

From Production Lines to Cloud Solutions: Unlocking Manufacturing Potential with Advanced Connectivity

How Scalable, Reliable Networks Drive Efficiency, Innovation, and Growth in Modern Manufacturing.

Are U.S. Manufacturers Ready to Connect to The Next Big Opportunity?

Some have a secret weapon: Great connections.

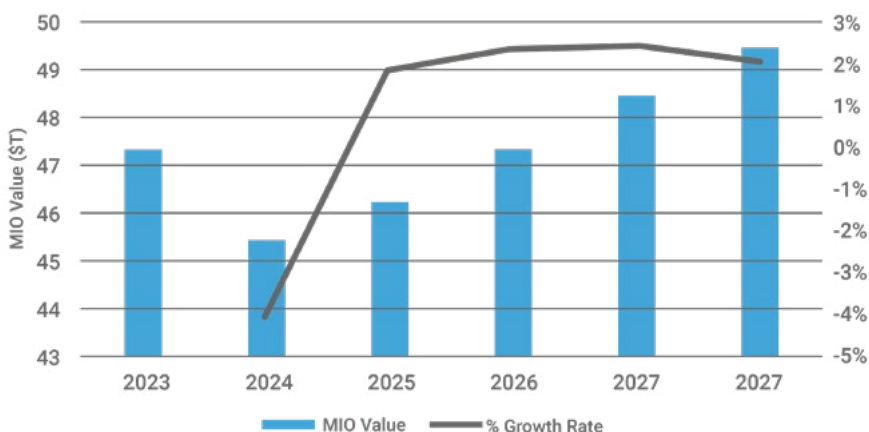
After five years of supply chain disruptions, sluggish growth, and tense geopolitical maneuvering, new research from respected market intelligence firm Interact Analysis indicates a rebound in global manufacturing is on the horizon – with the U.S. leading the charge.

Still, too many manufacturers are either cautiously approaching modern technology or diving in headfirst without sufficient IT networks or industry-specific guidance, leaving them vulnerable to wasting time, money, and falling behind.

Now the critical question manufacturers must ask themselves: Are they positioned to seize the opportunity?

The key to thriving in this new era will be successful digital transformation. That means intelligently using every digital tool available. Advanced telephone systems. Cloud-based back-office productivity software. The full spectrum of Industry 4.0 solutions such as AI and advanced analytics.

They all contribute to the same goals: Productivity, quality, and cost-efficiency.



The path to success is paved with better network infrastructure.

This paper helps you avoid those pitfalls. It will guide you in making informed IT decisions tailored to industry needs, ensuring your business is positioned to thrive in this new era of manufacturing by getting the greatest value from the technology it uses to drive it forward.

Digital Transformation isn't about new technology.

Yes, digital transformation means advanced technologies like automation, AI, and robotics in our facilities. But it's also about leveraging the tools businesses use every day for better efficiency and productivity.

Q. What defines better infrastructure for manufacturers?

- A. Speed
- B. Reliability
- C. State-of-the-art security
- D. Industry expertise
- E : All of the above

A. Yes, of course, it's E.

The numbers speak for themselves.

The future belongs to those ready for it. According to McKinsey & Company,¹ digital technology has enormous potential upsides in creating value for those that can successfully deploy them.

15 - 20%

Reduction in inventory holding costs

15 - 30%

Productivity increase

30 - 50%

Less machine downtime and more

¹ Industry 4.0: Digital transformation in manufacturing | McKinsey

What does better digital infrastructure offer manufacturers?

- ✓ AI & Machine Learning
- ✓ Smart factories, robotics and guided vehicles
- ✓ IoT
- ✓ Block Chain
- ✓ Virtual Reality
- ✓ Big data & real-time analytics
- ✓ 3-D printing
- ✓ Digital twins
- ✓ Advanced phone systems
- ✓ Microsoft Office 365
- ✓ Teams, Zoom, and Slack
- ✓ Cloud connectivity and storage
- ✓ Managed IT services
- ✓ Cybersecurity services
- ✓ CRM tools
- ✓ Backup and recovery systems.

Ready for The Next Big Opportunity?

If not, it's time to figure out what's getting in your way. Here's how.

No matter their size, manufacturers can be held back if technology doesn't meet their specific goals. Here's some common connectivity problem areas — and how to overcome them.

