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Insights

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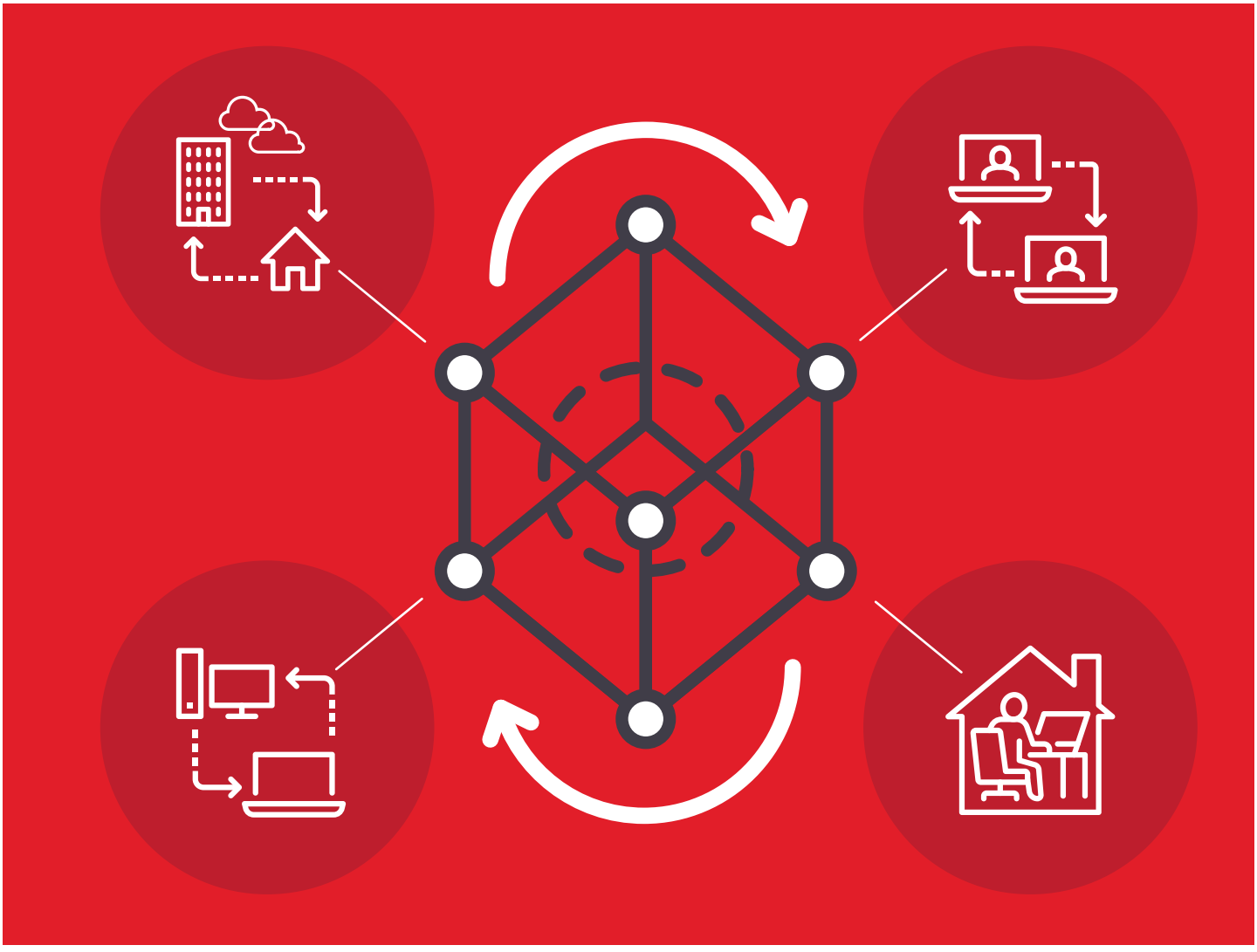
The coronavirus pandemic has forced organizations to reformulate technology strategies and pivot to IT agility, resilience, and speed.

Succeed in tough times: Make a digital pivot



Key takeaways

1. Amid the disruption caused by the coronavirus pandemic, organizations have had to reassess their digital transformation strategies and recalibrate, often speeding up planned technology projects to survive.

2. The organizations that are faring best during the crisis are the most digitally mature – they've embraced strategic tech initiatives that have enabled them to swiftly shift in accordance with market demands.

