

Achieving CPG 4.0 with a Connected Plant

SOLUTION BRIEF



Build the bridge to the next era of smart factories without overhauling aging systems or adding costly capital expenditures



Silos, Proprietary Systems, and Legacy Assets Inhibit the Industry 4.0 Journey

Digitization is critical for the next era of manufacturing – however, there are roadblocks to achieving it in the CPG space. IT and OT systems are siloed, legacy assets have no visibility or connection to centralized monitoring, and proprietary technology creates ad hoc and disparate networks. Manufacturers will only be able to digitize and benefit from efficiencies, automation, and increased uptime when they break down these silos and better connect their factories.



Becoming a Best-In-Class Plant Appears Daunting and Unachievable

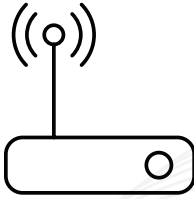
The benefits of a connected plant are astounding. IIoT allows for exponential efficiencies, real-time system visibility, predictive failure detection, waste reduction, and much more. However, the capital costs and risk of downtime in overhauling legacy systems and connecting proprietary and decentralized systems presents a logistical nightmare – particularly in the CPG sector, which relies on highly specialized systems.



Digitization is Filled with Uncertainty and Risk

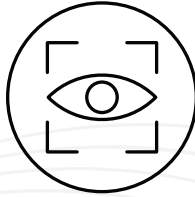
While Industry 4.0 is a long-term goal for many CPG manufacturers, uncertainty around the required technologies and potential costs slows the pace of achieving that goal. Digitization requires adding many unknowns to a highly volatile environment, such as IIoT devices and sensors, expanded networks, data lakes, and on-prem to cloud connections. These developments introduce risks to operations, both in potential downtime as systems are built and connected, and in increased exposure to cyberthreats.

Belden Builds a Safe Bridge to CPG 4.0



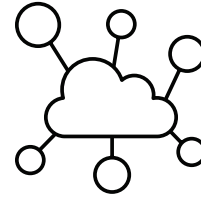
Establish a Network Backbone

Break down all of a factory's data silos, connect all systems, and build an end-to-end connection that will allow for a safe runway to transition into a smart factory.



Visualize the Factory

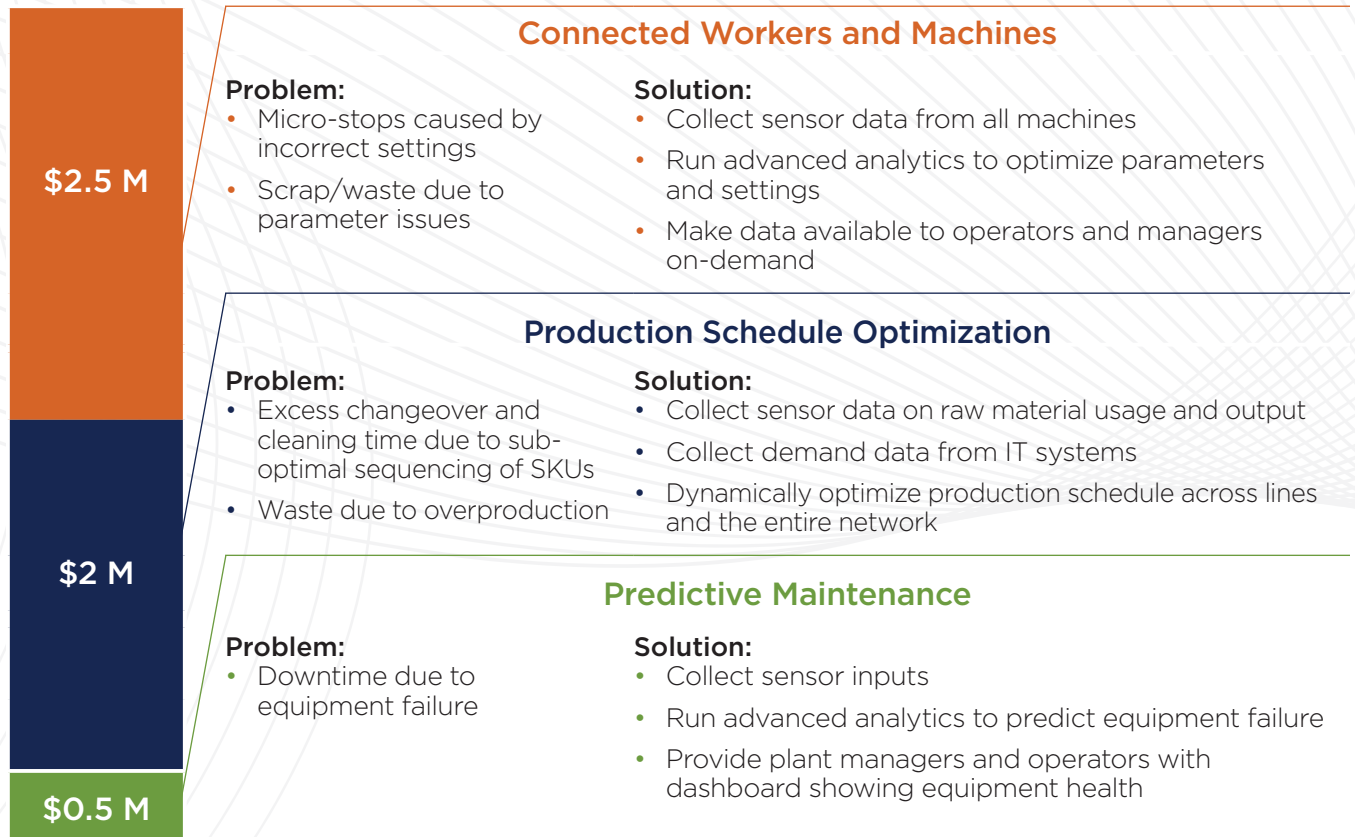
Collect and contextualize all data from all systems, even aging or proprietary assets, and use the power of big data and machine learning to visualize assets, workflow, and schedules.



