TRANSFORMING FIELD SERVICE WITH EMERGING TECHNOLOGIES

How Field Service Organizations' Technology Strategies Have Adapted to New Challenges and Opportunities

INSIGHTS Worldwide Business Research

FIELD SERVICE

SERVICEMAX

Transforming Field Service with Emerging Technologies

How Field Service Organizations' Technology Strategies Have Adapted to New Challenges and Opportunities

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TABLE OF CONTENTS

EXECUTIVE SUMMARY

In the previous report in the “Emerging Technologies” Field Service series, we learned that field service organizations had already made considerable advancements in their technology adoption. Not only had companies deployed hand-held technologies for their technicians, but 55% of the respondents said they had already adopted micro data centers as an edge computing strategy.

After two years of disruption, field service teams are preparing for another year of technology-enabled services. And while many look forward to a return to relative normalcy, most would agree that the field service department may never be the same again.

This report explores how field service organizations’ technology strategies have changed over the past year. It includes key insights from decision makers and benchmarking information about companies’ ongoing service strategies.

ABOUT THE RESPONDENTS

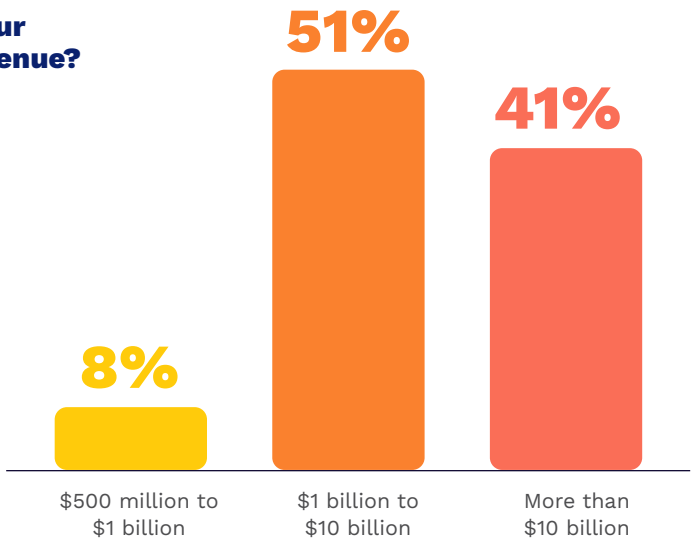
The WBR Insights research team surveyed 100 IT, operations, service, and support leaders from across the U.S. and Canada to generate the results featured in this report.

What best describes the area in which your organization provides service?

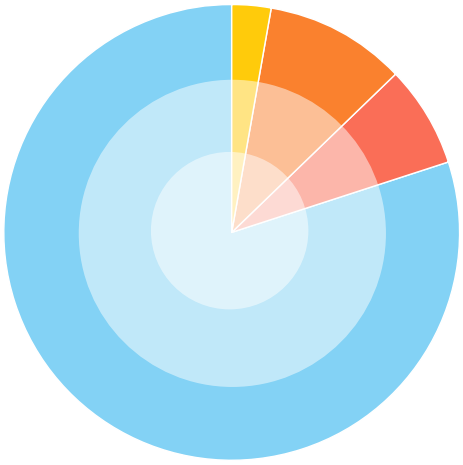
- **10%** Enterprise Network Equipment
- **9%** Appliances & Electronics
- **9%** Construction & Industrial
- **9%** Information & Communication Technology
- **9%** Manufacturing
- **9%** Medical & Scientific Devices
- **9%** Transportation
- **9%** Utilities
- **8%** Heavy Equipment
- **8%** Semiconductors
- **6%** Commercial Computers
- **5%** Domestic Computers

ABOUT THE RESPONDENTS

What is your annual revenue?



What is your seniority?



- **3%** C-Suite
- **10%** Vice President
- **7%** Department Head
- **80%** Director

What is your role?

