



# Leading Manufacturer of Construction and Mining Equipment Engages Tata Communications to Accelerate their Digital Transformation Journey

**COMPANY**

Leading US Manufacturer

**INDUSTRY**Manufacturing  
Heavy Equipment**SOLUTIONS**

IZO™-WAN

**OVERVIEW**

Leveraging automation, connectivity, and electrification advances, a leading US manufacturing company sought to embrace new digital capabilities across their operations. However, their journey was significantly hindered by a foundational obstacle: a rigid, legacy MPLS network. While they had made strides in integrating advanced technologies, their network infrastructure struggled to support the scale and agility required for true transformation.

Globally distributed workforce with significant operations across North America, Latin America, Europe, Africa, the Middle East, and Asia-Pacific.

Managing a vast network of global manufacturing facilities and suppliers with significant logistical complexity, requiring seamless coordination across time zones, compliance with diverse regulatory standards, and consistent quality control across locations.

Recent advances in automation, connectivity, and electrification driving advances in sustainability, productivity, and growth, with a strong emphasis on cleaner, technology-driven solutions.

Legacy networks present a significant challenge for manufacturers navigating the complexities of digital transformation. While the focus tends to be on modernizing machinery and software, the underlying network infrastructure—frequently built on rigid MPLS systems—often acts as a critical bottleneck. These networks, designed for a pre-digital era, lack the agility, scalability, and cost-efficiency needed to support advanced technologies like IoT, AI/ML, and real-time analytics, which are essential for future growth.

The issue isn't just about outdated hardware but also the limitations in connectivity and adaptability. Legacy MPLS networks, while reliable in their time, struggle to handle the demands of cloud-based applications and geographically dispersed operations. They're expensive to maintain, challenging to scale, and offer limited flexibility for integrating with newer solutions.

For manufacturers aiming to optimize supply chains, enable predictive maintenance, and embrace smart manufacturing, retrofitting or replacing these networks can feel daunting—but it's also unavoidable. Addressing these network limitations is no longer optional; it's key to unlocking the full potential of digital transformation initiatives.



### Commercial Flexibility

Tata Communications' contracting flexibility was unmatched. No competitor could offer the same level of adaptability.



### Global Reach

Tata Communications offered global reach with over 600 points of presence (PoPs) worldwide and connections across all regions through 200+ partners and 120 mobile networks.



### Cost Efficiency

The Tata Communications IZO™-WAN solution achieved cost-effectiveness resulting in 30-50% lower operational costs than more expensive MPLS circuits, while optimizing performance levels.



### Performance Agility

The Tata Communications solution combines the scale of extensive global connectivity with the nimbleness and advanced technology of a smaller, highly agile provider.

Transitioning to IZO-WAN unlocked the flexibility the manufacturer needed to accelerate digital initiatives, improve operational efficiency, and position the business for sustained growth in a rapidly evolving market. What was once a restrictive system became the launchpad for transformation, enabling them to tap into next-gen capabilities that were previously out of reach.

The engineered IZO-WAN solution offered a customized approach tailored to meet diverse, complex use cases, blending technological flexibility with regulatory compliance. Designed to provide deep value, it starts with a detailed customer needs assessment—some solutions are ready-made, while others draw on proprietary IP to match specific requirements. An essential partnership with an agile, regulatory-savvy provider ensures compliance with regional regulations, particularly valuable in tightly regulated markets.

The solution transformed a rigid legacy MPLS-based network infrastructure into a more flexible Internet first wide area network (IZO™ Internet WAN). IZO™ Internet WAN enables much greater flexibility for modern, cloud-driven, and distributed networks. For the US manufacturer, when they prioritize application performance from their overlay, they need strong internet underlay to meet the needs of complex and diverse traffic conditions, such as:

- Dependable site-to-site traffic within China through direct connection to the local incumbent networks
- China sites to rest-of-world traffic with better latency and packet delivery while meeting regulation requirements
- Bi-directional China sites to international SaaS applications with a lower number of PoPs

In addition to enhancing adaptability, the solution focuses on reliability to prevent costly downtime. Incorporating diverse internet access points and multiple fiber pathways to each customer location ensures consistent connectivity.



