ensure key application performance, consider a software-defined solution. Make security a priority by adding in behaviour monitoring and introducing zoned areas with firewalls to reduce the blast radius of any breach.

4. Strategic deployment of sensors

As part of your network refresh, identify where additional sensors would provide useful data and strategically incorporate them. Remember, it's counterproductive to roll-out different types of sensors as they all need different connectivity and produce different data, so be consistent. Aim to reduce, not increase the number of connectivity methods a site needs through sensor deployment. At this point, you should evaluate how much processing power you're going to need locally, and plan in the necessary edge computing capability.

5. Tackle your problem areas first

Local control has created a digitalisation patchwork for many life sciences organisations. Even organisation-wide changes are often taken up in a piecemeal and individualised way. This means there's no one-sizefits-all journey for each site, but the most effective digital implementation tackles the sites with the greatest opportunity for - and ease of replicability first. This creates a template of what success looks like, that can then be rolled out as a standard format across other sites, maximising early returns on your investment.

7. Collaboration, collaboration, collaboration

The rapid collaboration that emerged as a response to the pandemic is going to be a permanent part of a digital future in life sciences, so it's important to plan how you're going to support collaborative working and partnerships. AR technologies are now mainstream, and your transformation must factor in their support. Unified communication tools will be essential.

6. Business planning versus technology planning

Beginning with a proof of value exercise that can demonstrate a rapid ROI is essential to get buy-in and to show how refreshing your infrastructure will unlock savings that can be offset against your initial investment. 00.00

Our digital life sciences proposition

We provide industry-specific, global managed services that enable secure data distribution across global supply chains, operations and businesses.

Our ambition: to become the world's most trusted connector of people, devices and machines.

To power the digitalisation of your business, we can help you with:

- an end-to-end-infrastructure design, based on composable architectures
- the products, tools and services to support your digitalisation globally
- a service framework supporting your business on a scalable basis
- a security-by-design approach that protects your data, assets and business.

What your business can achieve with our digital life sciences solutions:

- 1. ensure your network infrastructure is digital-ready
- 2. resolve your cybersecurity challenges
- 3. deliver your data securely and globally to improve business outcomes.

Connect people devices and machines	→ Enhance customer and employee experience	Connect to low- latency resilient infrastructure	Securely transfer insight from the edge	→ Detect and protect against cyberattacks	→ Connect and manage the multi-cloud	Enable your partner eco-system
Factories	Digital and hybrid work	IoT sensors	IoT gateways	Remote access	Public, private and hybrid cloud	Microsoft Azure
Warehouses		Wireless access	Edge computing	Identity		Google Cloud
Hospitals, clinics and care settings	First line worker	Industrial and	SD-WAN	management	Carrier Neutral Facilities	AWS
Homes	Cloud contact centre solutions	Enterprise SD-LAN	Internet	Firewalls	Fabric port	Salesforce
Offices		4G and 5G		Threat	·	
Vehicles		Bluetooth LE	MPLS	management	IoT platforms	QiO
Data centres		and Zigbee	Satellite	OT security		ServiceNow
Distribution centres and many more	8-8 \8/	((g))		A	<u>}</u>	SAP and many more

Industry-specific global managed service across infrastructure, security and digital workplace

Why BT for digital life sciences?

Providing a proven framework to structure transformation

Our proven framework plots organisations against our maturity model. This baselines the entire organisation, including each site within the business, against the four levels of industry maturity. It highlights where digitalisation is required and how this should be implemented, site-by-site, to get all production facilities to the same maturity level.

A multi-cloud approach to secure and robust supply chains

Our multi-cloud hub securely connects different stakeholders, helping them to build complex, multi-sector, digital supply chains. Easily scalable, consistent across different locations and able to be reproduced globally, it connects life sciences organisations in an agile, real-time way with their partners – so all parties can share insights and coordinate their efforts. Rather than multiple third-party VPN tunnels, it's a more secure, sustainable way to collaborate.

We put life sciences front and centre

Our digital life sciences portfolio is the result of hundreds of conversations with our life sciences customers that our experts have used as the bedrock for developing their solutions. Even with this life-sciencescentric approach, we remain open to the fact that we may need to further tailor our solutions to precisely meet your requirements.

We're experts at building successful business cases

Our experts combine the right solution for you with proof of value exercises, a drive to establish excellent returns on investment and support to build a winning business case. Our structured framework approach also clearly demonstrates the impact technology has on an organisation's key deliverables or success measures such as OEE score. This consciousness of cost extends to our partner choices in a marketplace where 89% of UK organisations run open source code to manage costs.

We build trust before solutions

We understand that solutions that feel imposed upon teams are rarely as successful as those that are co-created. Recognising that your people know more about your business than we do, we value the trust of your teams on the ground and work collaboratively with them to develop a solution.

