



THE FABRIC OF FUTURE-PROOF ORGANISATIONS

Rearchitecting businesses,
platforms and infrastructures
for the digital age

Research Report

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Introduction

The market is changing faster than ever before. From significant technological advancements, such as the widespread use of artificial intelligence (AI) and machine learning (ML), and onto a wide range of non-technological factors, including macro-economic instability, geopolitical uncertainty, environmental sustainability and dynamic customer demands, modern executives face a never-ending barrage of challenges and opportunities.

Into this maelstrom of change charges the CIO. The C-suite looks to the CIO for trusted advice on how digital and data can be used to overcome challenges and deliver value from new market opportunities. It is no easy task, but it is one that CIOs must meet head on.

It's within this context that CIONET, BT, Cisco and a series of high-profile CIOs explored how technology chiefs are rearchitecting their businesses and IT systems to embrace fast-changing market conditions. In a wide-ranging CIONEXT discussion, five experts joined CIONET Founder and MD Hendrik Deckers and CIONET Research Director Roger Camrass:

- **Olivier Gibert**, Global CTO at Carrefour
- **Alexandra Zagury**, VP of Partner Managed and as-a-Service Sales at Cisco
- **Bart Kerkhofs**, VP of IT at Bridgestone EMIA
- **Colin Bannon**, CTO at BT
- **Dirk Olufs**, EVP & CIO at DHL Express

The panellists discussed how they are embracing change by creating the fabric for future-proof organisations. From dealing with new customer demands to rearchitecting the business and onto the platforms that will help their organisations manage change, the panellists focused on three questions, which we will consider in turn subsequently:

1 How is digital reshaping the customer experience?

2 How are businesses being rearchitectured to deal with changing markets?

3 How are CIOs reengineering the IT landscape and associated platforms?



How is digital reshaping the customer experience?

Customer demands flex rapidly in the digital age. What's evident from the digital leaders in our discussion is that CIOs across different sectors face specific challenges and opportunities.

Bart Kerkhofs says the automotive industry is being shaped by a combination of factors known as CASE (Connected, Autonomous, Shared, and Electric). He says CASE becomes manifest for Bridgestone in the form of digital transformation: *"The way we apply solutions is more integrated into how we do business, how we sell and how we interact with our customers."*

Kerkhofs says this focus on business outcomes means IT success is a jointly achieved goal that stretches beyond the confines of the technology organisation and across the whole company: *"Digital technology becomes more of a shared responsibility."*

Bridgestone has created a digital backbone, known as the Digital Playground. *"It's the building blocks that help our business to be successful in what it's trying to achieve,"* explains Kerkhofs, who says the Digital Playground ensures employees work together in an agile manner to deliver technological solutions that deliver *"the most bang for their buck"*.

Crucially, the delivery of digital solutions to business challenges at Bridgestone isn't just about establishing internal relationships. Kerkhofs says partnerships with trusted technology are crucial to dealing with long-term challenges: *"No one can do this alone."*

Partnerships are also vital to Cisco, which is embracing digital transformation to meet new customer demands. Alexandra Zagury says Cisco wants to deliver nearly 50% of its revenues through managed services by 2027. To meet this goal, the company has rearchitected its business through platform-based experiences and simplification via automation, AI and observability.

"What's really important is not only that we deliver connectivity but that we deliver it with security and observability, so that when we deliver to our customers, they can anticipate anything in their environment before it actually happens," says Zagury.

Retail is another sector that's reshaping the customer experience through digital. Rather than being singularly focused on digital transformation through e-commerce, successful retail CIOs help their businesses create an integrated omni-channel approach.

In nine years at Carrefour, Olivier Gibert has seen the role of IT shift from being an expense to a transformation agent at the heart of value creation: *"In all domains, we are considering how technology and data, including AI, can be leveraged to improve our ways of working and being more tailored to our customers' demands."*

Gibert launches data-led initiatives that satiate ever-increasing customer expectations: *"We are no longer in a world where there's offline shoppers and online shoppers."*

Now, we just have customers and we need to give them seamless, valuable and relevant experiences."

Scale is an additional challenge. Carrefour is an international retailer that operates across 40 countries globally. Each of these countries has its own technology landscape: *"Bringing synergies is quite a challenge, but it's an interesting one."*

Dirk Olufs is another CIO who recognises that digital plays a crucial role in enabling great customer experiences around the globe. DHL Express transports shipments and parcels across 220 countries. Customers expect their parcels to be handled in a safe and timely way, including through customs. Olufs says digital is reshaping the customer experience.