3. To respond, organizations need technologies that help them create new customer experiences, such as cloud migration and application modernization. They also need to rethink how they design and build their infrastructure, to accommodate the explosive growth of remote workforces.

When the coronavirus pandemic hit earlier this year, Alonso Yañez, CIO of Walmart's operations in Mexico and Central America, sprang into action, triggering the retailer's crisis management plan and leading its ongoing response.

After quickly upgrading his remote-access infrastructure, Yañez sent all 1,000 of his IT staffers home, where they have been working ever since. That remote IT group has been able to support Walmart's massive operations in the region – nearly 2,400 stores, 42,000 providers and vendors in the supply chain, and 200,000 employees.

At the same time, Walmart accelerated its digital transformation efforts, creating an omnichannel buying experience for its customers. Now they can shop online and have products delivered, shop online and pick up at the store, shop at the store and pick up items ordered previously, or any combination thereof.

"Everything should be easier, independent of the channel, the situation, the location. That's the intention, and that was the mission three or four years ago," says Yañez. During the pandemic, with lockdowns and physical distancing, "everything is speeding up. It's like a time machine. What we wanted three years ago and was part of our five-year mission is now reality."

The result: Walmart stores and clubs – there's one within 10 miles of nearly every home in Mexico – are open for business. Employee and customer safety is a priority. And e-commerce sales have registered triple-digit growth.

Walmart is a prime example of a company that has successfully negotiated a "digital pivot." Virtually every company had a pre-existing digital transformation plan in place. In many cases, companies were diligently, but maybe not urgently, implementing their plans; in others, they had prolonged, multi-year programs. But the coronavirus pandemic presents a cataclysmic, once-in-a-lifetime disruption that is forcing companies to confront a new reality and reshuffle their digital transformation activities in order to survive.

Now in our new normal, so goes business

"We believe that what's happened in the last four months, based on our conversations with CIOs, CTOs, CISOs, and chief data and digital officers, is that there has been a pivot based on the type of organization that you fall into," says Paul Lewis, global CTO at Hitachi Vantara.

The technology vendor sees three types of organizations dealing with the unprecedented disruption caused by the pandemic. There are thrivers – think Zoom, Netflix, Amazon. These are companies that are seeing an orders-of-magnitude increase in virtually every metric you can imagine – number of customers, number of subscriptions, number of transactions. At the opposite end of the spectrum are the businesses that require the physical presence of customers – theme parks, movie theater, hotels, airlines. They've seen revenue drop off a cliff. Then there are companies in industries like retail, financial services, and manufacturing that have been forced to change business practices and business models on the fly. For example, in financial and insurance, the move to

digital signatures and mobile apps. For a small retailer with a store in the mall, switching to e-commerce or finding alternative sales channels.

Generally speaking, the companies that are doing the best job of adapting are those with a high level of digital maturity. "The more mature the organization was with modern philosophy, modern design, modern architecture going into covid, the healthier they are moving through it, and the healthier they are moving out of it," says Howard Holton, enterprise CTO at Hitachi Vantara.

Companies that pursued digital transformation initiatives "on paper" – that is, they got a top-down directive from the CEO, say, to write up a plan – didn't get serious about the actual implementation, says Holton. As a result, they didn't adapt as well as their peers.

"The companies that embraced it a companywide initiative were able to transform, to push forward. Your company needs to be designed in a way that allows you to pivot as the market demands," Holton says. "That's the most important differentiator and really the most important lesson we should have learned up to this point."

