

Say Hello to the Right Technology:

A Guide to 2017
Connectivity Solutions



Frontier
BUSINESS EDGE™

Agile Companies Are Winners

It can be hard for today's businesses to create a truly integrated work environment. Having an infrastructure built on outdated technologies can further complicate the situation, resulting in a variety of business challenges that fall under four distinct categories:

- Managing Multisite Locations
- Connectivity Issues
- Bring Your Own Device (BYOD) Integration
- Decreased Employee Collaboration

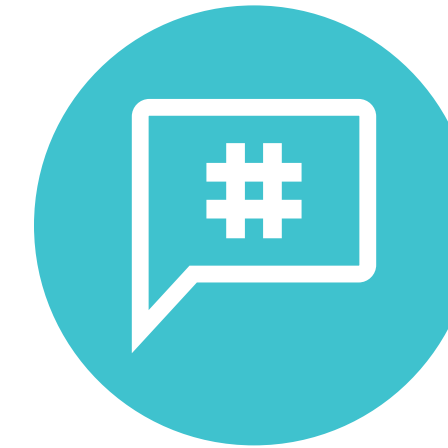
In this eBook, we'll examine connectivity solutions that can address these issues and provide work groups with the tools they need to be more productive, helping businesses run more efficiently.

What You Will Learn from This eBook



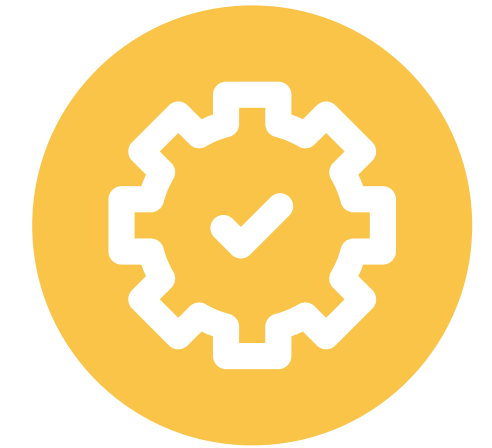
1

The connectivity challenges that hold businesses back



2

Recent trends that are changing the way businesses work



3

How businesses can work seamlessly by using technology to help employees be more productive



Common Business Connectivity Challenges

When your infrastructure is outdated, it can become increasingly difficult to create an integrated work environment. For many companies, their connectivity challenges fall under the following categories:



Managing Multisite Locations

Multisite businesses experience unique business challenges as they try to collaborate and transfer data across locations. Additionally, when these businesses add or consolidate locations, infrastructures that are built with disparate technologies can result in duplicative costs and incompatibility.



Connectivity Issues

Companies can't thrive without a connection that's fast, reliable, and secure. Businesses are at risk of disruption when systems are down, not running at full capacity, or compromised by a security breach. Plus, productivity is reduced when key resources and staff are pulled away to solve connectivity issues.



BYOD (Bring Your Own Device) Integration

Allowing employees to use their personal devices for work purposes can significantly boost productivity. But to safely realize the benefits of BYOD, companies need infrastructures that can securely support a wide range of device types, brands, and operating systems.



Decreased Employee Collaboration

Many companies use video conferencing, Voice over Internet Protocol (VoIP), and other technologies to help their staff collaborate—but they don't always have the infrastructure to handle it.

By tracking trends and using modern technologies, you can overcome these challenges quickly and affordably. Be on the lookout for their accompanying icon throughout this eBook to see which trends and solutions are best suited for your needs.



Now Trending for Businesses

There are many emerging trends that can help businesses build an integrated work environment. Read on to discover six factors that powerfully impact the technology needed to successfully run a multisite business.