"In the past, we focused a lot on building the best customer service organizations to handle any type of inquiry that a customer may have, be it track and trace, a problem with the shipment or rerouting," he says. *"Now, in the world of digitalization, all our interactions with customers are increasingly digital."*

Digital transformation at DHL Express continues apace. Olufs says customers demand an ever-increasing range of options for monitoring and managing their deliveries through online platforms. The next step for the company is boosting its real-time capabilities.

"Everything is becoming more interactive and customer-centric through digitalization," he says. *"We want to use real-time information, so that we can go the extra mile with any transaction and really be there if our customers need us."*

Colin Bannon, BT's CTO, is also focused on customer experiences. He says BT serves the telecommunications needs of global companies, public sector organisations and smaller firms. He likens the company to a logistics specialist that moves data around the world: *"Digital transformation, for us, is absolutely essential."*

Bannon says BT has transformed its platforms and networks by working with partners like Cisco to stay agile and deliver customer services at speed. *"You need to be able to react quickly,"* he says. *"You need to have an agile, digital set of connected platforms that allow you to flow the data and react to customers in a timely way."*

Finally, he stresses the importance of connectivity and the provision of data-led digital interfaces that allow customers to control and visualise usage and performance. These connections and interfaces must be provided at a time of increasing complexity. *"Digitalisation is a key tool to try and master that complexity,"* he says.

How are businesses being rearchitected to deal with changing markets?



Our digital leaders recognise their businesses are being rearchitected in an era of a digital change and they point to three key considerations: culture, collaboration, sustainability.

Culture

Zagury says Cisco's change in its business model from selling hardware to subscription-based services is being achieved by fostering an innovative culture among its professionals: *"You have to give people the bandwidth to come up with new ideas and the environment to play."*

Zagury gives the example of her own department's deepening relationships with key partners such as BT. Senior executives at Cisco saw how the partner ecosystem was evolving and invested in her team. *"Our customers are consuming IT as outcomes and experiences – and that means the channels by which they consume IT are also changing,"* she says.

What's clear from the discussion is that rearchitecting any business requires a careful consideration of people and culture. Olufs says the move from a project- to a product-based way of working at DHL Express has required constant access to talented staff.

The company focuses on giving people the training they require and it continues to focus on talent development. *"It's about how can we help people to learn the next level of skills,"* says Olufs. *"Get that right and we will drive the right culture of collaboration and innovation."*

DHL Express already has an internal programme called I Love IT, which celebrates internal successes. *"The programme fosters the spirit to go the extra mile,"* he says. *"We have very loyal IT people who know the business and our customers inside out, and they strive to build better solutions."*

The company deals with the challenge of operating across 220 countries by designing and building systems centrally that are then deployed locally. Local IT experts provide support and ensure applications are exploited to their maximum potential.

In the case of Bridgestone, Kerkhofs says the manufacturer operates:



Tyres are a regional product, says Kerkhofs. Countries have different regulations and climates, which leads to variations across markets.

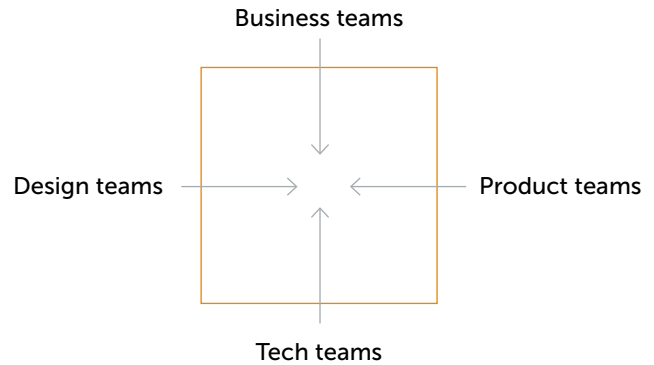
"It's been important for us to look at how can we define common solutions," he says, whether that's for point-of-sales systems or data models used in factories. *"That's been a journey for us – it's an evolution, not a revolution."*

Collaboration

Unexpected challenges can come from any direction. Carrefour's Gibert says the coronavirus pandemic provided a "peak of expectation" for e-commerce, where the average number of daily online orders increased fivefold.