A swift transition at Schneider Electric

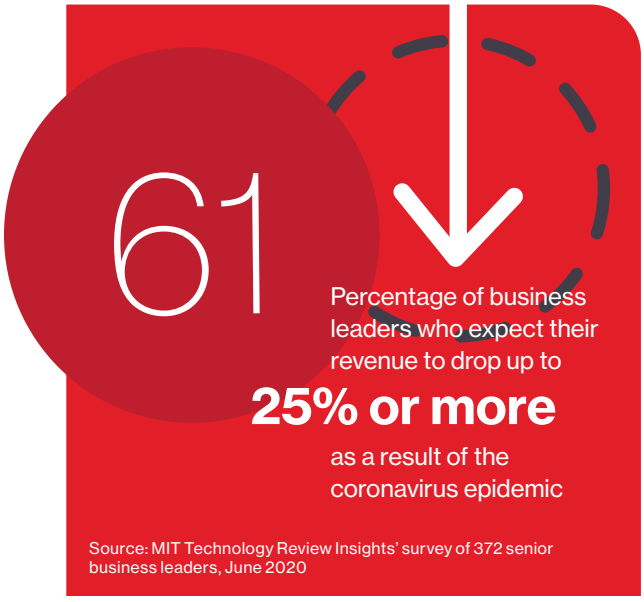
One company that has embraced a digital transformation strategy and responded quickly and effectively to the crisis is Schneider Electric. It is an energy management and industrial automation corporation that helps its customers digitally transform their data centers and other facilities, so it's no surprise that Schneider was well along on its own digital transformation journey when the pandemic struck.

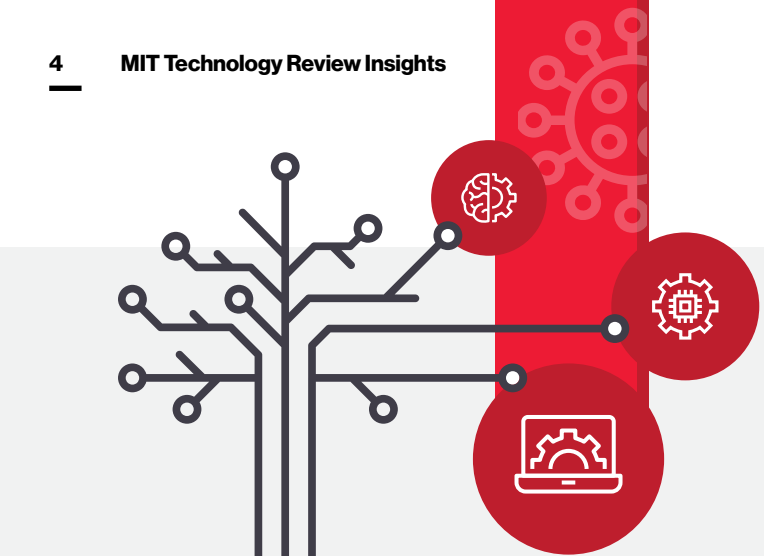
"Overnight, we've seen things that were going to be five, 10, 15 years down the road all of a sudden fast-forwarded because of the pandemic."

Mike Anderson, Senior Vice President and CIO, Schneider Electric

The first pivot point for Mike Anderson, senior vice president and CIO for Schneider in North America, was moving to a full-blown, work-from-home model overnight. Luckily, many employees were already working a hybrid schedule, so Schneider had made significant investments in the underlying remote access infrastructure. But Anderson had to quickly add more virtual private networks, provide more bandwidth, and enable more concurrent end users to "make sure we provided a positive experience in the work-from-home model."

Once employees settled into their fully remote work environment, collaboration emerged as a top priority. Anderson says the company had been in the early stages of a transition from Skype for Business to Microsoft





"The more mature the organization was with modern philosophy, modern design, modern architecture going into covid, the healthier they are moving through it, and the healthier they are moving out of it."

Howard Holton, Enterprise CTO, Hitachi Vantara

Teams, which has better capabilities for selective screen sharing, advanced integration of meeting notes, white-boarding and, most important, as a cloud-based service, it scales to accommodate more participants.