Automate from Insights

With the factory visualized, improve overall equipment effectiveness (OEE) and productivity by gaining actionable insights on the data to optimize your operations.

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



Total Impact: Up to \$5M Annual Savings

Source: Expert interviews

Belden Addresses CPG Challenges

- Recovers lost productive equipment time due to micro-stops and scrap or waste
- Recovers material loss due to incorrect machine settings and equipment setup
- Recovers more than 50% waste due to machine setting monitoring

The Pathway to a Connected Plant

For maximum efficiency and value, Belden has mapped out four major design steps that are crucial to successfully connecting your workers to your machines:

Step 1: Asset Digitization

Upgrade your plant assets and workflows to pre-ingest more structured data for use by analytics systems.

Step 2: Onsite Field and Backbone Network

Establish onsite field and backbone networks to fulfill OT network priorities of data availability, data integrity, and data confidentiality.

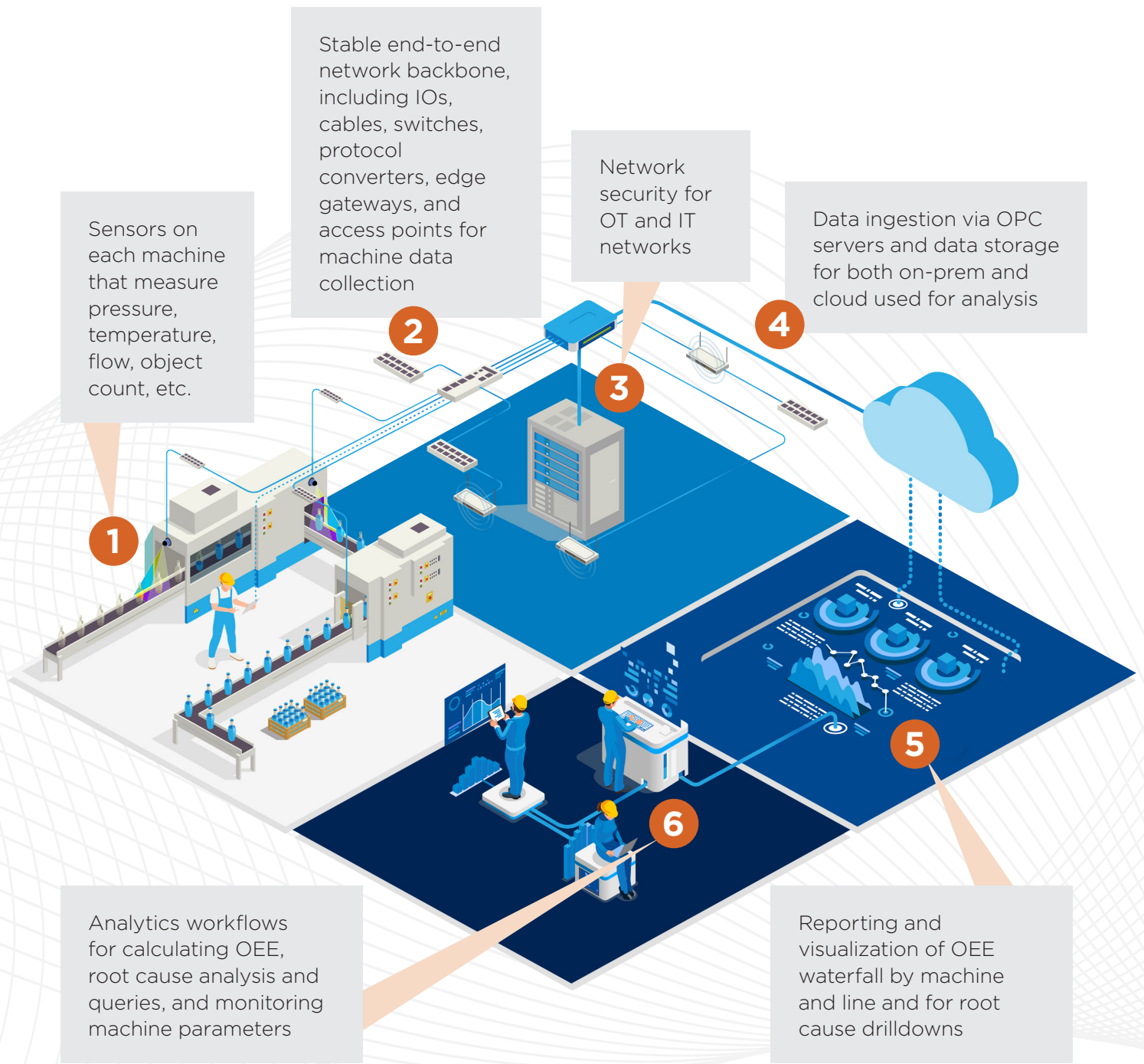
Step 3: Remote Connection

Enable secure remote access to machine data, with multi-protocol support and field-level insight into operational activity.

Step 4: Dataflow Visualization

Visualize and showcase data for network and security management as well as OT performance.

Components of the Solution



How Belden Can Help

As a comprehensive networking solution provider, Belden enables manufacturers to access the solutions, services and tools needed to take major steps in their digitization journey.

Our Experts at Your Side

Selecting the right solution for your business needs is not an easy task. Belden experts will be your trusted advisors in each phase of your automation journey.

Solution Architect



- Deep knowledge of network architectures
- Design solutions and networks of the future

Digital Automation Consultant