### Solution Scalability

IZO-WAN is cloud-friendly and easily scalable, making it ideal for organizations expanding into new regions or adopting hybrid or multi-cloud environments.



### Dynamic Routing

IZO-WAN dynamically routes traffic based on real-time network conditions and application requirements, easily adapting to bandwidth demand changes and network topology.



### Improved Management

Centralized control and simplified management make IZO-WAN a more efficient solution for managing global networks than MPLS, which requires more manual configuration.



### Cleaner Technology

By leveraging virtualization, IZO-WAN reduces hardware dependency and energy consumption, aligning with sustainability goals.

In addition to enhancing adaptability, the solution prioritizes reliability to prevent costly downtime. By incorporating diverse internet access points and multiple fiber pathways to each customer location, it ensures consistent connectivity. This redundancy supports critical business continuity, especially for teams working on complex projects in remote or high-stakes environments where downtime could lead to significant productivity losses. Through this multi-layered approach, the solution combines regulatory compliance, network agility, and reliable uptime for comprehensive, dependable connectivity.

The “single pane of glass” monitoring system is a standout feature, which offers customers a comprehensive view of network health and performance. This oversight, compliance, and adaptability blend establishes a reliable, high-value network solution.

Leveraging Tata Communications' vast infrastructure alongside cutting-edge, adaptable technology, this leading US manufacturer gained the advantages of a powerful blend of global reach and local precision, delivering unparalleled value.

The solution also paves the way for future growth with AI/ML capabilities in the early stages. With current IZO-WAN capabilities in place, the manufacturer is equipped for efficient, scalable operations across regions. Tata Communications' Digital Fabric can further enhance this foundation, adding advanced AI/ML capabilities to meet evolving demands in predictive maintenance, supply chain optimization, and smart manufacturing.



# SMARTER APPROACH TO EMPOWERING DIGITAL ACCELERATION FOR MANUFACTURERS

According to our study of Global 500 manufacturing companies, 80% are now in the execution phase of their digital transformation strategies.\* However, fewer than half have reached even the halfway point in this transformation journey. As manufacturers accelerate digital transformation, Tata Communications helps them tackle key challenges with a structured approach.

## Tata Communications' approach de-risks network transformation, ensuring a secure, compliant, and automated future for manufacturers.



### Complex Markets

Tata Communications provides insights and tailored solutions to address regional demands, regulatory differences, and supply chain complexities, enabling manufacturers to operate efficiently across diverse markets.



### Security & Compliance

Combining superior global supplier relationships with knowledge of regulatory requirements, Tata Communications ensures manufacturers adhere to evolving compliance standards, reducing risks and maintaining operational integrity.

Tata Communications also strengthens digital infrastructure to protect against cyber threats, implementing robust security protocols to safeguard sensitive manufacturing data.



### Automation

Tata Communications enables the network requirements for streamlined automation initiatives, optimizing productivity and reducing manual intervention through advanced technology that integrates seamlessly into existing workflows.



### AI & Future Growth

Tata Communications supports AI and future growth with network solutions that enable real-time data processing, faster application response times, and dynamic bandwidth allocation across multiple cloud environments. This flexibility empowers organizations to seamlessly integrate AI applications, scale efficiently, and ensure robust, high-speed connectivity that adapts to changing demands, laying a strong foundation for future growth.

\*Source: Developing a Digital-First Operating Model in Manufacturing: Reengineering Communications, Work Practices and Supply Chain Security (Tata Communications CXO Survey in association with 451 research).

## ABOUT TATA COMMUNICATIONS

Tata Communications is a digital ecosystem enabler that powers today's fast-growing digital economy. The Company enables the digital transformation of enterprises globally, including 300 of the Fortune 500—unlocking business opportunities by enabling borderless growth, boosting product innovation and customer experience, improving productivity and efficiency, building agility, and managing risk. With its solutions-orientated approach, proven managed service capabilities, and cutting-edge infrastructure, Tata Communications drives the next level of intelligence powered by cloud, mobility, Internet of Things (IoT), collaboration, security, and network services.

For more about Tata Communications' Manufacturing services solutions, visit [www.tatacommunications.com/manufacturing](http://www.tatacommunications.com/manufacturing)