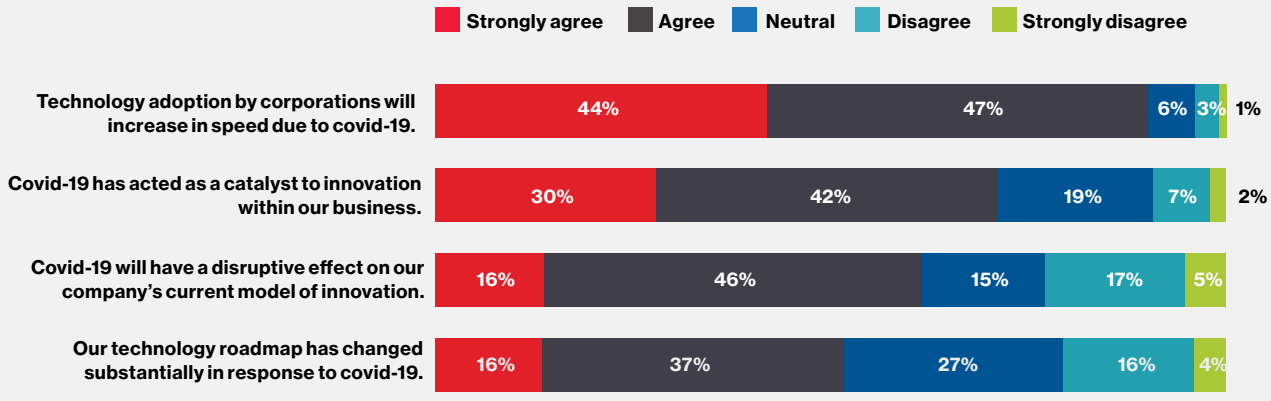
The pandemic put the Teams transition into overdrive; between December and the end of March, Teams usage went from 19 million meeting minutes to 60 million. "We were worried about adoption and change management, but people loved it," says Anderson. The move to Teams did require re-routing traffic directly to the Microsoft cloud and accelerating the adoption of optimization technologies like SD-WAN.

As an industrial manufacturer of highly engineered systems, Schneider has customers that want to physically inspect the product they've ordered at different stages in the process before signing off on the next stage. Customers would visit a Schneider plant for the inspection – but that's a problem in the covid era. To solve it, Anderson was able to digitally re-create that inspection process by mounting video cameras on carts in a way that gave customers a view of the products and kept employees safe.

Quickly shifting to a digital selling model was another key pivot point. Via collaboration technology, Schneider's salesforce is now conducting virtual product demos.

Shakeup in business as usual

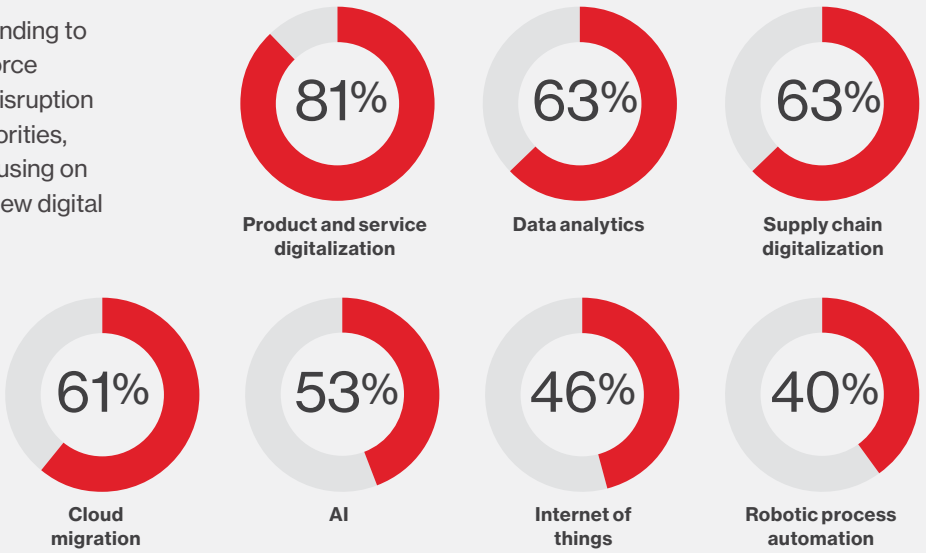
The coronavirus pandemic will change the way organizations manage business. Almost three-quarters believe the crisis has sparked internal innovation, and a whopping 91% expect corporate technology adoption to speed up.



Source: MIT Technology Review Insights' survey of 372 senior business leaders, June 2020

Tech boom

Organizations are responding to pandemic-driven workforce changes and business disruption with new technology priorities, with more than 80% focusing on digitalizations, building new digital services and products.



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"Overnight, we've seen things that were going to be five, 10, 15 years down the road all of a sudden fast-forwarded because of the pandemic," says Anderson.

Under duress, achieving agility, scale

Organizations are re-prioritizing digital transformation initiatives in order to create new customer experiences that are likely to be online, highly mobile, and highly social. One way they can meet those requirements for increased scale, agility, and speed is by accelerating their cloud migration and application modernization programs. That means not just lifting and shifting existing apps to the cloud. "If I'm refactoring my application to be cloud-native, now I'm taking advantage of the availability of the cloud, the distributed nature of the cloud, the agility of the cloud to scale up and scale down," says Lewis.

