Physical Infrastructure: Uncover a Hidden Competitive Advantage

PANDUIT™
infrastructure for a connected world

Is Your Physical Infrastructure Friend or Foe?

There is a hidden asset in your organization right now that has the potential to be one of your greatest competitive advantages. Or, if ignored, it can become a hidden liability that can rob you of productivity and profit—and make it harder for you to compete against other companies vying for your same customers.

Read on to find out how to ensure your network and electrical infrastructure works as a friend, rather than a foe:

inspect

Inspect the efficiency-robbing menaces in your physical infrastructure that are working against you.

investigate

Investigate the specific areas where physical infrastructure can unleash new possibilities in your enterprise.

inquire

Inquire about new ways physical infrastructure can provide competitive advantages that lead to a profitable future.

Know Your Enemy

The first stage to uncovering these new competitive advantages is getting to know the countless threats that often lurk in underperforming network and electrical infrastructure. If left ignored, your operational, financial, and environmental performance is left vulnerable to wide-ranging consequences.

Operational Threats

Neglected network and electrical infrastructure can lead to downtime and reduced output, restricted scalability, unpredictable inefficiencies, and hindered safety and compliance.

Financial Threats

Ignored network and electrical infrastructure can increase total cost of ownership, limit the return on key asset investments, decrease customer satisfaction and repeat business, and impede expansion into new markets.

Environmental Threats

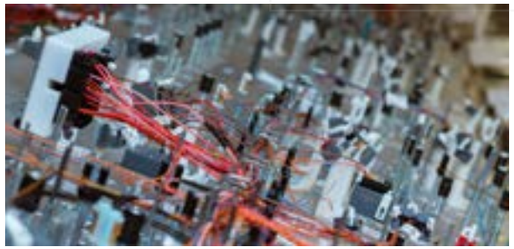
Outdated network and electrical infrastructure can hinder the creation of safer, more productive work environments, and delay sustainability and corporate social responsibility goals.

Turn Threats into Advantages

Now that you know the high-level threats to your business success, it's time to see where those threats are located in your operation. Let's investigate your organization more deeply to see how advanced network and electrical infrastructure solutions can turn the specific threats in your current operation into immediate competitive advantages.

Read on to uncover how to unlock more uptime, profitability, productivity, and more in:

Industrial Construction/MRO



OEM Operations

Enterprise Networks

Data Centers

Industrial Networks

Industrial Construction/MRO

Start on Solid Ground

Grounding systems need to provide more than connection reliability—they need to withstand corrosive elements, electromagnetic forces, freeze-thaw cycles, and the risk of damage from construction equipment.

Identifying the Risks

Avoiding risk starts with being able to recognize it. Equipment identification solutions built for long-term durability and legibility are a critical part of on-site safety.

High Standards

Set up projects for long-term compliance and future-proof against ongoing standards harmonization by using equipment and materials designed to the highest specifications.

Built-In Performance

The right cabling and connectivity can deliver consistent performance and reliability even amid the harsh conditions of a construction site.

The Enemy Within

Inferior tools don't cost less—they cost time, worker safety, and construction quality. Enlisting only the most efficient and reliable installation tools keeps dangers at bay.

Secure Your Reputation

The reputation your company has built up can be torn down in the split second of a short circuit event. Protect your personnel and equipment by securing electrical cables with IEC 61914:2015-compliant cable cleats.

KEY: *Operational* *Financial* *Environmental*

OEM Operations

Power That Won't Quit

Industrial uninterruptible power supply (UPS) devices use maintenance-free ultracapacitors instead of batteries, delivering a 50% to 70% lower cost of ownership while decreasing downtime risk for switches, PLCs, HMIs, and other critical applications.[1]

The Human Element

Empower workers while improving productivity with tools designed to fasten, bundle, clamp, and install wiring quickly, safely, and ergonomically.

Smart Panels, Strategic Control

With the proliferation of plant-floor connectivity, the space needed to deploy IoT and other advanced manufacturing technologies requires optimized control panel design.

Controlling Change

The growing number of Ethernet nodes on the plant floor requires new design strategies beyond traditional panel selection and layout to ensure network performance and real-time productivity measurement for automated systems.

Beyond Safety

A single electrical-related worker injury averages $200K to $320K in indirect costs on top of direct compensation and medical expenses.[2] Prevention through design, such as reliable absence of voltage testing, costs much less.

[1] Panduit. "Powering-Up the Industrial Network." https://tinyurl.com/y6xz4mdq
[2] F. A. Manuele, "Accident costs: Rethinking ratios of indirect to direct costs," Prof. Safety, pp. 39–47, Jan. 2011.