- **44%** Operations
- **32%** IT
- **12%** Service
- **12%** Support

KEY INSIGHTS

AMONG THE RESPONDENTS:

- **54% rate the current sophistication of their field service technology as only somewhat sophisticated.** However, 25% rate their sophistication as very sophisticated.
- **10% are already assessing the outcomes of their recent technology implementations.** Most indicate they are actively assessing technology solutions (26%) or they are implementing technology solutions (28%) as well.
- **38% have unique technology or transformation initiatives for unique lines of business.** However, 31% indicate that in one or more cases, they have not yet determined if new technology will help their business.
- **Nearly half** indicate their organization's field service technology budget will either **increase significantly** (15%) or **increase somewhat** (31%) over the next 12 months.
- **44% identified augmented reality (AR) and/or wearable devices for technicians as most critical to their success** over the next 12 months; 35% identified artificial intelligence (AI) and machine learning (ML) as most critical as well.
- In each case, **most believe customer-centricity and personalization** (68%); **face-to-face or in-person field service appointments** (55%); and **leveraging service technicians as brand representatives or salespeople** (51%) will become more important over the next three years.

KEY INSIGHTS

- **50% are not currently satisfied with their asset visibility and analytics**, while 52% are not currently satisfied with their voice of customer (VoC) programs.
- Their **two most-significant challenges when attempting to adopt emerging field service technologies over the past two years** have been **budget constraints** (37%) and **integrating new technologies with existing systems** (37%), in each case.
- Most have either **made investments or changes in their business to measure their sustainable impact** (23%); or they are **focusing on understanding and measuring their sustainable impact** within the next three years (32%).
- **52% indicate total cost of ownership (TCO) is among the top-three factors driving their decisions surrounding technology vendors.** In each case, nearly half of respondents claim customer references or ratings (48%) and analyst recognition (47%) are driving their decisions as well.
- Most respondents claim **their organizations use in-house engineers mostly** (45%) **or entirely** (12%) as opposed to outsourced engineers. However, nearly one-third (32%) use mostly outsourced engineers; 11% use only outsourced engineers as well.
- **28% indicate their organizations are "advanced" in their use of data analytics from equipment"**—they use predictive maintenance, remote trouble shooting, remote diagnostics, and/or business analytics. About half (48%) say they are "intermediate" in their use of data analytics.

TECHNOLOGY DEPLOYMENTS ARE REACHING SOPHISTICATION

Field service teams must now manage an increasingly diverse and geographically dispersed customer base that has come to expect a high level of service.

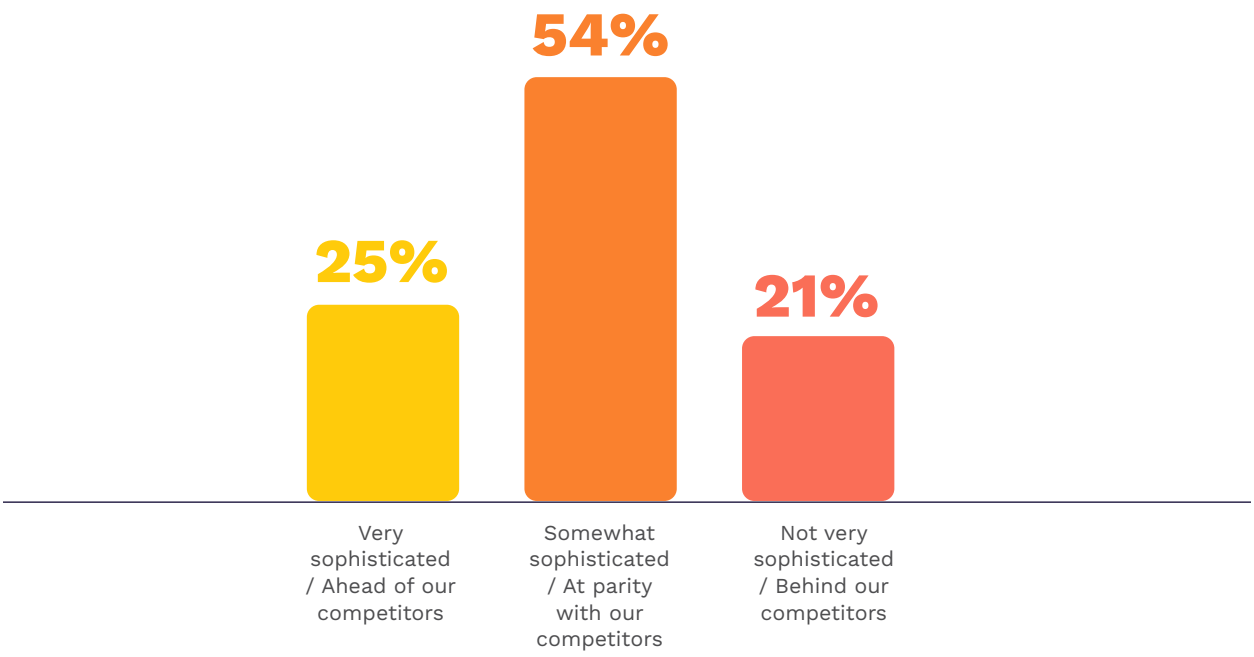
To meet these expectations, field service organizations have turned to emerging technologies such as cloud-based field service management (FSM) solutions, mobile applications, and the Internet of Things (IoT).

