



# The Operations Guide to Connected Devices

## 3 Strategies for Forging a More Unified Field Service Infrastructure

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# Connected Devices Create New Opportunities in Field Service

**Connected devices are becoming more common within modern service environments. However, their potential for data creation, distribution, and applications is not being leveraged to its full potential across the market.**

Internet of Things (IoT) adoption is growing, where recent data from Gartner suggests it is among the top strategic technology trends for 2020.<sup>1</sup> IoT in field service creates new opportunities to boost team productivity and drive customer satisfaction. “With this data, organizations can anticipate vulnerabilities, sometimes providing service before parts break down, heading off costlier or even catastrophic failures,” Forbes reports.<sup>2</sup> “There’s less time wasted all around, as service providers with a 24/7 view of equipment data can more efficiently plan, schedule, and complete on-site service, keeping businesses up and running.”

But field service teams aren’t getting the most from their data without the means of appropriately structuring it, storing, and responding to it. The real-time responses customers increasingly demand are predicated on teams’ abilities to draw insights from data and coordinate a multi-faceted response.

Furthermore, recent enterprise solutions that complement the use of IoT data—machine learning, robotics, artificial intelligence, edge computing, and mobile technologies for technicians—stand to transform how field service teams approach connectivity and data collection from the field. The question remains as to what degree service teams are using these technologies, and what use cases can serve as examples of their success.

In this report, WBR Insights and Field Service will explore the methods that service organizations are using to connect their technology environment. We’ll uncover how far along they have progressed on these journeys, as well as the use-cases and plans they hope to establish. We will benchmark and forecast their progress on next-generation technology integrations with connectivity solutions and provide tangible steps you can take to leverage a unified strategy surrounding connected devices at your field service organization.

<sup>1</sup> <https://www.gartner.com/en/doc/432920-top-10-strategic-technology-trends-for-2020>

<sup>2</sup> <https://www.forbes.com/sites/sap/2019/12/03/iot-revolutionizes-the-service-repair-industry/#3cc7a53f3c9c>

# Key Insights from the Data



**Nearly three-quarters of field service organizations (71%) have a 24/7 view of equipment data** using connected devices.



Most field service organizations consider their **ability to leverage data from connected devices in the field for predictive insights** as either good (44%) or exceptional (19%) compared to their competitors.



Even so, **most field service organizations cite either business agility (28%) or customer dissatisfaction (27%)** as their biggest business pains.



Most field service organizations **cite anticipating vulnerabilities (54%) and driving customer satisfaction (53%) as real accomplishments** for their company thanks to the use of connected devices.



**73% of respondents claim their customers demand rapid responses**, and they are delivering on those expectations.



**Nearly half of field service organizations (47%) indicate connected devices increase team productivity**, and over half (58%) claim mobile technologies for their technicians leverage data from connected devices to support their successful rapid responses to customers in the field.



**Most field service organizations (54%) claim a revamped customer engagement solution to help maintain or enhance relationships with customers is a priority for their next software initiative.** In each case, nearly half cite one connected, automated system from field to back office (49%) and a fully automated, dynamic scheduling solution to manage dispatching and field staff (49%) as priorities as well.



**Nearly half of field service organizations plan on selecting a new service software within the next three months (4%) or in the next 3 -12 months (40%).** Only 17% are happy with their current solution to the extent that they do not plan on selecting a new service software.





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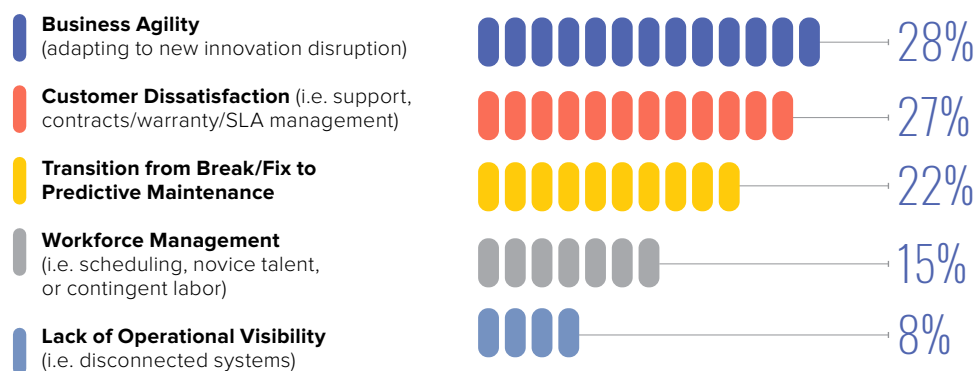
# Moving Toward a Proactive Maintenance Model

