

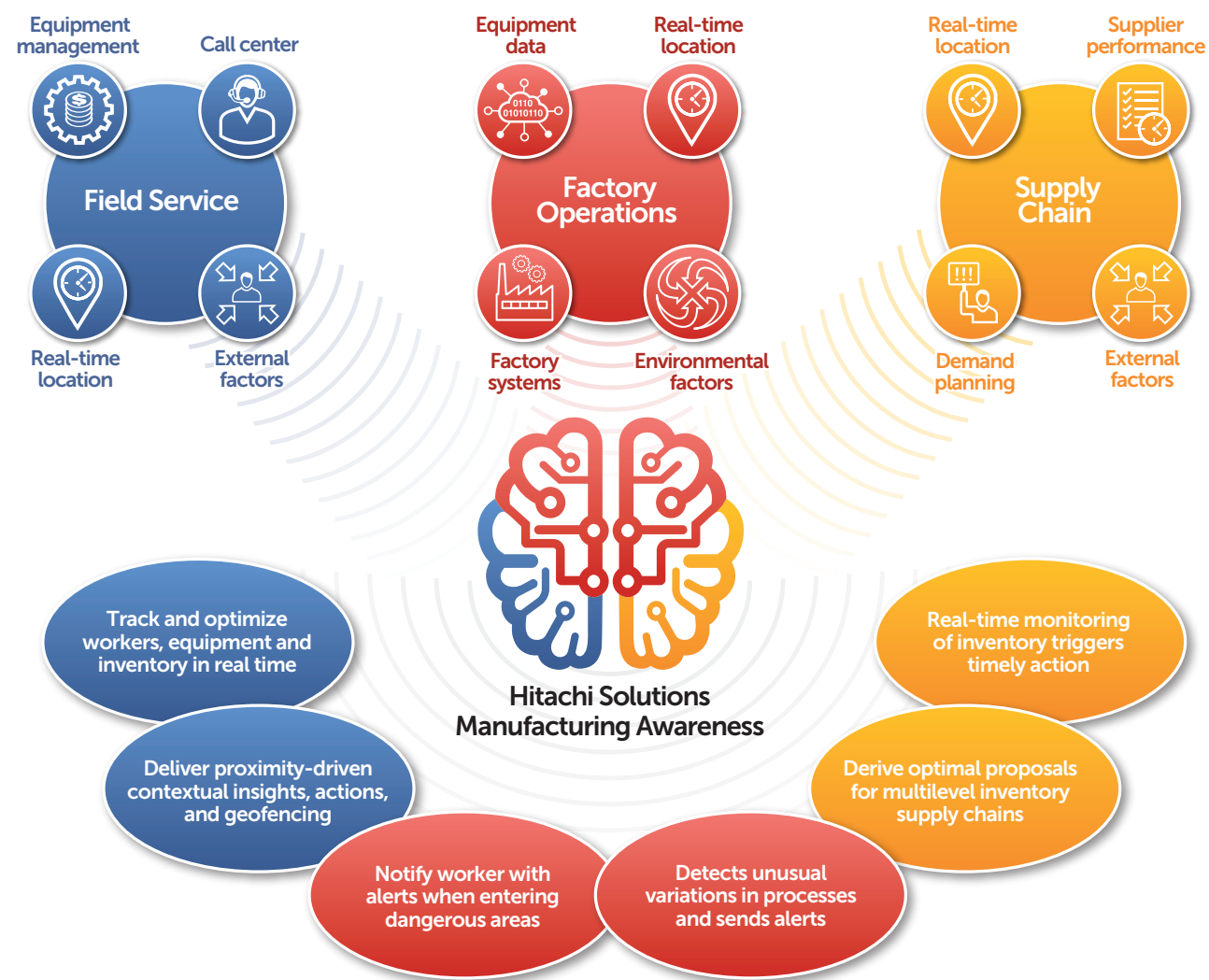
# Proactively and predictively monitor and optimize field services, shop floor, and supply chain operations

Hitachi Solutions Manufacturing Awareness

Manufacturing Awareness connects disparate systems with workers and uses real-time proximity and analytics to deliver increased visibility







## Gain End-to-End Insights With Manufacturing Awareness







### Challenges

Lack of real-time awareness and the inability to optimize the workforce and the complex mix of moveable assets and systems

-  Reduce inefficiencies across operations that result from disparate systems.
-  Reduce delays caused by unknown status and location of inventory, equipment, and people.
-  Improve decision-making through real-time awareness of workforce, inventory, and process status.
-  Gain visibility into worker behavior to improve safety.

### Solutions

Hitachi Solutions Manufacturing Awareness: Enable timely decision-making and automated supervisory interventions via an end-to-end connected and continuous monitoring

-  Connects disparate systems and uses real-time proximity to identify and resolve issues before failures occur, improving operational efficiency.
-  Provides real-time visualizations, including location and context of workforce and equipment.
-  Uses AI and machine learning to predict and improve performance.
-  Provides real-time workforce tracking including geolocated incident reporting.

### Business Outcomes

Manufacturing Awareness drives operational efficiency, insights, and interventions that reduce downtime and optimize operations.

Transforms maintenance optimization from repair-and-replace to predict-and-fix.