Cloud-based field service management solutions provide field service organizations with the ability to manage their operations in real-time, from any location. This allows field service teams to respond quickly to customer needs and issues, as well as track and monitor field technicians in real-time.

In addition, mobile applications allow field service technicians to access customer information, enter work orders, and view schematics and manuals from their mobile devices.

TECHNOLOGY DEPLOYMENTS ARE REACHING SOPHISTICATION

How would you rate the current sophistication of your field service technology?

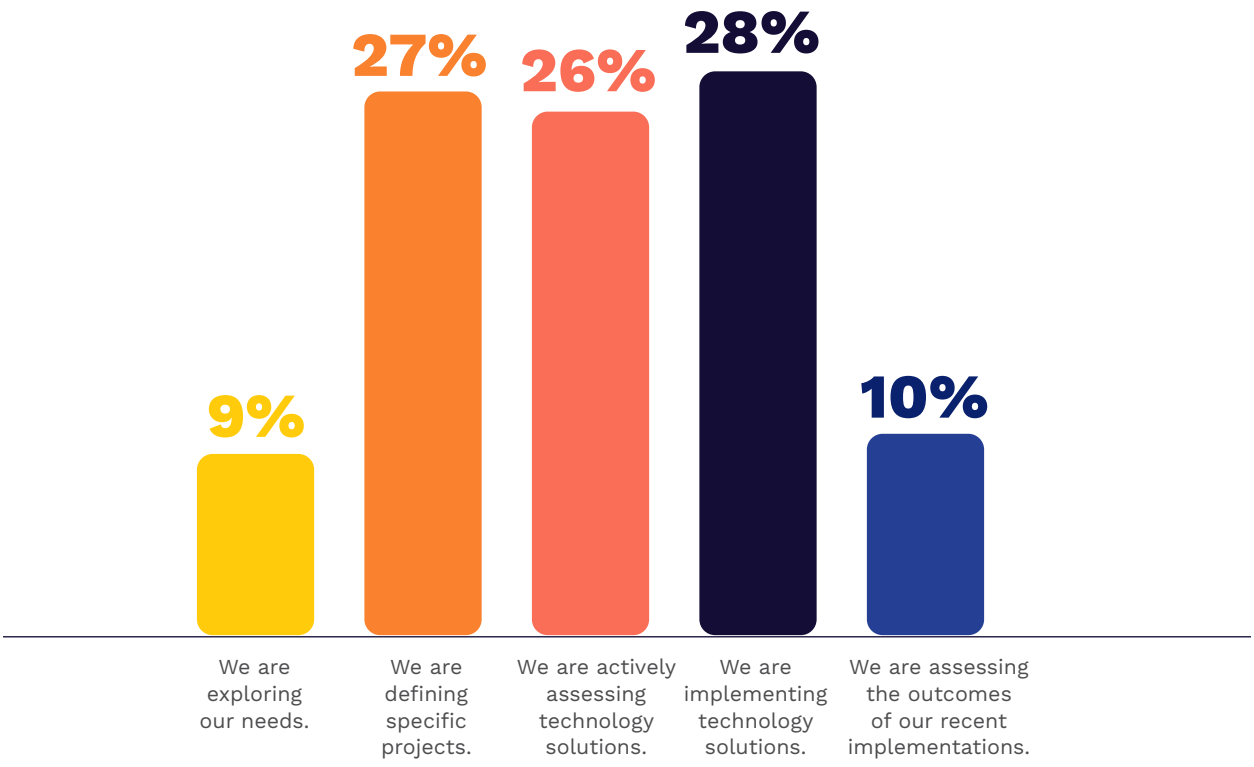


Nonetheless, achieving a sophisticated deployment of field service technologies has been a challenge for some organizations in the past. Currently, most of the respondents believe their technology implementations are somewhat sophisticated or at least at parity with their competitors.

Exactly one-quarter of the respondents believe they have very sophisticated technology implementations and are ahead of their competitors. Likely, these respondents have already deployed emerging technology applications like IoT sensors, AI-powered analytics, and interactive solutions for remote support or like augmented reality (AR) for their technicians.