KEY: *Operational* *Financial* *Environmental*

Enterprise Networks

The New Power Grid

Power over Ethernet is delivering power and data to a myriad of devices in today's smart buildings, including intelligent lighting systems that can potentially reduce energy costs by 90%.[3]

Open Communication Lines

Modern AV systems can empower connection and collaboration across departments, divisions, and even continents—if there's a reliable infrastructure in place ensuring signals get where they're needed without delay.

Mission Control

A smart building is a productive one, thanks to a converged IP infrastructure that allows systems and devices to share data across the network and to be centrally managed on-premise or remotely.

Defend Your Territory

Real estate is expensive and overcrowded telecom rooms are now a reality for building owners. Infrastructure cabinets and racks specifically designed to maximize performance in a minimal footprint enable tomorrow's technology to run in today's space.

[3] Freeman, Dean. "Market Trends: The Five Phases That Smart Lighting Providers Must Address to Be Successful in the Internet of Things." https://tinyurl.com/y4zvpdty

KEY: *Operational* *Financial* *Environmental*

Data Centers

Save Energy, Save Space

If your data center is running out of cooling capacity resulting in higher temperatures, hot spots, and airflow problems, wireless monitoring and control solutions could help you maximize the utilization of floor space while reducing overall cooling energy costs by up to 40%.[4]

Fast Deployment

Converged infrastructure solutions arrive ready to deploy with thermal management, cable systems, connectivity, and active monitoring intelligence in place, reducing deployment time by up to 65%.[4]

Clear a Path to Faster Data

As data rates accelerate, the capacity of your cabling infrastructure is key to giving your operation a cost-effective path from 40G to 100G Ethernet and beyond.

Value-Added Infrastructure

Consumer demand for services like automated chat, biometric authentication, and real-time tracking continues to rise. Companies that invest in advanced data and networking infrastructure enjoy a big advantage over their competition.

Decision-Making Visibility

DCIM solutions result in a proactive approach to data center management—one that can analyze equipment performance, power usage, and environmental information to identify areas ripe for optimization.

KEY: *Operational* *Financial* *Environmental*

[4] Panduit. "Energy Efficient Data Center Cabinet and Containment Systems." https://tinyurl.com/y692gveb

Industrial Networks

From Separate to Seamless

Traditional lines of demarcation between IT and OT hinder the transformative power of IoT, requiring you to use modern cabling infrastructure that seamlessly connects the shop floor to the top floor to realize the full business-boosting benefits of convergence.

Fighting the Elements

The wrong cables, connectors, switches, and enclosures leave your network vulnerable to dust, vibration, moisture, and temperature, all of which negatively affect equipment performance and longevity.

Ready to Grow

Leveraging a zone-based architecture allows cells to operate independently and enables quick scalability by minimizing engineering and installation for new cells.

Losing the Infrastructure Battle

An hour of unexpected downtime costs a typical automotive OEM $43,000; a paper mill $31,000; a food packaging line $15,000; and up to $500,000 per pharmaceutical batch lost.[5]

An Ally to Industrial Automation

The expansion of IoT-enabled devices requires a network infrastructure that brings edge computing and analytics closer to the machines, controllers, and sensors on the plant floor.

