

ORACLE

Making Sense of Proactive Maintenance in Field Service



Spark Series



AN EIGHT-MINUTE READ



What is proactive maintenance?

Reduce downtime and win customer loyalty.

Traditionally, resolving customer issues soon after they occur was considered the hallmark of excellent field service. But today, it requires more.

With proactive maintenance, your team can surpass expectations by identifying and addressing product or asset issues before a customer is even aware there's a problem. This helps decrease unscheduled downtime, equipment failure, and risks from operating faulty equipment. Plus, it keeps customers happy and makes them more loyal.

There are three types of proactive maintenance.

- 1. Predictive maintenance** analyzes sensor measurements and formulas to pinpoint future maintenance issues before they manifest.
- 2. Condition-based maintenance** monitors performance metrics in real time and flags service needs when any metric reaches an unacceptable level.





3. Scheduled maintenance involves regular inspections or service work that's performed at a set interval or timeframe (for example, daily, weekly, monthly, or annually).



47% of manufacturers still track maintenance schedules using in-house spreadsheets, while 46% still utilize clipboards to keep paper maintenance records.¹



The Internet of Things (IoT) is a big component of what makes proactive maintenance possible. Field service organizations can use data from connected devices to identify and diagnose issues and initiate service calls to address them. And since many products—from appliances to exercise equipment to medical devices—are connected today, proactive maintenance is an excellent opportunity to differentiate your business.

As service costs continue to rise and erode margins, connecting your supply chain to the service chain is critical to help improve inventory management. If you want to gain a competitive advantage while simultaneously lowering service costs and increasing revenue, it's time to consider proactive maintenance.

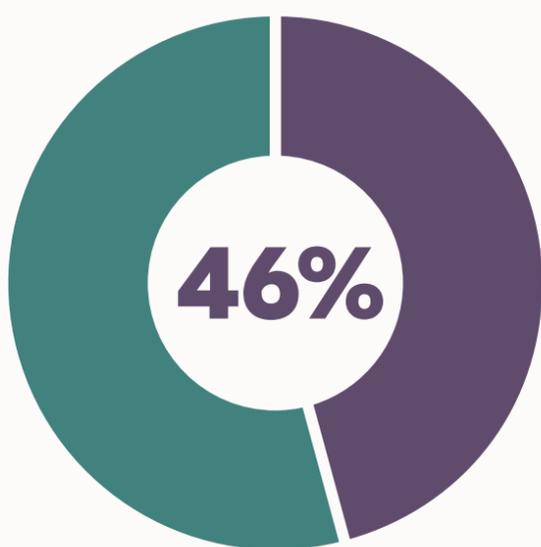


Why it matters today

Proactive maintenance benefits customers, field service teams, and your business.

When a customer reports a service issue, they expect it to be addressed in a timely manner. But customers truly appreciate machinery and products that stay up and running without their intervention. Proactive maintenance delivers just that by preventing unexpected outages or product malfunctions. It also:

- **Reduces repair and replacement costs**
- **Enhances workplace safety**
- **Provides real-time data insights**
- **Extends the lifetime of the equipment**



46% of service organizations are planning to introduce or reinvent a maintenance strategy to minimize asset downtime.²



For businesses, implementing proactive maintenance will take planning and financial investment, but the payoff is worth it. Consider these benefits.

- **Reduced downtime with fewer malfunctions**
- **Improved equipment reliability and availability**
- **Lower long-term maintenance costs**
- **Fewer productivity and safety issues**
- **Increased equipment longevity**
- **Happier customers**

Proactive maintenance also opens the door to new revenue sources. Consistent uptime allows vendors to earn income from preventative services. They can also offer a service subscription program that generates predictable revenue versus fluctuating revenue associated with reactive maintenance.

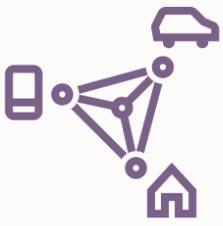


60% of companies associate preventive maintenance with better productivity, and over 60% with decreased downtime and improved safety.²



The basics

These fundamental concepts and tools help ensure effective proactive maintenance.