Field service teams continue to adapt and deploy new data-driven technologies to enhance their productivity and meet the increasingly high expectations of their customers. Significant investments in connected devices and the enterprise solutions that leverage data derived from them have changed the way field service teams provide services, but many organizations are still experiencing varying levels of success in their ability to process data, stay agile, and transition into more proactive service models.

At 28%, a plurality of respondents says business agility—the ability to adapt to innovation disruption—is their biggest business pain point. Meanwhile, 27% say customer dissatisfaction is their biggest pain point and 22% say transitioning from a break/fix model to a predictive maintenance model is their biggest pain point.

Nonetheless, only 8% say they lack operational visibility and 71% of organizations say their company has a 24/7 view of equipment data through their use of connected devices. <sup>[Exhibit A]</sup>

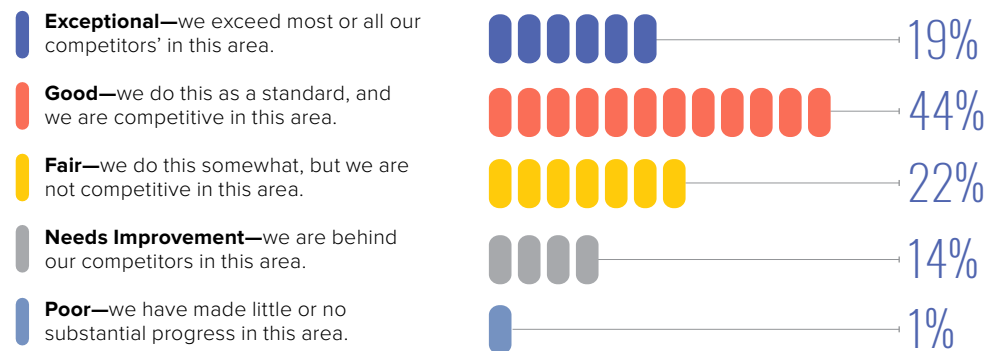
## Among the following options, which is your biggest business pain?



## Moving Toward a Proactive Maintenance Model

Connected devices can provide important data about productivity in the field. However, field service organizations must implement the back-end solutions necessary to draw, sort, and analyze field service data from disparate sources. Not only would this enable them to deliver up-to-date insights to technicians in the field, but it would also enable them to fully leverage the structured data necessary for predictive and proactive maintenance.

### Compared to your competitors, how would you rate the success of your ability to leverage data from connected devices in the field for predictive insights?



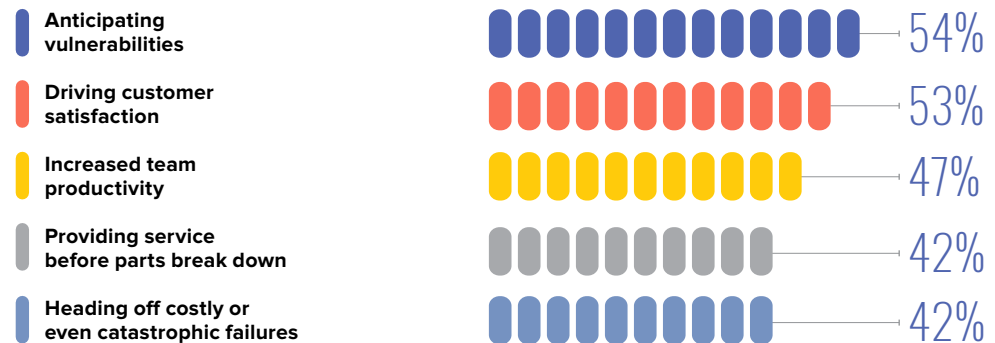
Currently, 63% of respondents rate the success of their ability to leverage data from connected devices in the field of predictive insights as either “Good” or “Exceptional.” However, over one-third of organizations say they still need to improve this capability. They are either not competitive or behind their competitors in terms of predictive insights.