New challenges, including inflationary pressures, continue to test Carrefour. However, Gibert says time to market is the constant challenge. The ambition is to stay ahead and avoid being disrupted: *"We have competitors and we need to be able to adapt quickly."*

Carrefour's IT team is shifting away from just being a supplier to the business. Today, the company practices collaboration at scale. Known as 4-in-a-Box, this collaborative approach brings together:



in cross-domain Digital Factories. *"Combing these four skills is a more efficient way of creating solutions to business challenges,"* says Gibert. *"You have everyone in the same place, they are collaborating on a common topic, and we have the ability to release deliveries through an agile way of working."*

Kerkhofs is another CIO who recognises the traditional IT supplier relationship has run its course. Too often, IT is an order taker. This disconnected approach creates fragmented solutions, systems and data sets. *"In this new digital world, you have to start looking at a much more collaborative model,"* he says.

Bridgestone's Digital Playground provides a scalable, secure and sustainable infrastructure that allows people to collaborate. Kerkhofs says this model encourages cross-functional collaboration where people across the business define digital roadmaps in partnership.

Zagury also points to collaboration. Cisco is working with BT to think about how technology can be used to reinvent offices as collaborative spaces in the hybrid age. *"That work is all about how we make the office a magnet and not a mandate,"* she says.

Further developments are afoot. BT's Colin Bannon suggests the convergence of DevOps, which involves agile application development, and FinOps, which is a means for controlling costs and platform usage, especially around cloud, could boost collaboration going forwards.

Zagury says true value is delivered at the intersection of business disciplines, such as the role of site reliability engineers, who operate at the junction of software engineering, operations management and IT management: *"This intersection of disciplines is impacting us all."*


Sustainability

Bannon says BT has learnt five key things from its pioneering work around sustainability:

- 1 Investors, regulators and governments want evidence of sustainable practices.
- 2 Attention to Scope 3 emissions is increasing.
- 3 Robust data is the best defence against greenwashing accusations.
- 4 Effective carbon-cutting programmes create cost savings.
- 5 Genuine sustainability credentials helps firms to attract and retain talent.

BT is putting lessons learnt into practice, says Bannon: *"We're rearchitecting all of our networks to combine them into a multi-service solution – called Global Fabric. It's built on the latest hardware, which is more efficient, functional and reliable than legacy equipment."*

There's already 16% fewer devices in our network due to working with partners such as Cisco. The devices and platforms the company has converged are

 **64% more efficient**

In total, BT is delivering a network that's

 **79% more energy efficient than existing networks**

Bannon says the network of the future will allow BT to give its customers the data they need to report sustainability more effectively: *"We've put this circular economy of energy efficiency at the heart of sustainability and how we're designing for the future."*

In the case of Carrefour, Gibert says the retailer has deployed tools to monitor its IT carbon footprint. However, in-store electricity is also a big part of emissions. Carrefour uses specialist systems to monitor in-store energy consumption. The retailer is also deploying solar panels and working with partners to improve its processes: *"It's an ongoing challenge."*

Kerkhofs says all-encompassing sustainable practices must consider deforestation, responsible sourcing, water treatment, recycling, and product life cycle management. CIOs who want to use technology to oversee these areas face a huge challenge. Bridgestone has developed a suite of applications for its reporting responsibilities. *"The learning curve has been enormously steep so far and it's not going to stop anytime soon,"* he says.





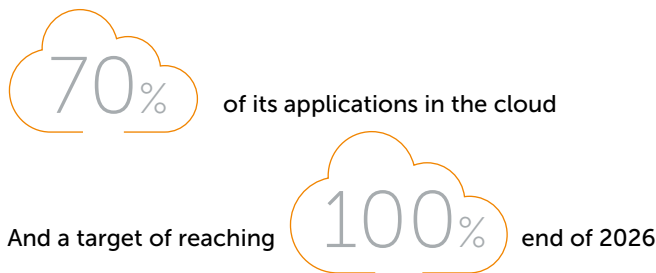
How are CIOs reengineering the IT landscape and associated platforms?

While many enterprises are adopting a cloud-first approach, lots of organisations are still bogged down by decades-old legacy infrastructures. So, how can CIOs adopt a modern digital platform that provides synchronicity between IT, business and the marketplace?

