Drive business growth with network modernization

Learn how managed services can help advance manufacturing, construction and transportation

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Industrial companies face a variety of challenges in the pursuit of competitive advantage and growth. Implementing managed services can help them overcome these obstacles as they look to improve scalability, reduce costs, secure their network and empower employees.

Managing the rapid expansion of new and complex technologies can top the list of key considerations for companies from aerospace to mining. Integrating these systems, platforms and solutions requires resource-constrained IT teams to learn and adapt quickly to avoid compromising workflows and operational goals. The technologies can empower employees, especially distributed workers and remote staff. However, when solutions are not effectively rolled out, this can undermine cost management, communication, collaboration and productivity. A sound plan guided by expertise can provide a reliable path forward to the many potential benefits technology offers companies that design, manufacture or ship products.
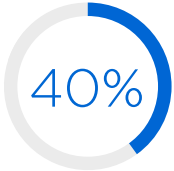
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40 billion

IoT device connections by 2030.[1]

½

of manufacturing executives say the pace of AI adoption in the industry is fast or very fast.[2]

40%

of breaches involve data stored across multiple environments.[3]

Connectivity powers industrial modernization

As companies embrace new solutions, they must inevitably contend with the escalating need for dependable, high-performing connectivity. The rapid expansion of Internet of Things (IoT) devices is creating urgency among industrial companies to adopt new smart technologies, enhance monitoring and improve safety. Fast access to data residing in the cloud is another key driver of connectivity as businesses seek to avoid latency and improve operational efficiency and responsiveness.

The number of devices is growing, driving ever-greater volumes of traffic on the network. To retrieve the data generated by these devices and use it for better, faster decision-making, companies require secure and reliable connectivity. Of increasing importance in manufacturing and similar sectors is the connectivity required to maximize the potential of new and emerging innovations and applications such as AI, machine learning, data analytics and smart camera technology. These technologies are fast becoming important ingredients in companies' pursuit of competitive advantage.

Protect your business

Growing cyberthreats are an unavoidable by-product of increasing connectivity. As companies migrate to cloud and edge architectures, integrate software as a service (SaaS) into workflows and add devices to build out their connected ecosystem, the attack surface expands.

Although connecting operational technology, IT and external networks promises greater efficiency and productivity, the interconnectedness can also introduce vulnerabilities that require additional security controls. Buildings, machines, products and people underscore another important threat vector demanding strict safeguards — physical assets. Bad actors look for weaknesses across factories, warehouses and other sensitive structures, exploiting insufficient protection to steal resources or interrupt operations. Smart cameras can help mitigate such threats, providing important data, analytics and control from video monitoring indoors, outdoors and via infrared for areas with poor lighting.

Unleash the differentiating power of your data

Data can reveal opportunities to improve product quality, streamline supply chains and optimize costs. Managing and processing the rapidly growing volumes of data from new devices, applications and connections is vital, from the front office to the factory floor and beyond. With rising data also comes the necessity to implement systems and processes to securely store and access that data so you can make the greatest use of it for your business.

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Three key industry segments and network modernization

Each economic sector contends with issues as they modernize their networks and drive digital growth. Manufacturing, construction and transportation offer a glimpse into some of those challenges and priorities, from rising costs to cyberthreats.

Manufacturing

Among manufacturing leaders, 84% expect to see an acceleration in the adoption of digital technologies over the next few years.[4] That trend reflects a broad understanding across the industry about the increasingly important role technology will play for companies. Leaders are eager for solutions that address manufacturing challenges and help create the resiliency necessary to limit potentially costly downtime. They want help to lessen persistent cost pressures and protect long-term profitability while they scale up their smart factory and network modernization efforts. As they do, they know they must also guard against new vulnerabilities related to cybersecurity, such as ransomware, phishing and data breaches.
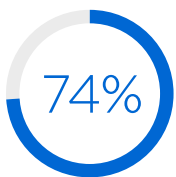
For manufacturers, migrating important applications to the cloud figures among their most pressing priorities as they look to achieve greater efficiency and productivity. They also see the benefits of building a cloud-direct infrastructure to support predictive maintenance as they seek to lower operational costs and improve overall production processes, scaling as demands require. Meanwhile, WAN solutions can support broader modernization efforts and help avoid the drawbacks of backhauling traffic to a centralized data center. In addition, organizations can reduce latency for IoT sensors and other real-time applications and minimize security risks with software-defined networking solutions that prioritize traffic routing by type.

> 70%

of manufacturers plan to increase their investments in IoT.[5]

Construction

It is estimated that the construction industry will need to hire over 2 million workers to meet near-term demand.[6] This labor shortfall comes at a time of compounding challenges, from ongoing inflation to rising material costs. Supply chain disruptions continue to frustrate construction operators as well, impacting schedules and the customer experience. Low adoption of emerging technologies is part of the problem. The absence of digital tools contributes to project delays while limiting productivity and undermining office and off-site communication and collaboration.
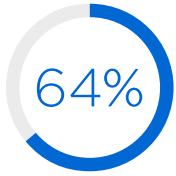
As the construction industry looks to the future, leaders want to build strong, reliable networks and optimize the use of IoT devices. Given the distributed nature of their business, a growing number of leaders see the upside of enabling data access from a centralized dashboard to facilitate real-time decision-making across the company's jobsites. Integrating advanced project management software tools is part of the same push to realize untapped efficiencies to bring down costs and hone their company's competitive advantage. Equally important is the integration of security protocols and zero-trust user access to data to protect sensitive information regardless of location.