Predictive insights are no longer exclusive to large field service organizations. Connected field service software solutions, affordable IoT devices, and everyday devices like smartphones can provide accessible insights to organizations of all sizes. It’s up to each field service organization to identify the technologies that will fit into their budgets and strategies to deliver these capabilities.



## Moving Toward a Proactive Maintenance Model

Which of the following represent real accomplishments for your company thanks to the use of connected devices in the field?



And field service organizations are already making significant strides with connected devices and field service data. Among these respondents, a significant number of SMBs and mid-market organizations are already meeting their customers' expectations alongside their enterprise-level competitors.

More than half of respondents say they are already anticipating vulnerabilities and driving customer satisfaction through their use of connected devices, while 47% say they have increased team productivity. Still, only 42% of respondents are providing service before parts break down and heading off costly or catastrophic failures, in each case.

After seeing benefits to productivity and customer satisfaction, the next step for field service organizations is to adopt new solutions for organizing and analyzing data, so they can more effectively roll out a proactive maintenance business model.

## Key Takeaways

### One

**Integrate software and back-end solutions** to sort and analyze field service data from disparate sources.

### Two

**Identify those solutions that fit your organization's size and budget**—there are more affordable solutions on the market than ever before.

### Three

**After seeing quick wins in productivity, implement a technology and analytical strategy** to move toward a proactive maintenance model.





# Delivering on Customer Expectations

**Customer expectations surrounding field service are changing, and most customers will no longer be satisfied by the break/fix maintenance model. Thankfully, most organizations are taking steps to meet customer needs.**

Based on the research from this study, 73% of organizations say their customers demand rapid responses, and they are delivering on those expectations. <sup>[Exhibit B]</sup> When asked how connected devices have supported their ability to do so, many respondents say they are helping them to plan more effectively, keep their technicians and customers informed, and better understand maintenance situations.

According to one respondent from an enterprise-level organization, “Connected devices help us understand a situation effectively and learn for future occurrences.”

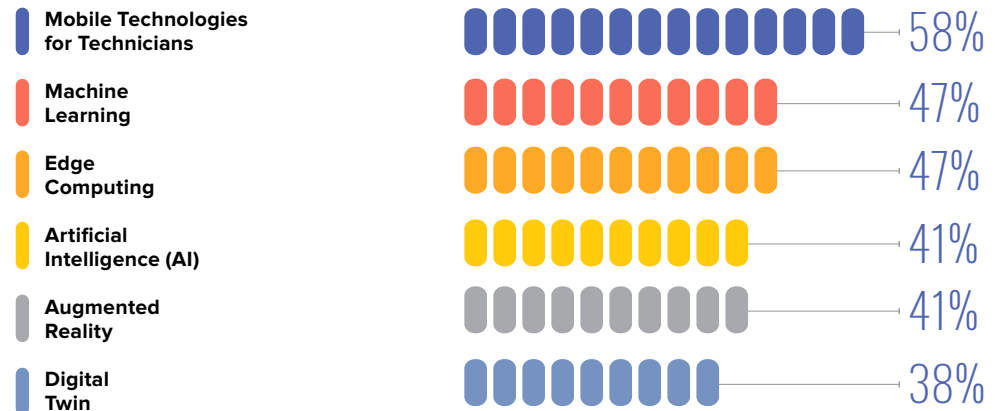
Similarly, a respondent from a mid-market organization says, “Our service agents reach destinations prepared with information on what exactly the challenge is and the reason for why they are being contacted.”