SCALE	PAIN POINT	CONSEQUENCE	YOUR KEY TO SUCCESS.
 SMALL	Communication & Tracking Outdated software and communication tools; lack of real-time tracking	Cloud apps run too slow; teams drop the ball too much; customers wait too long for answers	Full-featured phone system and strong bandwidth that support modern communication and collaboration tools — making it easier to get things done with fewer miscues.
 MEDIUM	Aging Equipment Outdated machinery and manual processes; slow adoption of automation	Missed deadlines; frustrated customers; expensive repairs	High-bandwidth, low-lag fiber connectivity supports automation systems, increasing productivity while reducing downtime.
 ENTERPRISE	In-House Expertise IT teams stretched thin; difficulty in recruiting talent for next-gen IT needs	Employee burnout; increased HR costs; shallow expertise	A cost-effective managed service provider to handle IT tasks — so your teams focus on mission-critical needs, instead of troubleshooting network problems.
	System Integration Disparate IT systems across multiple locations; lack of standardized processes	Slowdowns; breakdowns; and overreliance on in-house experts with siloed institutional knowledge	Scalable, future-proof cloud-based solutions effortlessly keep your sites in sync; setting the stage for you faster growth and greater efficiencies today — and in the long term.
	Supply Chain Poor real-time tracking and communication breakdowns; disruptions in logistics	Mystery bottlenecks; missed orders; lost opportunities; PR nightmares; higher operating costs	A high-reliability network lets you maintain real-time visibility into production, inventory, shipping, and delivery, so you can rest easy knowing everything's moving smoothly.
	IT Security & Compliance Insufficient cybersecurity measures; difficulty maintaining compliance across sites	Vulnerability to hacking, ransomware; corporate espionage; costly fines	Managed security keep your secrets locked up tight and compliant with the latest data rules & regs — so you avoid worst-case scenarios.
	Industry 4.0 Limited bandwidth and data processing capabilities	Higher operating costs, lower productivity; loss of competitive edge	High-bandwidth, low-latency fiber connectivity lets you implement technology without rebuilding your network; keeping you agile and competitive.
	Infrastructure Management Synchronizing data, and communication on a global scale	Inability to expand your operations and stay competitive; increased compliance/security risk.	With a partner who helps you manage risk and complexity, nothing stops you from growing to your full potential.

10 Essential Questions for Manufacturing IT Leaders: Is Your IT Network Provider Driving Your Success in Modern Manufacturing?

- **Production Line Connectivity**

Is your provider delivering fast, reliable network solutions that keep your processes and production lines connected without interruption?

- **Scalability for Future Growth**

Can your network infrastructure easily scale as your manufacturing operation expands, adopts new applications, or adds new locations?

- **Data Security and Compliance**

Does your provider offer comprehensive cybersecurity solutions like firewalls, encryption, and compliance with industry regulations (e.g. ISO, PCI-DSS)?

- **Cloud and IoT Integration**

Is your network equipped to handle the growing demands of cloud computing, Internet of Things (IoT), and real-time data analytics?

- **Availability, Redundancy, and Uptime**

Does your current provider offer solutions like wireless failover to ensure seamless operations in the event of a primary network failure?

- **High-Quality, Reliable Remote Access**

Are your remote facilities, warehouses, and/or mobile teams supported by reliable VPNs or SD-WAN for secure and efficient network access?

- **Collaboration Across Teams**

Does your network enable effective use of Unified Communications-as-a-Service (UCaaS) solutions for seamless collaboration between your departments and remote workers?

- **Cost-Effective Solutions for Lean Operations**

Is your provider helping you optimize your IT network budget by offering flexible solutions that reduce or eliminate unnecessary infrastructure costs?

- **Data for Better Decision-Making**

Does your network provide the bandwidth required to support data-intensive analytics tools, helping you make real-time, data-driven decisions?

- **Changing Industry Demands**

Is your network (and your network provider) flexible enough to adopt new technologies and innovations as the manufacturing landscape evolves (e.g., AI, automation, and smart factories)?

If not, then it's time to reassess your IT readiness.

Contact Us

Let's discuss how Conterra can power a better communication strategy to meet today's business needs.

CONTERRA[™]
NETWORKS
Fiber Driven. People Powered.

Conterra: Rev Up Your Industrial Readiness

The manufacturing industry looks to Conterra for solutions and expertise that increase productivity, streamline operations, and provide process insights.

Understanding the problem is only half the battle. The next step is identifying and implementing the right solutions that will not only address these challenges but also position your business for long-term success.

Don't Get Treated Like Another Cog in the Wheel

Experience the Conterra Difference.

Why work with a specialist like Conterra? Unlike the giant network providers and their one-size-fits-all solutions, we never take an assembly line approach to the needs of manufacturers.

Conterra specializes in customizing network services to fit the unique needs of your operation – whether it's ensuring seamless connectivity across multiple sites or fortifying your IT infrastructure from the next threat.

We listen to your goals and challenges – and design solutions to keep your production lines running smoothly and efficiently.

It's what we mean by

Fiber Driven.

People Powered.

“Inadequate knowledge of digital capabilities and a lack of organizational talent can prevent broader buy-in and properly scaled transformative efforts.”

McKinsey, Transforming Advanced Manufacturing Through Industry 4.0



**Contact
Conterra Today**
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