Field service management system:

Driven by predictive maintenance, this allows services and repairs to be scheduled, dispatched, and executed efficiently. Mobile applications enable predictive maintenance tasks to be completed with fewer errors. They may also provide more accurate data showing what actions were taken that would lead to more effective prescriptive maintenance.

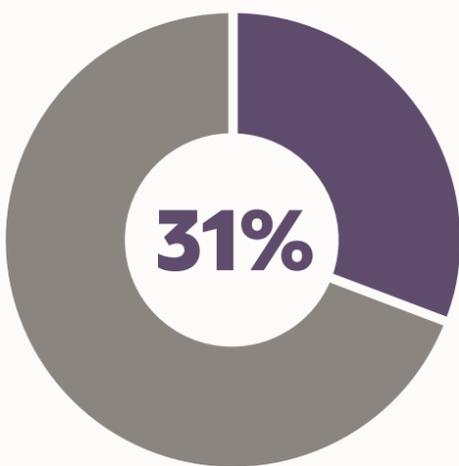


Maintenance-as-a-Service (MaaS): For smaller businesses that want to try the latest maintenance strategies without incurring a lot of debt, MaaS is the perfect solution. It provides maintenance services through a subscription model versus per incident.





Knowledgebase: One of the best ways to provide product and service information for your customers and agents, a basic knowledgebase can include FAQs, manuals, and troubleshooting guides. More advanced knowledgebases are built around artificial intelligence that can interact with user input using natural language search functionality that automatically interprets the nature of the question and responds with relevant information.



31% of companies outsource service operations because skilled individuals are hard to find.³



Let's take a look at some of the tools that make proactive maintenance possible.

- **Advanced equipment sensors:** helps with inventory planning, predicting disruptions, and identifying the root cause of equipment issues.
- **Data collection and analysis:** provides accurate modeling and effective forecasting for predictive maintenance.
- **Digital twin simulators:** uses real-world data to create simulations that predict how a product will perform or show how a connected product is performing in real time.
- **Remote monitoring services:** allows agents to resolve issues by sending commands directly to IoT-connected equipment and gives field service workers the information they need to resolve issues on the first visit.
- **Connected assets:** prevents downtime by using IoT sensor data for real-time visibility and maintenance of machines, vehicles, and other assets.
- **Integration with service systems:** connects maintenance and service management applications to optimize proactive maintenance scheduling.



Once you implement and execute proactive maintenance, it's important to clearly understand how it's performing. Like in other areas of your business, key performance indicators (KPIs) will gauge what's working and what isn't, then help you course-correct when necessary. Here are some metrics frequently used to measure the performance of assets and field service operations.

- **Mean time to repair:** measures the average time it takes to troubleshoot and repair failed equipment
- **Mean time between failures:** measures the average time between system breakdowns.
- **Overall equipment effectiveness:** measures how effectively a piece of equipment is utilized.
- **Planned maintenance percentage:** measures the percentage of maintenance hours devoted to planned maintenance activities versus unplanned.
- **Preventive maintenance compliance:** measures the percentage of preventive maintenance tasks completed on schedule during a specified time period.



What's next?

Once you're ready to transition from reactive to proactive maintenance, it's essential to have a solid plan in place.

You should also understand that it will take some time—since it's a process versus an instant switch. Here are four steps to help get you on the path to proactive maintenance.

1. Assess your current maintenance operations:

Before you develop your strategy, gather performance data from multiple sources such as operations and engineering, along with your maintenance documentation system. Performance data should include the use of maintenance resources and asset availability (when downtime occurs, how long it lasts, and what causes it).

2. Determine which types of proactive maintenance make sense for your business:

When creating new service offerings such as subscription-based maintenance, make sure you consider your service organization's current capacity. It's also important to think about what types of SLAs you will offer and how you will price and sell these service offerings.





3. Explore new technologies and processes:

Do you need to implement new systems or just reconfigure what you currently have? Do you have the right tools for your maintenance management, field service, supply chain, and knowledgebase? These are the keys to successfully managing your proactive maintenance programs.