Problems Can't Hide

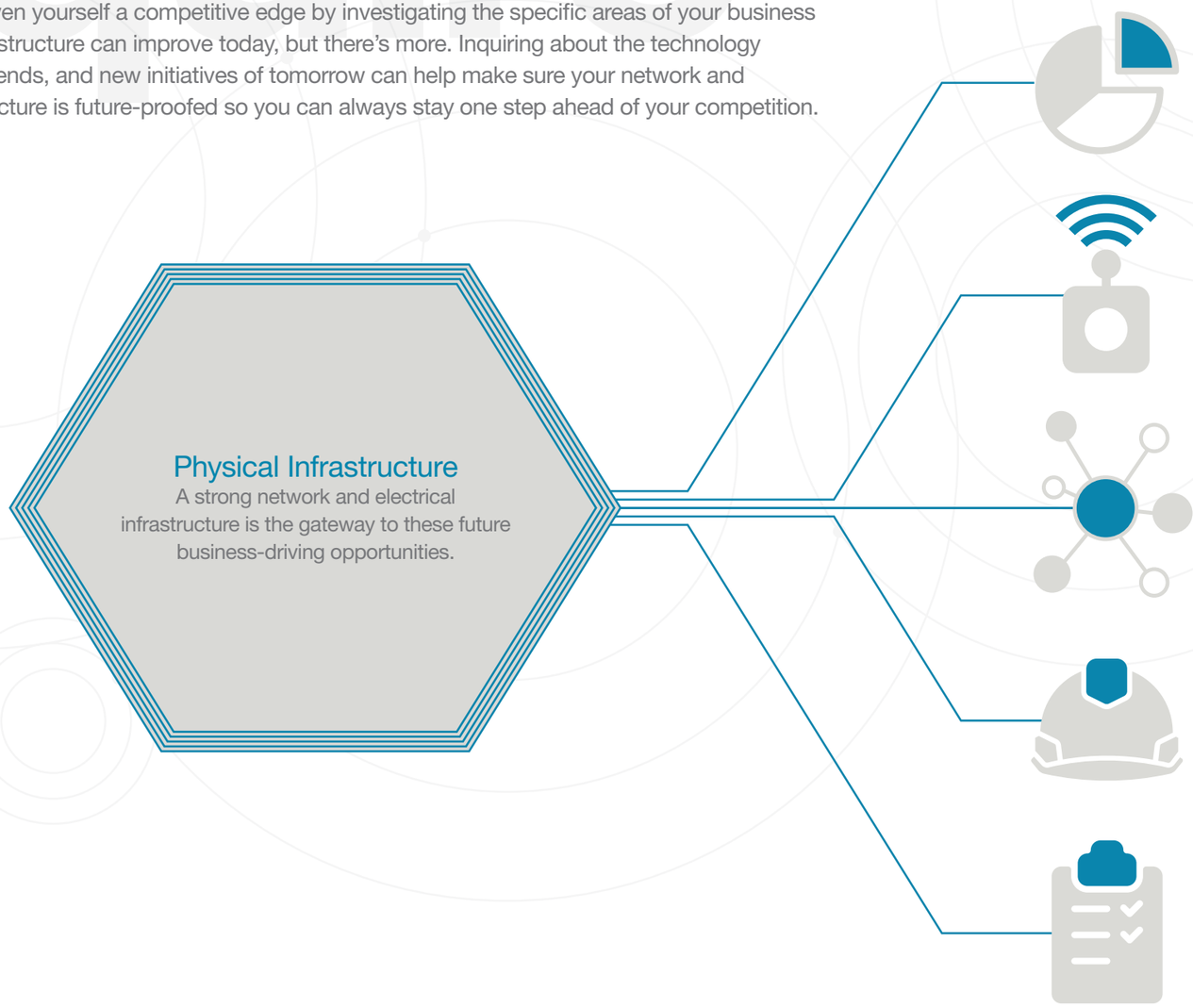
Real-time visibility into your network improves overall uptime and performance by letting your team take a proactive approach to detecting, diagnosing, and solving problems.

KEY: *Operational* *Financial* *Environmental*

[5] McGrath, Dan. "Is Your Plant Floor Network Helping You Avoid Downtime?" https://tinyurl.com/y5kr8mu9

Look Ahead to Stay Ahead

You've already given yourself a competitive edge by investigating the specific areas of your business that physical infrastructure can improve today, but there's more. Inquiring about the technology advancements, trends, and new initiatives of tomorrow can help make sure your network and electrical infrastructure is future-proofed so you can always stay one step ahead of your competition.



Big Data & Analytics (BD&A)

BD&A provides a tremendous opportunity to mine actionable insights from data, enabling you to create growth in new and unexpected ways. The high velocity and large volumes of data it creates strains the current infrastructure of most organizations, requiring you to rethink your processing power and storage capacity.

Internet of Things (IoT)/Smart Devices

With thousands of sensors collecting data across smart devices, IoT enables you to make more informed decisions in less time, gain insights that were hidden before, and optimize processes for greater efficiency. To realize these benefits, your physical infrastructure requires tighter power parameters and greater data capabilities to deploy more robotics, automation, and sophisticated processes.

Connected Systems

Connected, smart buildings converge multiple systems onto a single IP network—from security and lighting to HVAC and audio/video—empowering you with new opportunities for automation and efficiency. This convergence requires powerful physical infrastructure solutions that allow the highest capacity in the minimum amount of space.

Prevention through Design (PtD)

The PtD initiative from the National Institute for Occupational Safety and Health (NIOSH) helps you to "design out" on-the-job risks to employees, including electrical hazards like shock and arc flash. Designing a safer, more productive work environment requires a more modern electrical infrastructure that utilizes the latest workplace safety innovations.

Harmonization of Standards

Successful organizations look to the evolution of global industry standards as a way to future-proof and evolve their businesses, rather than as inhibitors to success. Proactively participating in the global harmonization of standards is both good for business and the safety of your employees.

To Find Out If Your Infrastructure is Friend or Foe, Ask Yourself:

Can my current infrastructure handle the velocity and volume of critical data required for my business to succeed in the next five years?

Does my current infrastructure integrate my IT and OT teams, enabling me to capture, analyze, and act on plant floor data in real time?

