

# THE MAINTENANCE MANAGER'S GUIDE to Industry 4.0

## What is Industry 4.0?

**Also known as the Fourth Industrial Revolution, Industry 4.0 represents a shift from isolated, automated systems toward intelligent, interconnected machines, materials, and products.** The goal is to optimize production, increase speed to market, and allow business leaders to make better decisions. While most manufacturers have yet to realize the full potential of Industry 4.0, keep these nine pillars in mind when planning for the future to maximize your competitive advantage.

## The 9 Pillars of Industry 4.0



### The industrial Internet of things (IIoT)

The industrial Internet of things is a framework of intelligent, connected machines designed to help manufacturers optimize operations. This includes intelligent factories, asset tracking, transportation monitoring, and more.



### Big data and analytics

Accurate, real-time data is at the heart of Industry 4.0. Collected by IIoT devices, it helps maintenance managers and others predict when assets are likely to fail so they can more efficiently maintain them and plan for replacement as needed.



### Simulation

Simulation takes big data a step further by creating computer models of equipment, known as digital twins. This allows managers to see how equipment should operate under ideal conditions and helps them spot issues before they lead to downtime.



## Horizontal and vertical integration

Successful companies connect production floor data with higher-level business objectives. That means having full visibility into the entire supply chain and asset life cycle.



## The cloud

Most enterprises have already replaced spreadsheets and paper documentation with cloud-based software, allowing them to manage their data and processes anywhere. Nearly 95% of manufacturers use a private cloud, public cloud, or a hybrid model to improve operations and overall equipment effectiveness.<sup>1</sup>



## Autonomous robots

Many manufacturers and warehouses already use autonomous robots to handle repetitive or dangerous tasks. Deloitte predicts they will become more prevalent and sophisticated over the next five years.<sup>2</sup>



## Augmented reality (AR)

Augmented reality involves using wearable devices that overlay text or images to enhance what the user sees in the physical world to help them better perform their job. Manufacturers can use augmented reality to give them more information about how their equipment is running, help them make repairs, or train employees.<sup>3</sup>



## Cybersecurity

In today's connected world, cybercriminals could steal sensitive information like product designs or even shut down a plant's entire operations. Thirty-five percent of manufacturers said concerns about cybersecurity were keeping them from fully implementing digital technologies.<sup>4</sup>



## Additive manufacturing or 3D printing

Additive manufacturing, also known as 3D printing, allows manufacturers to create complex parts more easily and faster while reducing costs. A recent survey of global manufacturers found more than 50% use the method to create end-use parts.<sup>5</sup>

# How CMMS Software Prepares You for Industry 4.0

Before you can begin to take advantage of the emerging technologies that Industry 4.0 brings together, you need full visibility into each of your assets.

You also need accurate data on asset inventory, costs, maintenance, and performance. Hippo's CMMS software brings all your assets into a digital platform your team can access anywhere. It allows you to record inspection details, schedule preventive maintenance, and calculate total cost of ownership.

**Ready to take the first step toward better business intelligence that will power your Industry 4.0 strategy?**

**REQUEST A FREE DEMO**

### Sources

1. [Manufacturing Industry Gears Up to Outpace Average Adoption of Hybrid Cloud by 2020 \(June, 2019\)](#)
2. [Using Autonomous Robots to Drive Supply Chain Innovation \(Deloitte\)](#)
3. [Augmented Reality in Manufacturing \(Internet of Business\)](#)
4. [Cybersecurity: Making Manufacturing Secure \(Manufacturing Global, April 2020\)](#)
5. [Moving Additive Manufacturing From Prototyping to Production \(3D Natives, June 2020\)](#)

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