We're security specialists

Our experience and expertise in protecting governments, nation states, critical national infrastructure and large global corporations from over 6,500 cyberattacks each day gives us a ringside seat on the complex security threat landscape. We use this unique position to support organisations to detect and respond to threats in a Zero Trust world with real-time visibility and monitoring, drawing on the expertise of our 3,000 security experts, 350 consultants, and our security operations centres around the globe.

Our renowned global network

We're a reliable partner with global experience and credentials, and the research and development capabilities to turn the latest innovations into resilient and trusted services on a global scale. We've delivered thousands of solutions globally with our ever-increasing choice of secure services and solutions. Our approach means that multiple technologies and legacy systems can be easily managed to create a single, secure global network infrastructure for your business.

The breadth and depth of our portfolio

Through our broad portfolio of solutions, we can easily integrate with the applications, data and third-party cloud providers you need globally. Then our end-to-end management of your entire solution simplifies operations for you – and improves user experience for your team and your customers. Our portfolio combines our deep expertise and extensive capabilities in cloud, networking and security services.



Our extensive and experienced partner ecosystem

We offer an ecosystem of partnerships to transform the way you run your operations. Our links with leading public cloud providers delivers flexible connectivity into hyperscalers and regional datacentres. And, through leading industry partnerships, we blend the latest specialist technologies into what we offer.

Our investment in R&D and innovation

A commitment to innovation is part of our DNA. We've invested £2.5bn in research and development over the last five years, making us the third largest investor in R&D in the UK. Our 13,000 scientists and technologists worldwide have filed over 10,000 patents since 1990 to push forward the boundaries of what we can help our customers achieve.

We take an open approach to innovation, working in close collaboration with our customers and strategic partners or specialist innovators such as universities, government organisations, standards bodies and technology companies. Our innovation scouting teams are always scanning the horizon for ideas and expertise generated by third-party organisations that we can incorporate into our search for the next technological breakthrough. Our own BT Labs at Adastral Park is a globally recognised centre for telecoms research and a key source of UK Intellectual Property, and our 4,000 scientists, IT experts, engineers and collaboration partners based there continue to push the boundaries of innovation.

Our long-standing commitment to sustainability

We've been on a climate action journey for over 25 years, since setting our first carbon reduction target in 1992. Since 2016/17, we've reduced the carbon emissions intensity of our operations by 57% and have reduced carbon emissions by 19% in our supply chain over the same timeframe. We've pledged to be a net zero and circular business by 2030, and 2040 for our supply chain and customers. We hold a platinum EcoVadis rating, reflecting our comprehensive sustainability approach.



Make digital life sciences happen

Our experts are ready to help you bring digital life sciences to life in your organisation. To find out how to unlock the potential of digital life sciences, get in touch with your account manager today or visit our webpage.

Digital industry in action

Creating a global standard of voice communication

The challenge

A leading global pharmaceutical was struggling with silo-driven voice procurement, creating lots of duplication, lack of interoperability between sites and increased complexity due to multiple suppliers. As costs spiralled, it was clear it needed a more efficient, scalable solution.

The solution

We created a global voice architecture based on common standards so that all sites and departments around the world had interoperable, high-quality voice infrastructure. We also kitted the organisation out with a consistent global operating model with full ITIL stack and softphones.

The result

With a more reliable voice service and improved internal communications, the business was able to transition to a more flexible office model and work environment, creating a better work / life balance for employees. The company not only saved on its voice service but was also able to reduce real estate costs as a result of the security and reliability of this voice solution and the remote working it enabled.

Moving away from a legacy network

The challenge

An agrochemical business with global operations and over 25,000 employees came to us for help transitioning from its legacy network. A dramatic increase in network demand and connectivity meant it was struggling with bandwidth and needed to get moving on cloud adoption.

The solution

We started with an IT access refresh across over 400 sites around the world. With IT consolidated and centralised, we then followed this up with network optimisation, alongside ongoing performance and monitoring.

The result

The business was transformed without any disruption and it's now operating with an 8 times increase in network capacity and speed. With a cloud-ready network and increased visibility, connectivity for employees is vastly improved and the business overall has benefited from a 20% cost reduction and 350% increase in WAN bandwidth.

Keeping one step ahead of the cyber threats

The challenge

Struggling with increasing regulations and security threats, a global pharmaceutical asked for help with its cyber defences. Operating millions of patents alongside hundreds of business partners, it needed its workforce to have secure device access, anytime, anywhere.

The solution

We put in place a number of managed security systems to help keep this organisation and its vital data safe. This included a managed firewall, managed web security and a managed intrusion detection system. We also rolled out vulnerability scanning, threat monitoring and incident management to create end-to-end security.

The result

Employees, suppliers, business partners and patients now have secure access to organisational systems. This means communications are safe and there's increased protection against extortion as data and intellectual property are only accessible through strict security protocols.



Offices worldwide

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