1. Smarter mobility

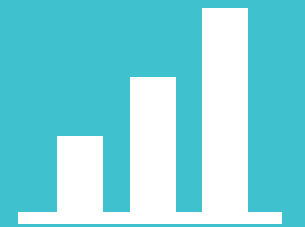
With workers more mobile than ever, businesses need to provide them with the tools needed to easily access data, applications, and resources when working from a home office, a client's site, or even while they're on the road. In addition, the universal proliferation of smartphones, laptops, and tablets has created an expectation that anyone can be in touch with anybody at almost any moment. And this expectation also exists in the workplace, where employees inevitably assume that these same types of tools will be readily available. The good news is that, when provided, these capabilities can seriously boost productivity.

Addresses these business challenges:

- ✓ Managing Multisite Locations
- ✓ Connectivity Issues
- ✓ BYOD Integration
- ✓ Decreased Employee Collaboration



By 2020:



The number of mobile workers will reach **105.4 million**.*



Mobile workers will account for three-quarters (**72.3 percent**) of the total workforce.*

2. It's all about applications

In addition to being mobile, people want to be able to have voice, video chats, email, IM, and broadband applications at their immediate disposal. These tools allow them to collaborate and enable them to contribute to projects in real time, no matter where they're working.

Broadband access supports these services; however, providing this access can present certain challenges when a multisite business partners with several service providers, including:

- Higher costs as each site is forced to negotiate different contracts.
- Different levels of service quality between locations.
- Loss of productivity due to varying data transfer speeds.

Addresses this business challenge:

- ✓ Decreased Employee Collaboration



50%

By 2018, more than 50 percent of users will go to a tablet or smartphone first for all online activities.*



3. Moving at the speed of business

Empowering your workforce to act quickly and efficiently is a powerful factor in determining how productive and competitive a business can be. Fortunately, new services are enabling workers to move seamlessly and rapidly across locations. Now, they can stop by a facility and be instantly recognized by the network, and have all the tools and capabilities they need to do their job.

Two issues that commonly impact productivity are:

- Temporary staff moves: When businesses move team members to branch locations, it can sometimes take hours or days for new desk phones, email servers, and other critical communication technologies to be set up.
- Basic onsite moves, adds, and changes: Because of outdated technologies, IT staff at multisite businesses often experience harmful downtime, leaving little time to work on critical business initiatives.

Addresses these business challenges:

- ✓ Managing Multisite Locations
- ✓ Decreased Employee Collaboration






The average total cost of a data breach is \$4 million.*

4. Keep it safe

As businesses share data, concerns over security and data protection inevitably emerge. Businesses are taking steps to secure their data, either at the location where it is created, or across networks. To help safeguard the business, it's imperative to:

- Retain backups of critical data in a safe, secure environment.
- Research and follow the regulatory requirements associated with storing employee or customer records.

Not taking these measures can leave businesses vulnerable to disruption, unplanned costs, and reputation damage. That's because:

- Finding the cause of the breach and mitigating its effects takes time, and may require hiring security specialists.
- Data breaches may need to be reported and fines may be imposed if a business's security is deemed inadequate.

Addresses these business challenges:

- ✓ Managing Multisite Locations
- ✓ Connectivity Issues



5. Being prepared when disaster strikes

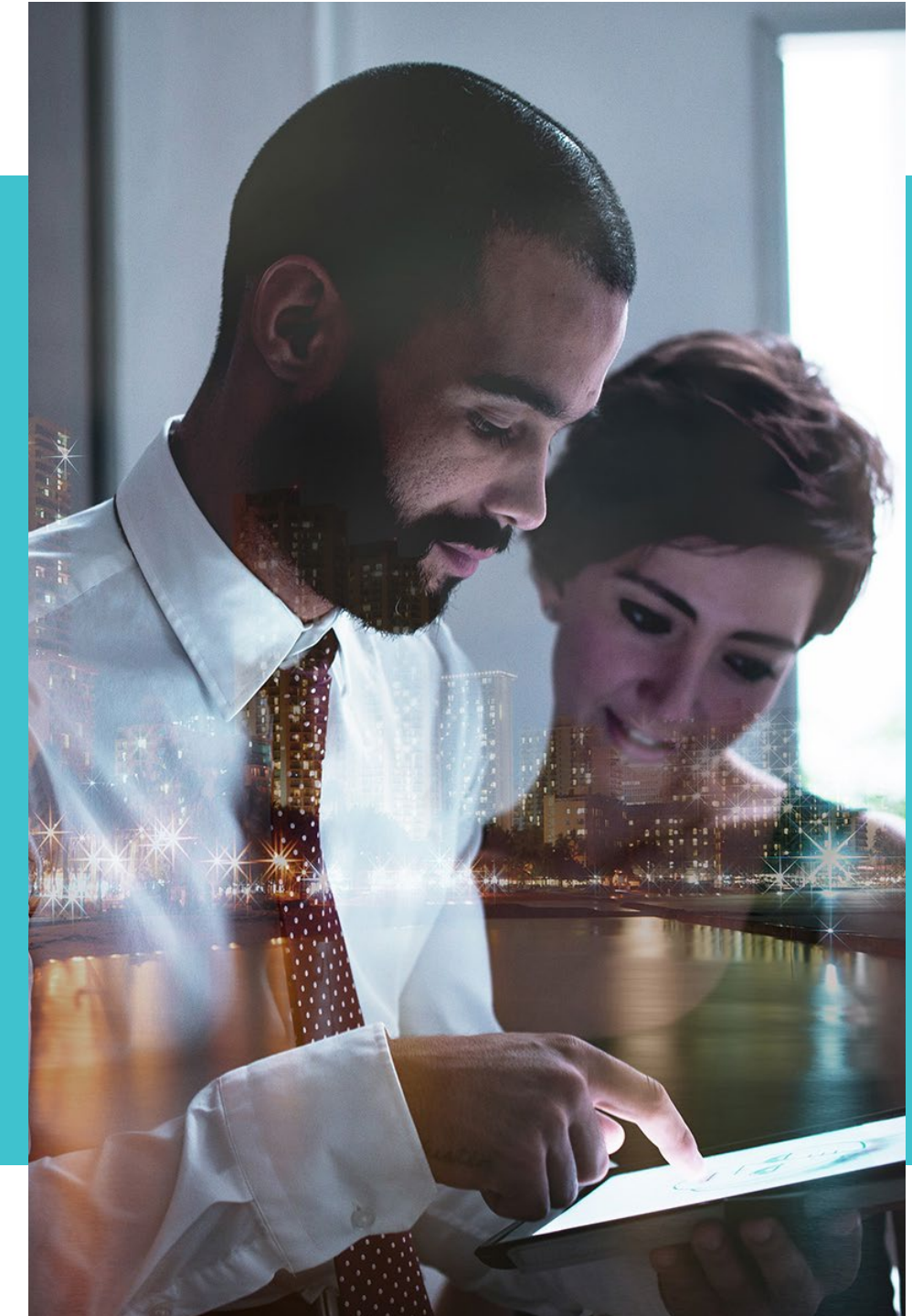
Avoiding business downtime is important for any profitable company. Whether it's critical hardware failure, a weather-related event, fire, or a flood that blocks access to the office, businesses can't afford to be offline. Clients, employees, and partners are relying on businesses to be there when they need them. Because of this, IT managers must plan on how to keep their businesses running smoothly.

Addresses this business challenge:

- ✓ Connectivity Issues



Natural disasters have cost the global economy over \$2.5 trillion since 2000.**



6. Extending the life cycle

While modern advancements have helped to increase a business's overall efficiency, business owners can't afford to pay for technology that falls out of favor within just a few years. After all, technology trends come and go. So, before making a big investment, do the research needed to make the right choices. Look for technology solutions from reliable partners that are forecasted to weather the storm, because growing businesses need technology that equips them with flexible options today—and anticipates potential needs in the future.