Olufs says DHL Express has expended a lot of effort in streamlining its application environment during the past 10 years. The company previously had thousands of applications in its network. Today, the firm has just 200 innovation-focused tools: *“That’s a very important step.”*

DHL Express has also ensured by design that its data models are synchronized and harmonized. *“We have data warehouses and other big customer-facing systems that are the same for everyone. Creating an omni-channel approach is now much easier,”* says Olufs.

For CIOs who are looking to rearchitect the IT platform, Gibert says the public cloud is an *“obvious choice”*. He sees the cloud as a pathway to better value services. Carrefour currently has:



“Before, it took too much time to deliver value and the public cloud has helped us a lot,” he says. *“The cloud is not a magic sauce; it’s only building blocks. You need then to architect your full platform correctly, but it’s helping a lot.”*

Cisco is another company that’s using the cloud to reengineer its IT landscape. Zagury says the company’s networking, security, observability and collaboration platforms are tied together by the cloud: *“There’s a design principle – it needs to be extensible, it needs to be interoperable, and it needs to be open, so that people can develop modern applications on it.”*

Zagury says any platform should leverage the capabilities of an ecosystem of partners. She gives the example of how Cisco has worked with BT to deliver its Meraki cloud-based platform. *“That platform is not just about delivering Wi-Fi ubiquitously,”* she says. *“It’s also about what our hundreds of ecosystem partners can do to deliver business outcomes.”*

Bridgestone, meanwhile, recently closed its internal data centre and is now a fully cloud-native operation. *“And that comes with all the tools and bells and whistles for optimization and for running a modern digital environment that we’ve been looking for,”* says Kerkhofs.

However, there’s still challenges to overcome. Kerkhofs says the transition to the cloud has often involved the lift and shift of applications. He recognises that running old applications on the cloud is expensive and inefficient. Yet the move from an internal data centre to a cloud-native operation is a big step forwards: *“Our team has celebrated the accomplishment.”*

The good news overall, says BT’s Colin Bannon, is that organisations are now taking a nuanced approach to where they place their workloads. *“Let the apps decide,”* he says. *“In different sectors and companies, the apps have certain characteristics and a greater propensity to where they would be best placed.”*

Bannon says some apps work best close to the production environment, others work best at the edge of the network. Some apps talk a lot and send a lot of data, others require variability and flexibility in terms of demand.

BT’s Global Fabric is set to comprise over



160

directly connected locations

and all of those BT nodes are interconnected redundantly. When factoring in local metro locations, this number rises to



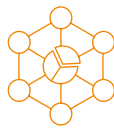
700

indirect locations

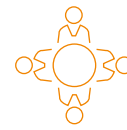
Bannon underscores the critical importance of robust micro-segmentation and security throughout the modern area network. *“Apps have exploded and it’s really important that you think about a fabric model that can underpin your digital transformation,”* he says.

Conclusion: Four leadership lessons for CIOs

Four themes emerge from the CIONEXT discussion for digital leaders who are looking to create the fabric for a future-proof organisation and to achieve alignment between the market, business structures, and IT infrastructures and platforms.



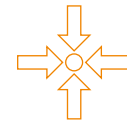
Business models are changing fundamentally. Think of how Tesla started as an electric vehicles producer and has shifted to mobility and energy, while Amazon transitioned from online retail to cloud provision. *“We’re all in the process of redefining our businesses,”* says CIONET’s Roger Camrass. *“Are we ensconced within a sector or are we moving across sectors?”*