74%

of engineering and construction firms say a focus on innovation is important for recovering from disruptive events.[7]

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Transportation

64%

of shippers indicate that foundational technologies such as transportation management systems are part of their technology roadmap.[9]

In the transportation industry, 87% of shippers report maintaining or expanding their technology investments since 2020, with 93% planning to maintain or increase their spending through 2026.[8] This comes at a time of stubborn cost management challenges and an increasingly complex technology landscape. Specific subsectors also face their own unique hurdles, such as driver staffing shortages in the trucking industry. All need new and better ways to consistently improve productivity, labor and performance management if they hope to remain competitive.

Goals for the sector include investing in digital logistics solutions to streamline operations, achieving always-on availability to avoid disruptions to data and communication, and reliable connectivity to power new technology and apps. Adoption of a resilient network also ranks among the top priorities to avoid disruptions, especially to mission-critical applications. Business continuity and sustained visibility of the company's entire network represent other must-haves moving forward.

Spectrum Enterprise® empowers your network modernization

Spectrum Enterprise offers a comprehensive portfolio of industrial connectivity solutions for companies across industry segments. Our expertise and suite of managed services can help your organization harness the power and promise of new technologies and accelerate your modernization plans, evolving with your company as needs change.

Experience the benefits of managed services and solutions

Managed solutions that integrate network management with smart devices and are customized to your needs can deliver a host of advantages. For example, you are better able to meet ever-changing IT demands by simplifying provisioning, visibility and integration. This can free up your resource-constrained IT team to concentrate on other goals and initiatives. You can also improve legacy connectivity among your different sites and data centers and strengthen the resilience across your workforce and workplace to help you manage disruption and uncertainty. What's more, managed services are designed to reduce your overall networking and operational costs, which can aid your efforts to lower TCO.
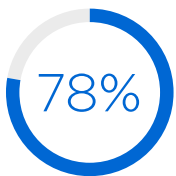
Access sufficient bandwidth to grow

With Spectrum Enterprise, you can tap the bandwidth you require to transport the mounting levels of data you are generating. Our networking services support and scale for large data transfers, low-latency apps and cloud workloads. If you have plans to move to a hybrid or multi-cloud architecture, we can help chart a path for you.

78%

of executives say their organization does not have the in-house skills to fully achieve their cybersecurity objectives.[10]

Bolster the security of systems, data and people

Spectrum Enterprise offers comprehensive solutions that encompass managed cloud security, distributed denial of service (DDoS) protection, network security and secure remote access. Help protect your enterprise data and securely connect your employees, regardless of their location, with our suite of security products and services. From network to cloud-based security, our products are designed to scale with your business needs. Our offerings also include smart cameras and environmental sensors to safeguard your physical assets, from buildings to machinery. Protect your business with security solutions that are customized to your organization and goals.

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Ensure reliable connectivity

The ongoing focus on IoT, new technology and apps means your reliance on dependable connectivity will only increase. Managed services from Spectrum Enterprise can support and enhance the performance of those solutions. Fully or co-managed WAN and local area network (LAN) solutions help modernize your connectivity and enable the agility to manage traffic types and performance with a software-defined wide area network (SD-WAN). We can help you quickly and consistently connect to the internet and public clouds via wireless internet. Finally, our high-speed data and fast, dedicated fiber internet connections can help increase your infrastructure flexibility, scaling up as needed.

Improve staff collaboration

Spectrum Enterprise offers fully managed, cloud-based unified communications (UC) solutions, simplifying workflows and enhancing communication and collaboration by combining calling, video conferencing, messaging, meetings and virtual workspaces in a single application. Extend your office network as well by providing remote and mobile employees secure access to the network and enterprise cloud services providers from anywhere.

Spectrum Enterprise is your partner for managed services

Spectrum Enterprise offers a full range of reliable, secure, cost-effective enterprise technology solutions that address your bandwidth, security, connectivity and collaboration needs. With tailored solutions and support, you can elevate the consumer and employee experience, simplify network management, support logistics goals and achieve the smart manufacturing future you want. Simplify your network management through customized managed solutions and ongoing maintenance that evolve with your business and can help reduce costs and inspire peace of mind. We can install and manage service all the way into your suite, with 100%, 24/7/365 U.S.-based support. Consult our experts to determine the optimal solutions to advance your industrial technology.

Learn more

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3.   "Cost of a Data Breach Report 2024," Ponemon Institute and IBM Security, 2024.
4.   "Manufacturing in 2030 Survey: A Lens on the Future," Manufacturing Leadership Council, 2022.
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7.   Geno Armstrong, Clay Gilge, Kevin Max et al., "Familiar Challenges—New Approaches: 2023 Global Construction Survey," KPMG, June 2023.
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9.   Ibid.
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About Spectrum Enterprise
Spectrum Enterprise, a part of Charter Communications, Inc., is a national provider of scalable, fiber technology solutions serving many of America's largest businesses and communications service providers. The broad Spectrum Enterprise portfolio includes networking and managed services solutions: Internet access, Ethernet access and networks, Voice and TV solutions. The Spectrum Enterprise team of experts works closely with clients to achieve greater business success by providing solutions designed to meet their evolving needs. For more information, visit enterprise.spectrum.com.

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