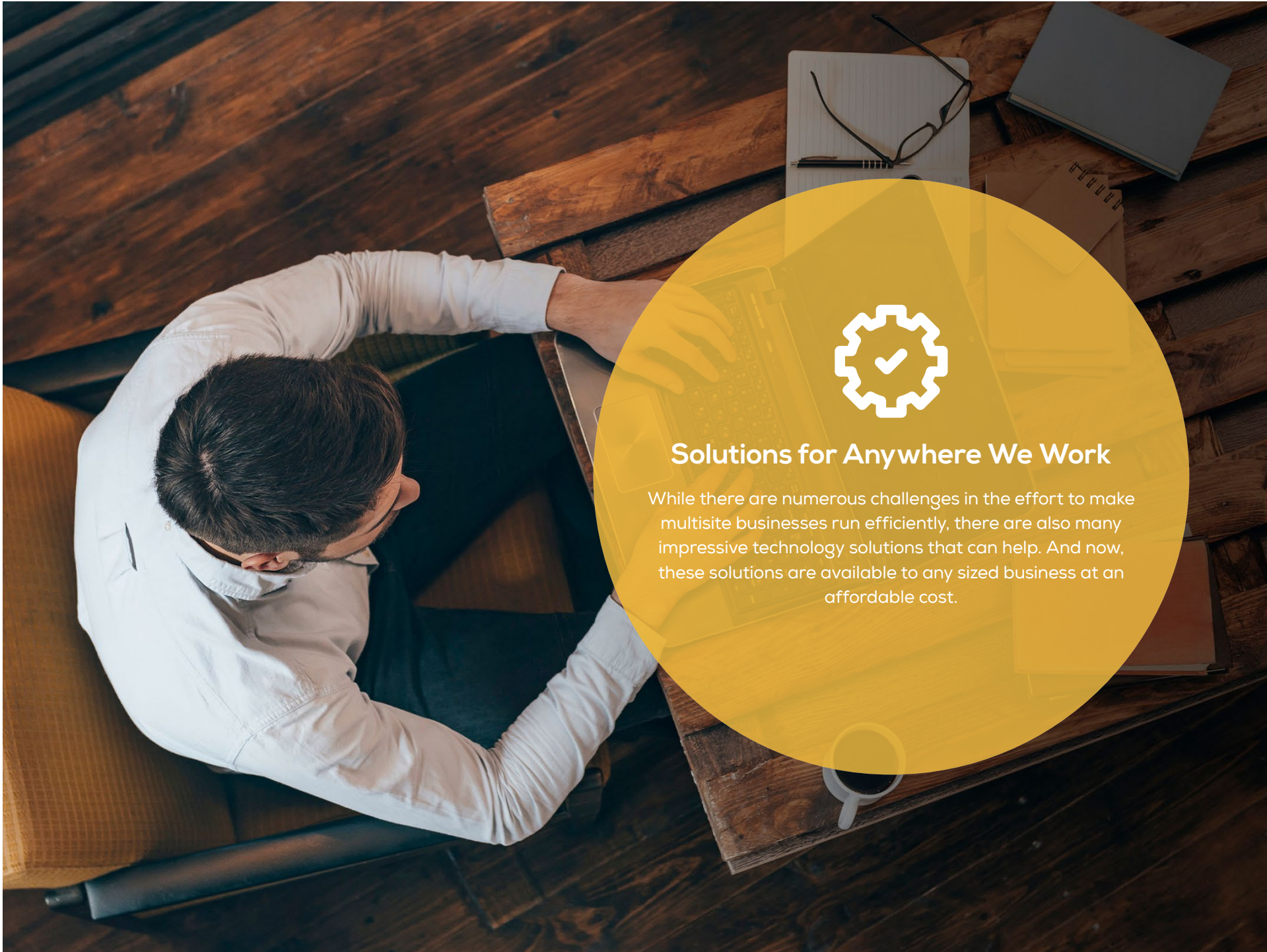
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Ethernet continues to evolve as the **Metro Ethernet Forum integrates new technologies**, such as **SDN, NFV, and Third Network Services**, to ensure this platform will serve your business far into the future.





Solutions for Anywhere We Work

While there are numerous challenges in the effort to make multisite businesses run efficiently, there are also many impressive technology solutions that can help. And now, these solutions are available to any sized business at an affordable cost.

