

# 7 factory efficiencies enabled by IoT

Internet of Things (IoT) technology is a key component of a connected factory. The right connectivity and IoT solution can help manufacturers leverage massive amounts of data to transform their operations.

**That's Enterprise Intelligence!**



**78%**  
of manufacturers say better operational efficiency is the top benefit of a smart factory.<sup>1</sup>

## Here are 7 ways IoT can improve factory efficiency in manufacturing.

### 1. Predictive maintenance

IoT data allows manufacturers to shift from calendar- or milestone-driven maintenance to condition- or data-driven maintenance, reducing downtime and unexpected maintenance costs.

**27 hours**

each month are lost by large plants due to machine failure.<sup>2</sup>

### 2. Resource optimization

Near real-time insights into production workflows and operations from IoT sensors can highlight ways to improve efficiency in manufacturing.

**11%**

A beverage factory reduced its daily water consumption by 11% by implementing an IoT-based monitoring system.<sup>3</sup>

### 3. Workforce management, productivity and safety

IoT technologies such as connected ID badges, proximity sensors and computer vision can enhance site security, help reduce workplace accidents, improve worker safety and notify management if workers are in the wrong location.

**3x**

Manufacturers with smart factories are expected to triple productivity growth between 2020 and 2030, compared to the previous decade.<sup>4</sup>

### 4. Digital twins

Building a digital twin of a production unit could enable teams to analyze different types of data sources, minimize faulty units, reducing downtime and increasing factory efficiency.

**25%**

Implementing digital twin technology can improve planning efficiency by reducing duplication of efforts and the need for manual intervention.<sup>5</sup>

Digital twin technology

### 5. Quality control

IoT sensors can help reduce quality control issues by detecting anomalies in workflows, adjusting unwanted fluctuations in environmental conditions or monitoring post-production storage conditions.

**15–20%**

Many organizations will have quality-related costs as high as 15–20% of sales revenue.<sup>6</sup>

### 6. Drones

Drones with sensors can quickly and autonomously conduct tasks like inventory tracking or transporting items inside the factory. This reduces time spent on these tasks while freeing your team to work on other higher-value projects.



**50%**

Studies show drones used for inventory can reduce data collection times by half.<sup>7</sup>

### 7. Supply chain management

IoT sensors can help improve your factory efficiency by giving you greater insight into near real-time customer demand signals and ending an overreliance on demand forecasting and out-of-date historical trends.



**80%**

of industry members are demanding greater connectivity and visibility throughout the entire supply chain.<sup>8</sup>

Learn more about how Verizon and IoT technology can help you build a demand-driven supply chain.



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<sup>1</sup>Manufacturing Leadership Council, *Manufacturing 4.0 Progress Report*, <https://www.mlc.org/insights/industry-trends/2022-manufacturing-leadership-council-report>, July 4, 2022, accessed June 29, 2023.

<sup>2</sup>Research, *The Top 100 Smart Factories*, <https://www.verizon.com/iot/for/industry/case-studies>.

<sup>3</sup>Jaygo B. Saunders, S. Chaitanya V. Narayanaiah, S. Durgajit M., An Infrared Thermal Approach for Remote Sensing of Gas Leaks in the Beverage Factory Sustainability, 2021, DOI: 10.3390/s13101930, <https://doi.org/10.3390/s13101930>.

<sup>4</sup>Research, *The Top 100 Smart Factories*, <https://www.verizon.com/iot/for/industry/case-studies>, accessed June 29, 2023.

<sup>5</sup>Industry Today, *Digital Transformation Effects on Productivity*, <https://www.verizon.com/iot/for/industry/case-studies>.

<sup>6</sup>ASQ, *Cost of Quality*, <https://www.asq.org/quality-resources/cost-of-quality>.

<sup>7</sup>IoT, *Drones in Supply Chain Management - The Trade Story*, <https://www.verizon.com/iot/for/industry/case-studies>.

<sup>8</sup>The Supply Chain, *2022 Supply Chain Report*, <https://www.verizon.com/iot/for/industry/case-studies>.