Other respondents say their solutions help them save valuable time through automated scheduling, which is made possible through workforce management software and the analysis of IoT data. Other respondents say they are saving on transportation costs through remote service and self-service.

Organizations are using a variety of technologies to facilitate their responses to customer needs.

## Delivering on Customer Expectations

Which of the following technologies leverage data from connected devices to support your successful rapid responses to customers in the field?



At 58%, most respondents say they already use mobile technology for their technicians to support rapid responses to customers in the field. However, Fewer than half of respondents are using machine learning, edge computing, artificial intelligence, and other solutions.

Organizations will need to adopt these technologies to predict customer needs, automate their responses, and provide more options for field service, be it remote or in-person.

## Key Takeaways

### One

**Use connected devices to keep technicians and customers informed.** But focus on delivering remote service, self-service, and automation to **exceed customer expectations.**

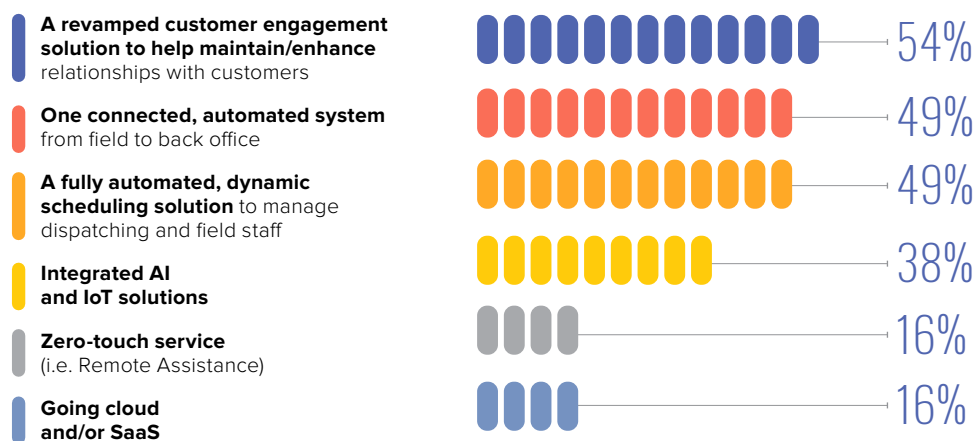
### Two

**Arming technicians with mobile technologies is a start,** but look for ways more advanced forms of computing, like ML and AI, can enhance your ability to deliver for customers.

# Prioritizing New Service Software Investments

Moving forward, field service organizations will be prioritizing those software investments which will help them achieve their customer service goals, save money, and move toward a proactive and predictive maintenance model.

## Which of the following are priorities for your next software initiative for your service organization?



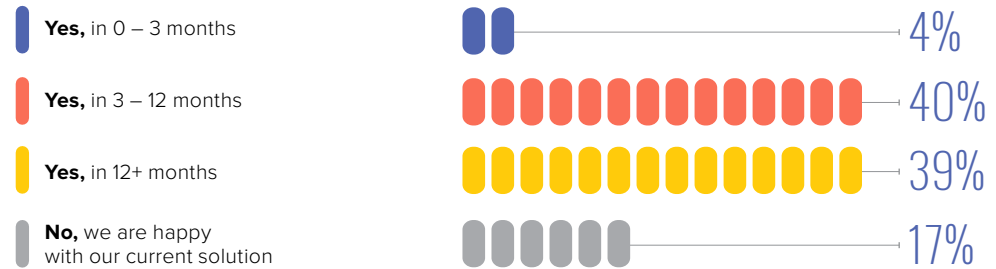
The software initiatives respondents prioritize most are revamped customer engagement solutions (54%), a connected and automated system from field to the back office (49%), and a fully automated, dynamic scheduling solution to manage dispatching and field staff (49%).

These software solutions will be integral for organizations to gain essential insights from their data, coordinate their resources efficiently and cost-effectively, and meet or exceed the increasingly high expectations of customers. Notably, 38% of respondents are prioritizing integrated AI and IoT solutions, signaling that some field service teams have already reached a substantial level of maturity.