4. Invest in maintenance management

software: It's estimated that currently 39% of facilities currently use computerized maintenance management software (CMMS) to manage maintenance activities.⁴ While this is definitely a step forward, it's important to make sure your team has the right software. Look for applications that capture data needed for predicting asset lifespans, failure rates, and maintenance costs, including technician notes, chats, log files, meters, sensor readings, and counters.

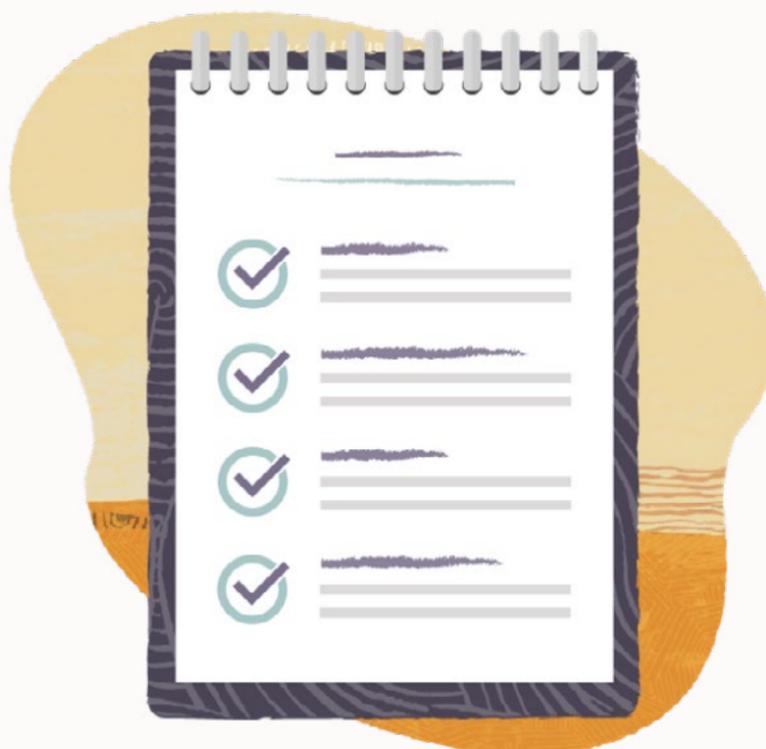


A view toward practical solutions

Ensure your success with innovation.

Once you've implemented proactive maintenance, it's critical to find new ways to maintain peak performance. Here are some examples of tools and technologies that get assets back online quickly, prevent downtime, and even assist with new employee training.

- **Predictive forecasting:** Use advanced analytics to forecast product lifecycle stages so you can schedule maintenance during off-times.
- **3D printing:** Avoid global supply chain constraints by creating your own spare parts.



- **Virtual reality simulations:** Help train new technicians by allowing them to practice before they work on actual machinery.
- **Sensor readings:** Identify early stages of degradation with embedded equipment sensors.
- **Drones:** Ensure drone equipment is available and paired with technicians performing preventative maintenance.
- **Remote-control robotics:** Perform more accurate and cost-effective repairs or maintenance in remote and dangerous locations.





To the experience-maker who's always moving forward

At Oracle, we know great experiences come from great inspiration, and we're providing the spark for your next idea. Packed with powerful info, the Spark Series will get you up to speed on core CX concepts—such as Proactive Maintenance in Field Service—quickly.

Think of it as a way to hone your understanding before turning your eyes toward a new strategy. Because if anyone's going to create CX gold, it's you.

What will you discover next?

- [Essential Strategies for Field Service Management](#)
- [Making Sense of Field Service Knowledge and Collaboration](#)
- [Unlock the Potential of the Internet of Things in Field Service](#)



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Sources

1. ["Facilities Maintenance Report 2019," Plant Engineering, March 2019](#)
2. ["Industrial Maintenance 2020 Status, Trends and Forecasts Report," Advanced Technology Services, accessed November 1, 2020\)](#)
3. [Amanda McLeman, Jack Smith, and Kevin Parker, "The maintenance function, like manufacturing itself, is a rapidly changing environment," Plant Engineering, June 23, 2021](#)
4. ["State of Maintenance 2021 Report," UpKeep, 2021, \(gated\)](#)



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