1. Instant connectivity

Connecting all business locations with an Ethernet-based network can lay the foundation needed to have multiple offices working together as a cohesive unit. Ethernet has evolved from office-based networking for Local Area Networks (LANs)—connecting computers and devices in an office—to Wide Area Networking (WAN) Technology capable of connecting multiple office locations. With every location connected, employees have instant “any-to-any connectivity” across sites. This provides staff with access to the resources they need, including the data and applications required to perform their jobs. Ethernet enables a highly efficient network, as it can be customized to fit the unique bandwidth needs for each location.

Addresses these business challenges:

- ✓ Managing Multisite Locations
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Ethernet solutions are now the undisputed choice for WAN connectivity in a wide range of vertical industries:

- Manufacturing
- Finance
- Healthcare
- Professional Services
- Education

2. Facilitating mobility

Voice still remains a primary tool for communicating with customers, staff, and partners. However, it is no longer just about the office desk phone. For instance, Voice over Internet Protocol (VoIP) provides functionality that fits the way people work by offering:

- Portable phone numbers: Staff can answer calls to one number from anywhere—their desk, their home office, a remote office, or their cellphone.
- Call segmentation: Team members can choose which calls get forwarded and which go to voicemail.
- Call masking: When employees call from other offices, home, or on the road, it appears as if they're calling from their office to keep them accessible to customers, while also providing the flexibility to work away from the office.
- Hot-desking: Staff can receive calls from their work number and have access to all office settings and features from any business location.

Addresses these business challenges:

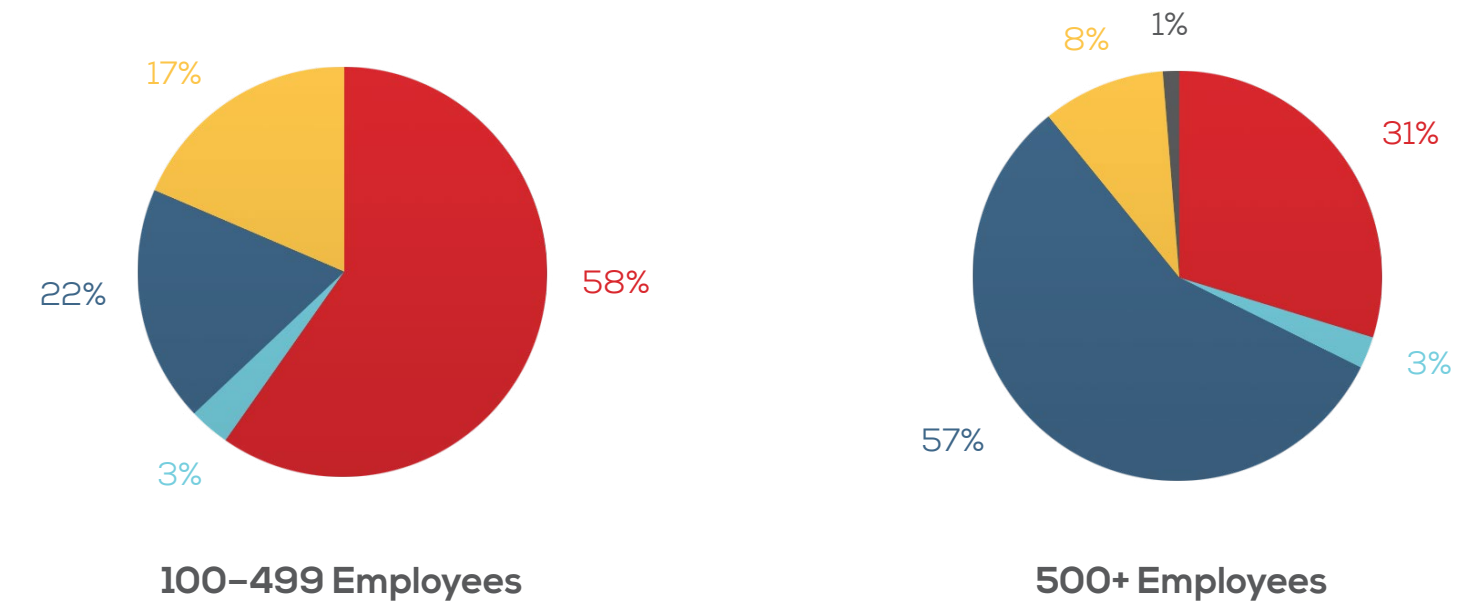
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Putting Ethernet to Work with VoIP

