BELDEN

Implementing a Connected Plant with Belden Network Infrastructure Solutions

When every minute of uptime counts, your connected plant cannot afford to sacrifice efficiency. Unplanned downtime from misconfigured networks and improper network design means loss – and can impact your productivity goals.

Advanced analytics are the key to maximizing productivity. This is the promise of the "Smart Industry 4.0 Factory"– a connected plant that leverages data to simplify and automate the operational decisions that maximize profitability.

Without a robust, dependable network backbone, your plant can have critical data gaps, preventing such automation. Belden will help you fast-track your digitization journey with a complete industrial network solution – from the field sensor, to the plant-level control system, to the enterprise servers.

What a Best-In-Class Plant Looks Like

Big data presents a big opportunity. But at many companies, data is siloed – limiting the potential for enterprise-wide visibility and insights.

Forward-thinking manufacturers are investing in new tech to capitalize on the Industrial Internet of Things. But without a robust, modernized network in the background, these technologies can be inefficient.

By partnering with Belden for your end-to-end industrial network solution, you can:

- Optimize your network to align with your business goals

- Improve operational efficiency to save costs and drive ROI

- Enjoy peace of mind that your network is reliable and your data is safe

Unlock Millions in Recurring Benefits with a Best-in-Class Network

These three solutions have the potential to unlock up to $5M in recurring benefits for an average plant.

Connected Workers and Machines

Problem:
- Micro-stops caused by incorrect settings
- Scrap/waste due to parameter issues

Solution:
- Collect sensor data from all machines
- Run advanced analytics to optimize parameters and settings
- Make data available to operators and managers on-demand

$2.5M Annual Savings

Production Schedule Optimization

Problem:
- Excess changeover and cleaning time due to sub-optimal sequencing of SKUs
- Waste due to overproduction

Solution:
- Collect sensor data on raw material usage and output
- Collect demand data from IT systems
- Dynamically optimize production schedule across lines and the entire network

$2M Annual Savings

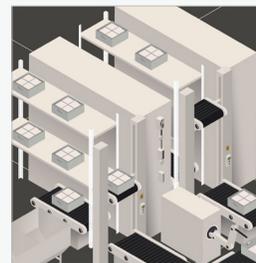## Total Impact: Up to $5M Annual Savings

Source: Expert interviews

Predictive Maintenance

Problem:
- Downtime due to equipment failure

Solution:
- Collect sensor inputs
- Run advanced analytics to predict equipment failure
- Provide plant managers and operators with dashboard showing equipment health

$0.5M Annual Savings

The Belden Network Solution

Belden connects and protects organizations worldwide with the industry's most complete suite of end-to-end networking solutions.

Our consultants can design a tailored solution that delivers maximum reliability and interoperability – all backed by best-in-class warranties, plus implementation and technical support from our Customer Innovation Center.

1 tripwire
Cybersecurity
Wireless network monitoring and complete cybersecurity

2 ProSoft
ProSoft RLX2
High-speed wireless Ethernet radio for long range applications

2 HIRSCHMANN A BELDEN BRAND
BAT-C2
Compact wireless LAN client and access point deliver a cost-effective, practical wired-to-wireless solution

3 lumbergautomation A BELDEN BRAND
LioN-X®
A fast, reliable and secure solution for collecting, converting and transmitting critical data in automated production environments

3 HIRSCHMANN A BELDEN BRAND
OCTOPUS
Designed for reliable and secure data transmission and long-term availability in harsh industrial environments

3 TOFINO SECURITY A BELDEN BRAND
Tofino Xenon
Advanced cybersecurity solution to secure complex industrial networks

4 BELDEN
SPE Cable and PoE Cat 6A Cable
Single Pair Ethernet in combination with Time-Sensitive Networking and Power over Data Lines enable an end-to-end Ethernet network from the sensor to the cloud

5 HIRSCHMANN A BELDEN BRAND
BOBCAT
Real-time communication using TSN for maximum performance under demanding conditions

6 HIRSCHMANN A BELDEN BRAND
Modular Industrial Patch Panel (MIPP)
Robust construction and high port density with multiple connector types, ideal for industrial network installation

7 HIRSCHMANN A BELDEN BRAND
BAT-F
Multiple interface configurations and a customized robust design ensure network and environmental requirements are met

The Belden Customer Innovation Center

The journey to digitization begins with the network backbone.

The experts in Belden's Customer Innovation Center have decades of combined network infrastructure experience. And with the industry's broadest end-to-end industrial network solutions portfolio, you can trust in Belden's deep knowledge of the hardware, software, and operations elements at work.

Our solution consultants will analyze your network to uncover opportunities for modernization, optimization and increased visibility. We will also validate your plant's cabling infrastructure and advise on modifications that will minimize the risk of downtime due to environmental factors, installation issues or unsuitable product selection.

The end result is a recommended action plan for targeted investments in your network that will remove roadblocks to achieving your operational goals.

We will guide you on the next right move at each stage in the process to meet your performance objectives. Accelerate your plant's digital journey with Belden – and get on the path to a future-ready network.

Customer™ Innovation Center

TECHNICAL CONSULTING
Confidently build the network you need

PROJECT MANAGEMENT
Bring your customized networking solution to life

EDUCATION & EVENTS
Own your future by learning new skills

SERVICE & SUPPORT
Ensure network availability 24/7