



# Cisco Smart+Connected Manufacturing

## Operations Excellence

## Improve production efficiency and flexibility and manage operational risk

### Cisco Smart+Connected Manufacturing

Cisco® Smart+Connected Manufacturing solutions provide intelligent, timely information and collaboration in context to transform manufacturing businesses through continuous innovation, a differentiated customer experience, supply chain agility, and operations excellence. Close interrelationships between these areas mean investments in one area drive further improvements in the others. The result is more efficient operations with successful new products and loyal customers that drive higher revenue and sustainable competitive advantage.

### Operations Excellence

Cisco Smart+Connected Manufacturing solutions improve production efficiency and flexibility through secure, real-time availability of information for better business decisions. With superior communication abilities from the factory floor to enterprise IT, key personnel have immediate access to asset and inventory locations, potential product problems, safety and compliance issues, and energy usage. As a result, they can swiftly resolve downtime and production issues and lower operational costs.

Cisco Unified Communications makes worker training available on an as-needed basis and helps improve worker empowerment and retention. Integrated solutions from Cisco and partners add communications and data to business workflows, plant systems, applications such as Manufacturing Execution Systems (MES), and business systems such as enterprise resource planning (ERP) to identify exceptions and mitigate operational risk.

#### Cisco Operations Excellence Solutions Key Benefits

- Increase flexibility to react to changes in demand and market needs
- Improve efficiency
- Reduce costs by decreasing idle time
- Identify and respond collaboratively to process exceptions in ERP workflow
- Provide real-time communications to factory floor personnel
- Manage operational risk and improve regulatory compliance

*“This is about a business change, to make our manufacturing facilities more flexible, more agile, and more lean.”*

—Kirk Gutmann, Global Information Officer,  
Manufacturing and Quality, General Motors Corporation

### Smart+Connected Manufacturing Operations Excellence Case Studies

#### General Motors

**Challenge:** Plant infrastructure was developed site-by-site, with no central view or control and no standardization

**Solution:** Cisco Borderless Global Network

**Result:** Transitioned from reactionary mode of operation to streamlined, standards-based operations that foster innovation; reduced network downtime by 95 percent; and connected all devices in the plant, including PLCs and robots

#### Boeing

**Challenge:** Misplaced toolkits, machinery, parts, and WIP

**Solution:** Cisco Unified Wireless LAN and location capabilities with Wi-Fi asset tags

**Result:** Reduced production delays and government fines

#### Festo

**Challenge:** Separate networks across 250 locations supporting 23,000 products

**Solution:** Cisco Ethernet to the Factory

**Result:** 100 percent uptime over the last 12 months; improved manufacturing, sales, customer service, and IT processes; 360 degree view of operations

### Create Manufacturing Flexibility

Globalization has brought more opportunities in local markets, but also shorter product lifecycles and rapid changes in demand and customer needs. Traditional automation networks inhibit visibility, flexibility, and integration of systems in manufacturing enterprises, slowing new product introductions, harming customer satisfaction ratings, lowering utilization rates, and increasing business risk. With IP becoming the standard on the factory floor, manufacturers can integrate systems for better visibility and faster reaction times. Cisco Smart+Connected Manufacturing solutions connect disparate systems to bring new products to market faster, boost customer satisfaction, improve efficiency, and manage risk.

*"It is like comparing night and day, absolutely everything is better and more time-efficient."*

—Jorgen Larsson, Communications and Security Manager  
Puma Nordic and Baltic

## Improve Efficiency and Reduce Costs

Truly lean manufacturing can only occur in a highly connected environment. To make best use of expensive assets and reduce wasted effort and inventory, manufacturers need visibility into supply chain disruptions, incoming orders, and product changes as well as the ability to track assets and inventory, contact plant floor personnel, and perform training. Cisco Smart+Connected Manufacturing solutions utilize an intelligent and secure network as the platform to improve planning accuracy, allow real-time collaboration in context to handle disruptions, and get new employees productive more quickly.

### Smart+Connected Manufacturing Operations Excellence Solutions and Services

#### Solutions

##### Collaboration

Connected Factory Floor  
Plant Voice Over Wireless LAN  
Cisco Unified Communications for Manufacturing  
Cisco TelePresence™ for Manufacturing

##### Borderless Networks

Ethernet to the Factory  
Context-Aware Solutions for Manufacturing  
SAFE for Process Control  
Secure Wireless Plant  
Cisco and Pelco Industrial Wireless Video Surveillance

#### Services

SONA and RFID Services  
Cisco Business Transformation Optimization Services



## Manage Risk

Operational risk takes many forms, including production and supply chain disruptions, safety and security issues, product quality concerns, and sudden changes in demand. To manage these risks, Cisco Smart+Connected Manufacturing solutions provide a borderless network for real-time visibility into potential problems, online collaboration tools to engage experts for faster resolution, and training and information tools to improve quality and compliance.

For more information, please go to [www.cisco.com/go/manufacturing](http://www.cisco.com/go/manufacturing)



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