Most businesses either already have or plan to deploy VoIP, but without the kind of bandwidth provided by Ethernet, it's likely they will never be able to use the technology to its full potential.

- We have fully deployed VoIP in my company
- We have partially deployed VoIP in my company
- We are planning to deploy VoIP in the next 1-5 years
- We do not have any plans to deploy VoIP
- Not sure



Furthermore, an Ethernet network helps businesses provide a seamless voice service to all locations using the same network infrastructure that supports data, video, and other business applications. Whether a business is deploying an onsite IP PBX or a Hosted VoIP from a provider, Ethernet provides the high-level voice quality and call connection stability that staff and customers expect. Plus, SIP trunking over Ethernet helps businesses retain existing analog- or IP-based phone equipment—all while replacing costly legacy business line services.

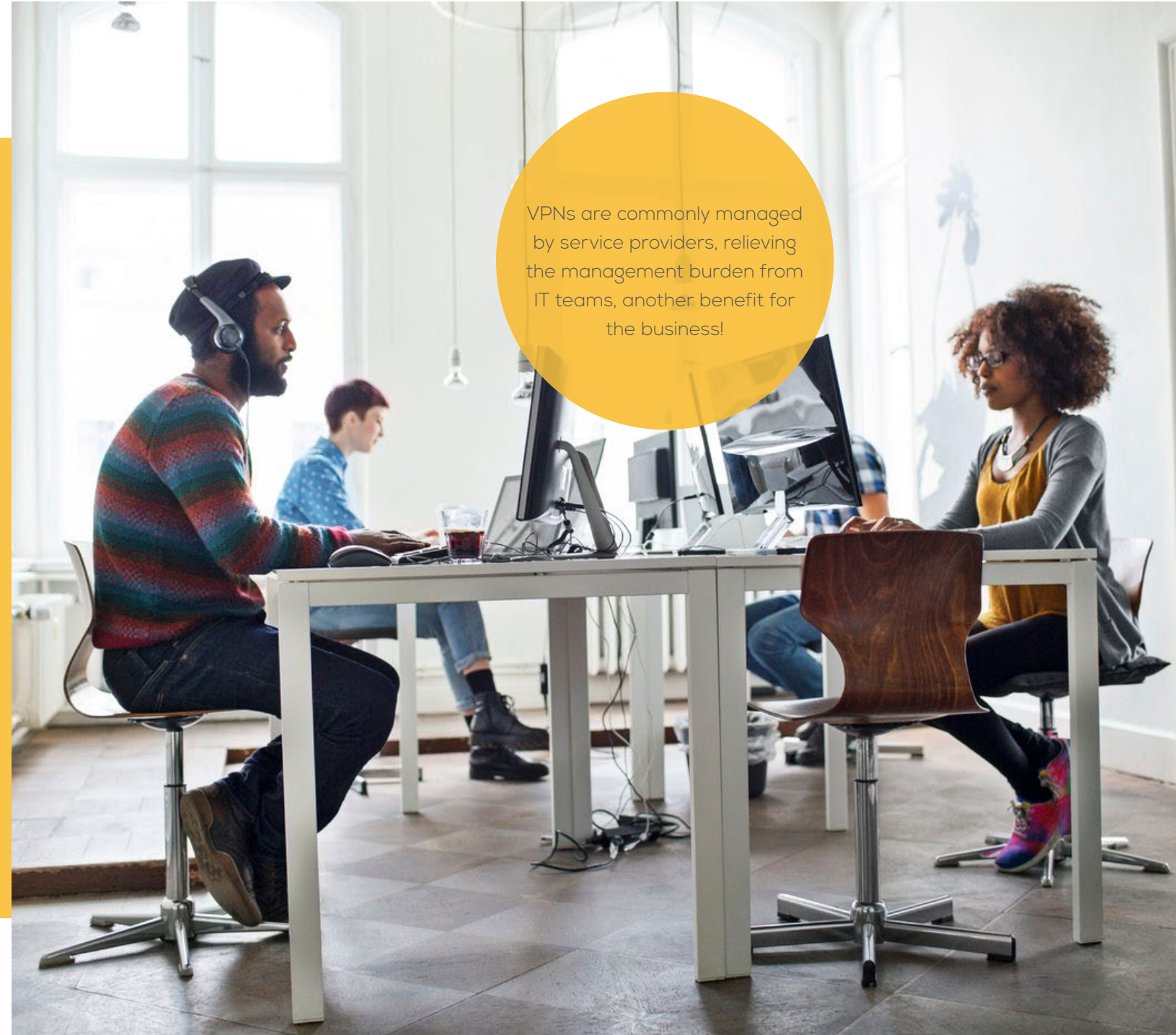
3. Your applications toolbox

From eCommerce to web-based applications, companies of all sizes are looking for network solutions they can depend on. Ethernet fits the bill and offers a variety of benefits, including:

- Robust connectivity: Due to its growing adoption worldwide, Ethernet allows companies to do business faster.
- Symmetrical bandwidth: Companies can enjoy the same speeds for both uploads and downloads.
- High speeds: Ethernet provides speeds of up to and beyond 10 Gbps—far higher than traditional networking solutions.
- Scalability: Bandwidth requirements can change as a company needs change.
- Single network connections: With just one connection and one point of contact, Ethernet can service every location to save companies time and money.
- Improved user experience: Ethernet provides consistent, reliable access across locations.

Addresses these business challenges:

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- ✓ Decreased Employee Collaboration



VPNs are commonly managed by service providers, relieving the management burden from IT teams, another benefit for the business!

4. Play nice and share safely