Detects abnormal movements against protocol, preventing defects or accidents and increasing productivity.

Improves product quality and automates safety via real-time, location-based contextual alerts.

Increases efficiency and system uptime and improves customer service with route optimization and proactive, location-aware alerts.

Improves process efficiency and field technician utilization via location-based, AI-assisted guidance and knowledge transfer.

### Get the Whole Picture with Manufacturing Awareness

Learn More

Manufacturing Industry Solutions >

Request a Demo >

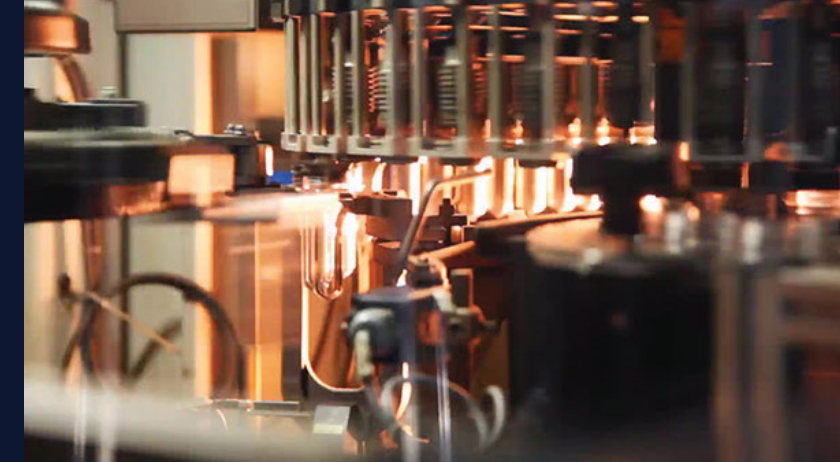


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# Orchestrate more efficient, safer operations across the end-to-end manufacturing spectrum

Hitachi Solutions Manufacturing Awareness

Manufacturing Awareness delivers operational and safety insights to boost productivity via real-time supervisory control with automated alerts and interventions



## Challenges

With siloed systems spread across field service, shop floor and supply chain activities, manufacturers need a real-time connected solution that delivers capabilities that collect and analyze data to optimize their assets and workforce.

- Lack of communication between locations impedes the supply chain.
- Missing connectivity makes it difficult to track products that are in transit.
- Lack of real-time status of worker and equipment location on the shop floor impedes timely decisions.
- Inefficiencies result without visibility into the location of field service personnel and their availability at any given time.

## Solutions

Identify significant gains in operational efficiencies across supply chain, shop floor, and field service using real-time awareness, advanced analytics and machine learning. Enable timely decision-making through continuous monitoring of machines, people and processes.

- Awareness Engine unifies field services, shop floor and supply chain operations to break down data silos and accelerate growth.
- Track workers as they deliver, load, work or reload products/parts to identify anomalies such as deviations in worker activities or line equipment that may result in failures.
- Real-time operational and predictive analytics including advanced machine learning.
- Executive AI-driven dashboard offers views into what is happening across manufacturing operations and identifies actionable areas of focus.

## Features

The Manufacturing Awareness solution includes:

- Contextual location-based tasks assignment in real time.
- Historical and real-time geolocated incident reporting.
- Real-time workforce and moveable asset location tracking.
- Workforce safety and tracking alerts for any unidentified person in a restricted area.
- Infrastructure-free solution for accurate indoor positioning with low setup costs.
- A customized digital, interactive multi-step employee engagement experience.

## Business Outcomes

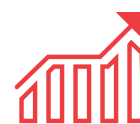
Manufacturing Awareness delivers financial, operational, and cultural benefits for manufacturers:

- **Improved profitability:** Sustain business growth with improved net revenue, reduced operational expenses, and expanded customer base.
- **Enhanced operations:** Streamline processes, leverage the benefits of fully connected data and management systems in real time to improve delivery performance and quality, and improve labor effectiveness.
- **Workforce retention:** Enable insights to boost employee satisfaction and develop process champions by promoting consistent behaviors, best practices, training, and continuous improvement.



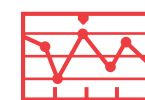
**56% of enterprises** use IoT data to improve safety.<sup>1</sup>

<sup>1</sup> Louis Columbus, "2017 Roundup of Internet of Things Forecasts," Forbes, December 10, 2017.



Manufacturing dominates growth of IoT network connections with **84%** growth.<sup>2</sup>

<sup>2</sup> Verizon, "State of the Market: Internet of Things 2017: Making Way for the Enterprise," 2017.



**71% of decision-makers** believe data/analytics are central to their decision-making.<sup>3</sup>

Companies expect a total of **12% efficiency gains** over five years thanks to Industrial IoT technology.<sup>4</sup>

<sup>3</sup> Forrester Research, "Expectations vs. Experience: The Good, the Bad, the Opportunity," June 2016.

<sup>4</sup> PricewaterhouseCoopers, "Digital Factories 2020: Shaping the Future of Manufacturing," April 2017.



**A connected workforce** increases output by **8-9%** while reducing costs by **7-8%**.<sup>5</sup>

<sup>5</sup> Michael Hobbs, "The Connected Industrial Worker: Achieving the Industrial Vision for the Internet of Things," The Telegraph, January 23, 2017.