- Lead workflow and data assessment
- Identify opportunities for digital transformation
- Calculate projected ROI

Solution Consultant



- Deep technical knowledge of applications and verticals
- Conduct industrial network audits

Service Engineer



- Deep knowledge of products and technologies
- Test and commission networks
- Deliver pre- and post-sale technical support

End-to-End Solution Portfolio

Belden offers the most comprehensive networking portfolio for your sensor-to-cloud solution. This includes:

Cable

- Fiber
- Copper
- A/V



Connectivity

- Fiber, Copper & A/V Connectors
- Racks
- Connectivity Tools
- Active I/O Modules
- Passive Distribution Boxes



Networking

- Wireless
- Gateways
- Switches
- Routers



Software & Services

- Network Management Software
- Firewalls
- SCM & VM



Worry-Free and Future-Ready

The need to digitize is certain, but the road there is full of uncertainty. With Belden's experts guiding you and drawing from our extensive solutions portfolio, we can give you the confidence and peace of mind to bring your automation plans to life. Get in touch with Belden's experts at belden.com/CPG to find out how we can custom tailor your CPG 4.0 roadmap.

About Belden

Belden Inc., a global leader in high quality, end-to-end signal transmission solutions, delivers a comprehensive product portfolio designed to meet the mission-critical network infrastructure needs of industrial, enterprise and broadcast markets. With innovative solutions targeted at reliable and secure transmission of rapidly growing amounts of data, audio and video needed for today's applications, Belden is at the center of the global transformation to a connected world. Founded in 1902, the company is headquartered in St. Louis, USA, and has manufacturing capabilities in North and South America, Europe and Asia.

Learn More

Visit belden.com/CPG for additional information and to contact our CPG solution experts.