For an increasing number of businesses, it has become critical that data gets backed up at offsite locations. Ethernet supports this need by:

- Transporting large data files quickly and securely.
- Allowing IT managers to segment data traffic and determine precisely what each site has access to, thus helping to protect sensitive information.
- Supporting and managing Virtual Private Networks (VPNs) to provide secure, private networking connections.

Addresses this business challenge:

- ✓ Managing Multisite Locations



5. Miss the roadblocks

Creating business continuity solutions used to be an expensive exercise, requiring purchase of extra equipment and redundant connections. Today, many technologies come with business continuity built in. For example, if one site goes down, an Ethernet network can automatically reroute traffic to an alternate site. In addition, cloud services, like Hosted VoIP, are offered by network providers. That means if communications from one location go down, staff can make and receive calls from another location, or from their mobile devices. These capabilities facilitate a strong business continuity strategy without the problem of expensive duplicate equipment, or having resources stranded in backup locations that only begin operating if an outage occurs.

Addresses these business challenges:

- ✓ Managing Multisite Locations
- ✓ Connectivity Issues
- ✓ BYOD Integration



In Conclusion: What It Means to You

In this eBook, we outlined common business communications challenges, including:

- Managing Multisite Locations
- Connectivity Issues
- Bring Your Own Device (BYOD) Integration
- Decreased Employee Collaboration

Technology solutions like Ethernet (from an MEF 2.0 certified provider), VoIP, IP VPN, video conferencing, and more are helping businesses reduce expenses, be more productive, and plan for the future. Take what you've learned and work with a trusted partner who provides all these solutions and more—and who can customize applications to perfectly fit your business.

We're here to help talk you through your technology options. Just visit business.frontier.com/enterprise/ethernet or call your Frontier representative at 1-888-860-0376.