## Prioritizing New Service Software Investments

Organizations that forgo these initiatives risk falling behind their competitors in terms of proactive maintenance. More importantly, they risk falling short of what customers have come to expect from field service.

### Does your organization plan on selecting a new service software?



Thankfully, only 17% of organizations don't currently plan on selecting new service software. Nonetheless, 39% say they won't do so for another year. As connected devices and IoT technologies have been available for some time now, many organizations are already in the process of adopting the software they need to analyze data in real-time and conduct fast-response field service operations. Organizations that are delaying their adoption must take up the opportunity to transform their models soon to keep pace.

## Key Takeaways

### One

**Organizations should prioritize customer engagement software,** an automated system that connects field data to the back office, and a fully automated scheduling solution to deliver better field service outcomes.

### Two

**Organizations that have developed more mature field service technologies should begin plans** for deploying integrated AI and IoT solutions.

### Three

**Most field service organizations are planning new software initiatives within the next 12 months.** Those that delay risk being left behind.





# Conclusion: Creating an Interconnected “Fabric” of Data Across the Field Service Organization

**In their final question, researchers asked the respondents to describe their goals for improving how they utilize data from connected devices in 2021. Some respondents note that they are pursuing specific technologies as part of their goals, such as digital twin technology, machine learning tools, and even more effective backup solutions for data.**

These respondents likely represent organizations that have already made significant progress in their adoption of connected devices and are now looking for new ways to leverage their data insights, either through analysis or automation.

However, many respondents note they want to create an interconnected structure of data—what some call a “fabric” of data analysis—that spans their entire organization from the field service technician to the back office. Their end goal in doing so is creating a predictive service environment in which insights are accessible to every stakeholder.



## Conclusion: Creating an Interconnected “Fabric” of Data Across the Field Service Organization

“We want to build a single data management fabric that covers all our operations,” says one respondent from an SMB that services semiconductors.

Similarly, a respondent from a mid-market information and communication technology field service organization says, “Our goal is to create a single fabric of data utilization that covers and connects the entire organization.”

At the enterprise level, one respondent says their organization intends to create “a unified IoT assisted system for better field service management,” while another says they want to form “a larger data lake that has underlying machine learning tools working on the data within.”

While some organizations focus on specific technology deployments, it’s clear that many field service organizations are focusing on broader initiatives that will enable them to anticipate vulnerabilities in equipment, improve productivity, drive customer satisfaction, and create a more executable data environment.

## Key Recommendations

### One

**Most field service organizations are making use of data, but they aren’t leveraging it to its fullest extent.** Identify software solutions that fit your organization’s budget and objectives, then integrate it into your operations so teams can sort, analyze, and act on field service data from disparate connected devices. This will enable you to work toward a predictive and proactive maintenance model.

### Two

**Prioritize customer engagement software and tools that empower your technicians to act on insights in the field or remotely.** To meet customer expectations, field service organizations must be able to provide fast, accountable service through the customer’s preferred channels.