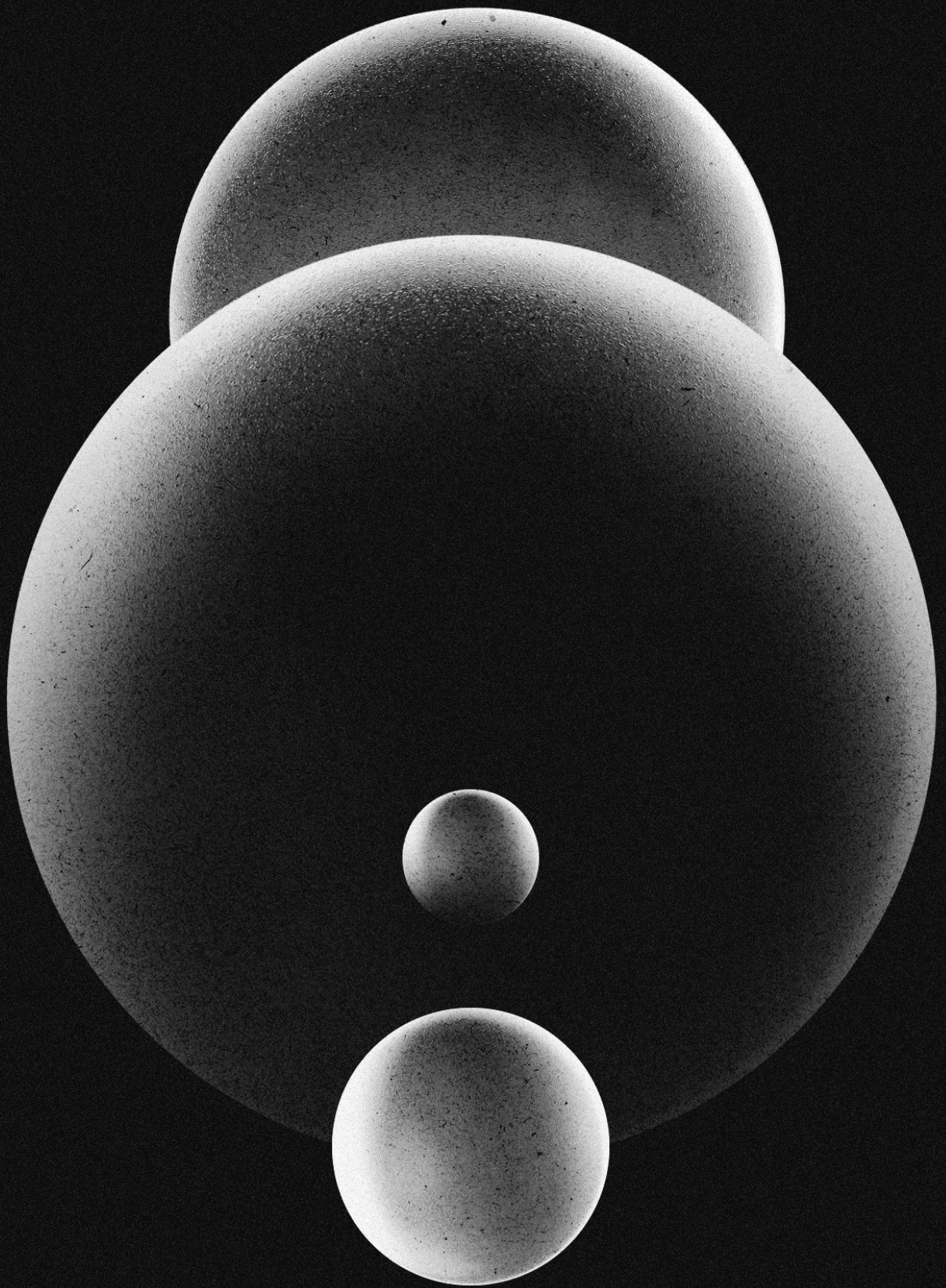
CIOs must consider **people and culture**: *“You can’t move an organization through pure technology – that’s not going to work. Without leadership you’re not going to get anywhere at all,”* says Camrass, who suggests a six defining characteristics of digital leadership – as highlighted in the CIONET Cookbooks.



Camrass says CIOs must aim for **synchronicity** between IT and the business: *“How does synchronicity really work in practice?”* he asks. *“How do you get the right skills, environment, objectives and governance to make synchronicity work?”* He says CIOs must remember the nature of these four critical factors has changed and will continue to evolve in the digital age.



CIOs must focus on the **digital platform**: *“Organisations are bringing in hundreds and thousands of SaaS services,”* says Camrass. *“We are using multiple cloud platforms. So, how do we simplify? Because right now, we’re only complicating things. The challenge going forwards is how to manage a versatile and complex environment in a secure way.”*



About the experts



Olivier Gibert
Global CTO, Carrefour

Olivier Gibert is Global CTO at Carrefour, which is an international retail giant that operates across more than 40 countries. Olivier has a degree in engineering from INSA Lyon. He's worked in IT for more than 25 years and describes technology as his passion. Olivier started his career in consulting, working for major companies such as CGI, SLIB and Sopra. He joined Carrefour in 2014 as lead architect. During the past decade, he's risen to the position of CTO, where he is helping the retailer to deliver on its ambition of becoming the leader of food transition for all. His role involves deploying technology and data across Carrefour's disparate geographies with the aim of helping the organisation become a digital retail company. Olivier is rearchitecting the business to deliver solutions quickly to market, to provide personalised recommendations to customers, and to prioritise efficient and sustainable operations across a complex ecosystem.