A smart cloud strategy also includes moving appropriate legacy apps to software-as-a-service platforms, which also provide the scalability, agility, and speed that organizations are seeking.

"If you look at the percentage of companies focused on moving major workloads to the cloud, it's been really slow," says Judith Hurwitz, president and CEO of consultancy Hurwitz & Associates.

In response to the pandemic, Hurwitz has seen companies accelerate both their migration of applications to the cloud but also their new emphasis on cloud-native application development.

Organizations also need to scale their infrastructure capacity and resilience to accommodate all of the shifts associated with the new normal, which include the use of server-based virtual desktop infrastructure – which separates the desktop operating system from a physical device such as a laptop – to deliver applications to remote workers and accommodate the surge in e-commerce.

Rather than continue to stack up capacity in a vertical design model inside an on-premises data center, companies should be scaling out their IT infrastructure across a hybrid environment that includes on-premises, multi-cloud, and edge locations. With capacity spread across multiple availability zones, companies can achieve scale, resilience, and agility.

Automation can be applied throughout the IT infrastructure, as well as across business processes, in order to take mundane, repetitive tasks out of the hands of employees and enable software to do them far more quickly and accurately. Automation can speed up software development, improve cybersecurity, and optimize business processes.

And finally, there's IT infrastructure procurement. The traditional process is too slow to meet rapidly shifting business demands. "It's impossible for me to architect, to acquire, to have delivered, to install, configure, and rack equipment in three weeks – it's literally impossible," says Lewis. He says IT organizations should consider a variety of alternatives, such as pay-per-usage, capacity-on-demand, managed services, or subscription-based software. "You need flexibility per application, per workload, versus per data center."

The great accelerator

Similar to the way survivors of hurricanes emerge from their homes to see which trees are still standing and which buildings have their roofs, the current economic upheaval will eventually end, and we will enter a new post-covid reality. When we look around to survey the damage, we will see that many companies have gone bankrupt, many will be teetering on the brink, and many will become takeover targets.

The companies that will thrive are the ones that rethink the whole notion of digital transformation. As Hurwitz puts it, "How do I create sustainability for the business so the next time some kind of event happens, I'm ready? I have to rethink how I get business done, how I grow my business, and how I compete with businesses that are really agile and can change on a dime. How do I build applications that are innovative and can address what my customers really need?"

At Walmart, CIO Yañez is parlaying a response-and-recovery strategy into an "offensive position." For example, he's in the early stages of rolling out a self-service in-store experience that enables shoppers to scan items on their smartphones and perform contactless checkouts. Looking ahead, Yañez says he's thinking about ways to offer shoppers extras like free Wi-Fi in exchange for information. That then can be analyzed to extract business insight into customer buying habits. His objective is to put together the right capabilities "to capture opportunities that in other circumstances would have been impossible to see."

And Schneider Electric today is more resilient than it was six months ago, Anderson says. The company has digitized customer engagements, accelerated change processes, and gotten people to adopt digital tools faster than he would have expected. "The pandemic accelerated that for all of us," Anderson says.

Security in a work-from-home world

The sudden, unexpected migration of thousands of employees from the relatively secure confines of the corporate office to home networks that are shared with other family members have ratcheted up security concerns.

As Hitachi Vantara global CTO Paul Lewis sees it: "I now have tens of thousands of people at home who've never worked at home, who probably aren't trained the way that information workers are trained, who are much more susceptible to phishing attacks and can be more easily socially engineered at home versus at the office. That's a much bigger concern now."

And it's not just your own employees. Hitachi Vantara enterprise CTO Howard Holton points out that all of the networks that your remote employees are connected to can become threat vectors. "It's no longer, 'I have to train my employee so that my employee doesn't install anything damaging to my network,' but rather, 'I have to now train everyone that has contact with my employee's home network so that they don't install anything on their devices that becomes problematic."

Certainly, companies need to respond to this increased security threat by beefing up training for employees. But in addition, organizations should be looking into enhanced ways of securing physical laptops from theft or loss, tightening up authentication and remote access policies with virtual private networks, enforcing enhanced data protection and data privacy, moving applications to a virtual desktop infrastructure, and even making sure collaboration sessions aren't hijacked.