### Three

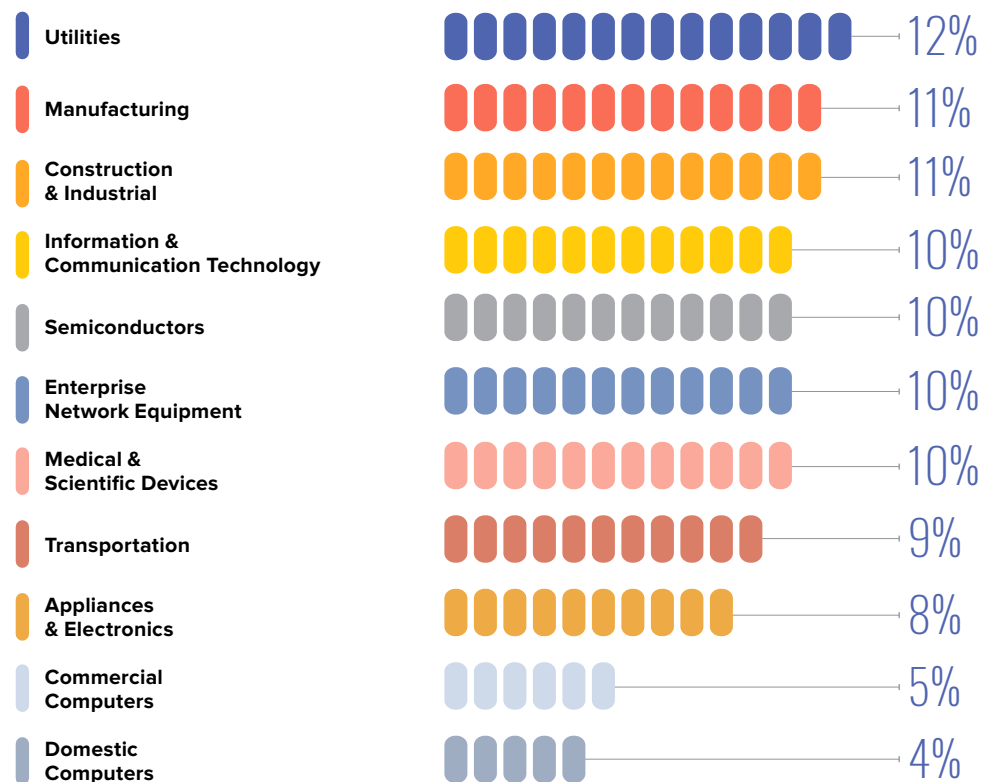
**If you haven’t already, begin making plans for deploying integrated AI and IoT solutions.** Most field service organizations are planning new software initiatives within the next 12 months.

# Appendices A & B

## Appendix A: About the Respondents

The data in this study are the results of a benchmarking survey of 100 professionals within the field service space. Respondents represent a variety of areas of service and are evenly split between Utilities, Manufacturing, Construction & Industrial, and other sectors.

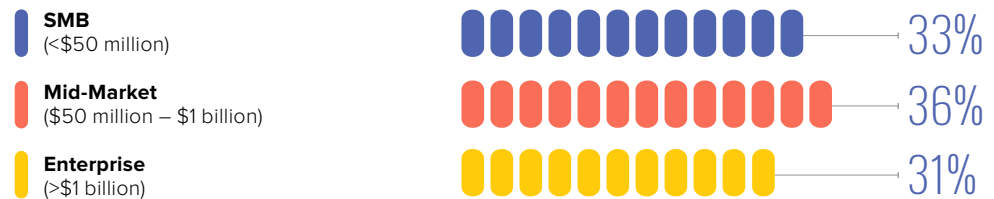
### What best describes the area in which you provide service?



## Appendix A: About the Respondents

Almost one-third of respondents (31%) represent enterprise organizations that bring in a revenue of over \$1 billion. The remaining respondents represent mid-market organizations (36%) and SMBs (33%).

### What is your company size and annual revenue (USD)?



## Appendix B: Other Data Referenced in This Study

Does your company have a 24/7 view of equipment data through the use of connected devices?

[Exhibit A]

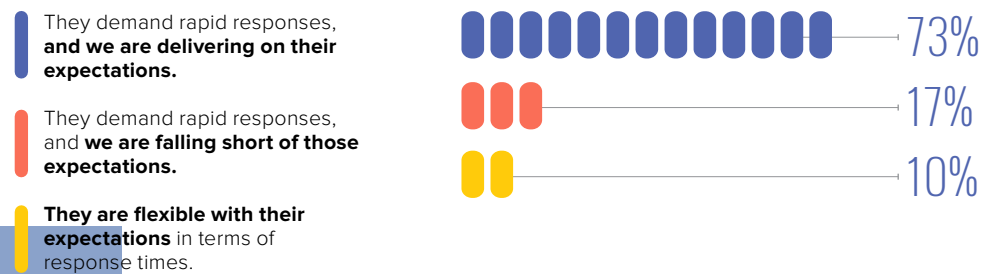


71%  
Yes



29%  
No

### How would you describe your customers' expectations in terms of response times from your teams?



[Exhibit B]



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