[Watch interview](#)



Alexandra Zagury
Vice President, Cisco

Alexandra Zagury is VP of Partner Managed and as-a-Service Sales at technology giant Cisco. She speaks four languages and graduated from the London School of Economics and Political Science with a degree in science and a master's degree in management. After working for major companies such as Citi, Yahoo and BlackBerry, Alexandra joined Cisco in 2015 and moved into her current role in July 2020, where she leads the development of new business models that support the managed and as-a-service markets. In her senior position, Alexandra works with her team to help partners and customers achieve their desired business outcomes. Prior to her current role, Alexandra ran the sales transformation of Cisco's 7,000-person Global Specialists organization. She is well known for her ability to create and execute strategy while maintaining operational excellence that allows the company to meet its long-term targets. Her work helps to drive Cisco's long-term business evolution.

[Watch interview](#)



Bart Kerkhofs
Vice President, Bridgestone

Bart Kerkhofs is VP for IT at Bridgestone across Europe, the Middle East, India, and Africa. With a degree in engineering from the University of Leuven, Bart honed his IT skills at big-name companies, such as Proctor & Gamble, HPE and DXC. He joined Bridgestone in 2017 and considers himself lucky to combine his long-term interest in technology with his passion for automotives and motor sports. While Bridgestone is well known for producing high-quality tyres, Bart says the Japanese company has the ambition of becoming a technology business that's focused on sustainable solutions. He is helping the company to meet its objectives by rearchitecting the business in response to the shift to CASE (Connected, Autonomous, Shared, and Electrified) vehicles. Bart says three pillars are key to Bridgestone's successful digital transformation journey: delivering the digital IT backbone, changing the digital operating model, and creating an IT partner ecosystem.

[Watch interview](#)



Colin Bannon
CTO, BT

Colin Bannon is CTO at BT Business, which is a managed network services organisation that provides high-quality telecommunications services to businesses. An engineer at heart, Colin studied science at Victoria University in Canada. He began his technology career with IBM and subsequently worked for big IT companies, such as Lucent and Unisys. Colin joined BT Business in 2005, where he focuses on engineering great technological solutions to his customers' challenges. He says BT Business offers security, outsourcing, and voice and digital workplace solutions to customers across its high-quality network, as well data-led emerging technology services covering 5G, IoT and Quantum. Colin wants to help BT deliver to its purpose of 'we connect for good'. He says this aim means enabling the company's clients to use the best possible technology to unlock the potential of their employees and the services and experiences they deliver to customers.

[Watch interview](#)



Dirk Olufs
EVP & CIO, DHL Express

Dirk Olufs is EVP and CIO at DHL Express, which is a business within the DHL Group that specialises in delivering shipments and parcels around the globe. With a long-standing passion for computing, Dirk started his own software company during his degree in economics from the University of Cologne. He joined DHL Express in 1997. Today, he helps the business create digital solutions to a range of business challenges, including the rapid growth in e-commerce and supply chain complexities. Dirk says DHL Express is focused on developing an insanely customer-centric culture, which puts the client at the heart of everything the business does. He says the company wants to hone its high-quality delivery services. Dirk is implementing a range of digital systems that provide real-time insight on customers. This process of digitalisation provides up-to-date information to customers that is being used to drive continual improvements in their experiences.

[Watch interview](#)



About CIONET

CIONET is the leading community of IT executives in Europe and LATAM. With a membership of over 10000 CIOs, CTOs and IT Directors, CIONET has the mission to help IT executives achieve their aspirations. CIONET opens up a universe of new opportunities in IT management by developing, managing and moderating an integrated array of both offline and online tools and services designed to provide real support for IT executives, so they can do more than just keep up with change but ultimately define it.

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Cisco offers an industry-leading portfolio of technology innovations. With networking, security, collaboration, cloud management, and more, we help to securely connect industries and communities.

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About BT

We serve global multinational organisations with our security, cloud and networking services in 180 countries. We help with flexible, on-demand models and cloud-based and software-defined solutions

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