"Succeed in tough times: Make a digital pivot" is an executive briefing paper by MIT Technology Review Insights. It is based on research and interviews conducted in July and August 2020. We would like to thank all participants as well as the sponsor, Hitachi Vantara. MIT Technology Review Insights has collected and reported on all findings contained in this paper independently, regardless of participation or sponsorship. Jason Sparapani and Laurel Ruma were the editors of this report, and Nicola Crepaldi was the publisher.

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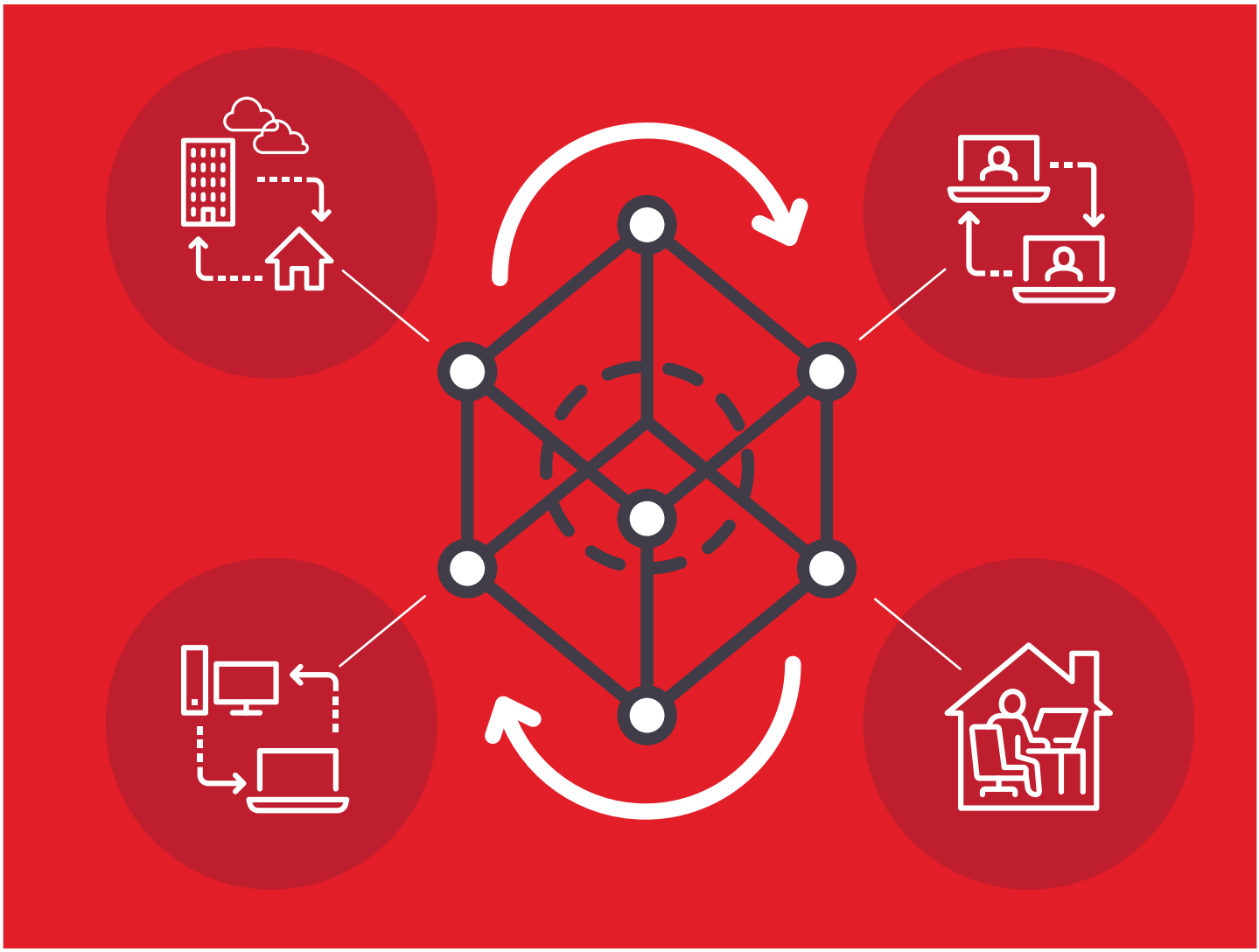

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