Can my current infrastructure connect all my building's systems without taking up more space than I have available?

Does my current infrastructure support workplace safety innovations, enabling me to "design out" risks to my employees?

Is my current infrastructure up to date with the latest global standards in my industry?

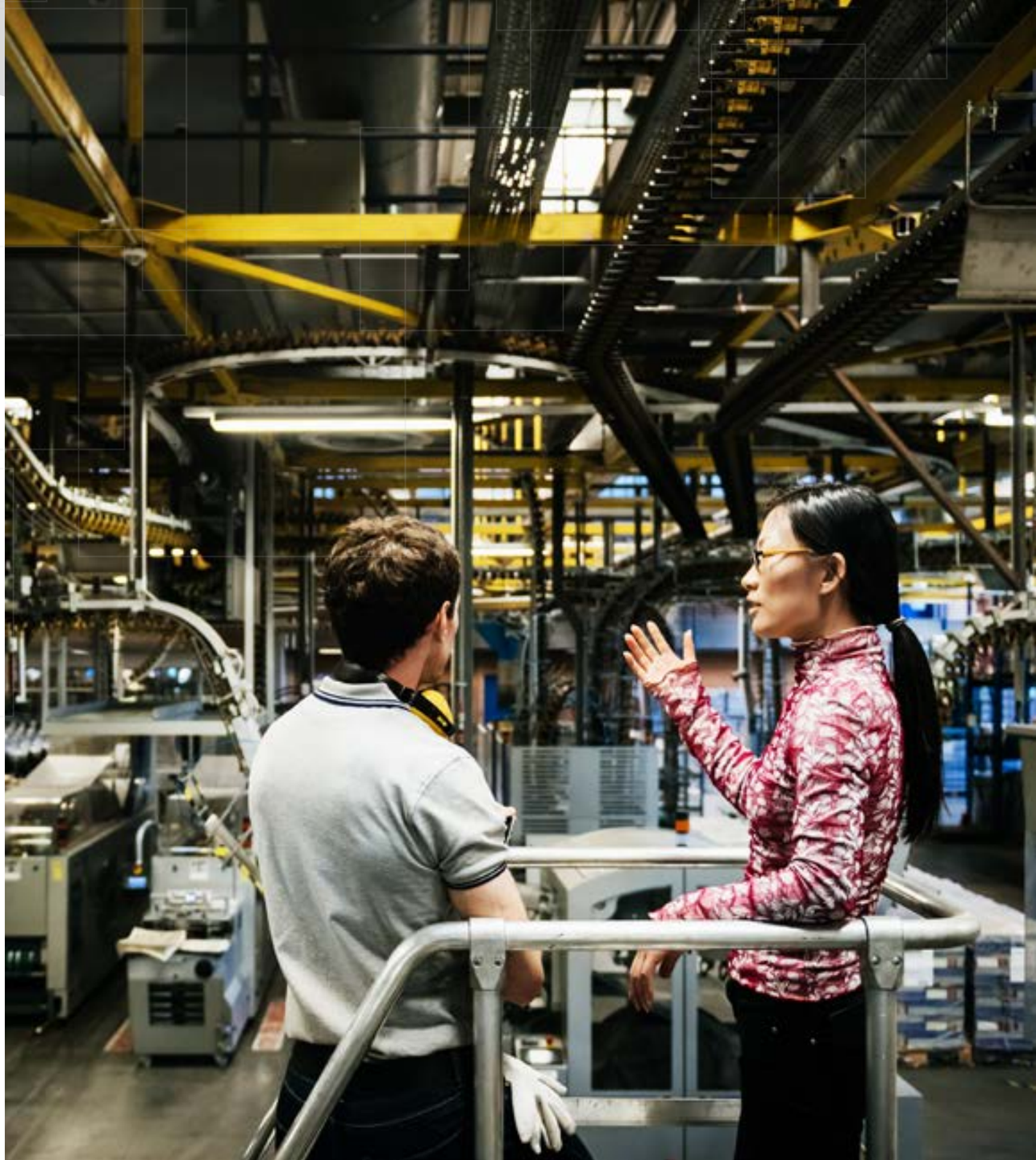
Find the only answer you need on the next page.

Panduit is the Answer

You don’t have to face the threats in your infrastructure alone. Panduit is one of the world’s leading providers of end-to-end solutions for both network and electrical infrastructure. Our focus on research and development has led to countless industry firsts and consistent industry-wide recognition for innovation. This unparalleled experience gives us the ability to uncover the threats currently hiding in your operation and discover new opportunities that will connect your business to future success.

Let’s Continue This Conversation

Visit www.panduit.com/letstalk and we’ll reach out to schedule a call to start uncovering the hidden competitive advantages in your physical infrastructure.



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