TECHNOLOGY DEPLOYMENTS ARE REACHING SOPHISTICATION

How far along are you in your next wave of field service technology implementation?

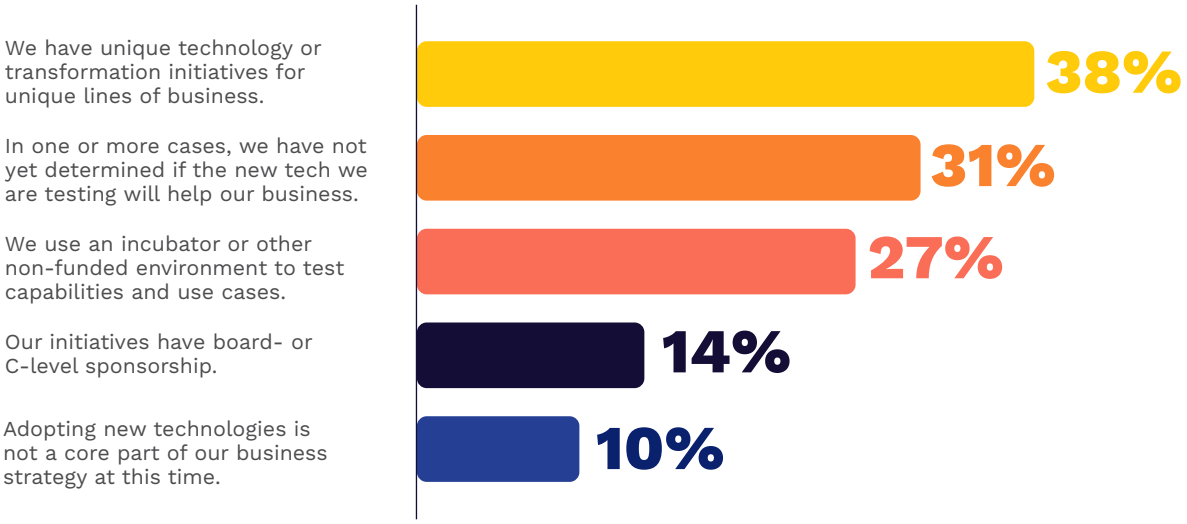


In last year's report on emerging technologies in field service, we learned that 18% of the field service leaders surveyed were still in the process of exploring their technology needs. This year, only 9% are in the process of exploring their needs.

However, fewer respondents than last year are currently assessing the outcomes of their recent implementations, even though about the same percentage of respondents are currently implementing technology solutions. This suggests that most field service organizations' technology strategies are ongoing. Although they may have implemented new technologies in the past 12 months, many of these leaders are already looking toward the next solutions they need to stay competitive.

TECHNOLOGY DEPLOYMENTS ARE REACHING SOPHISTICATION

What level of emphasis is your company placing on emerging technologies and digital transformation?

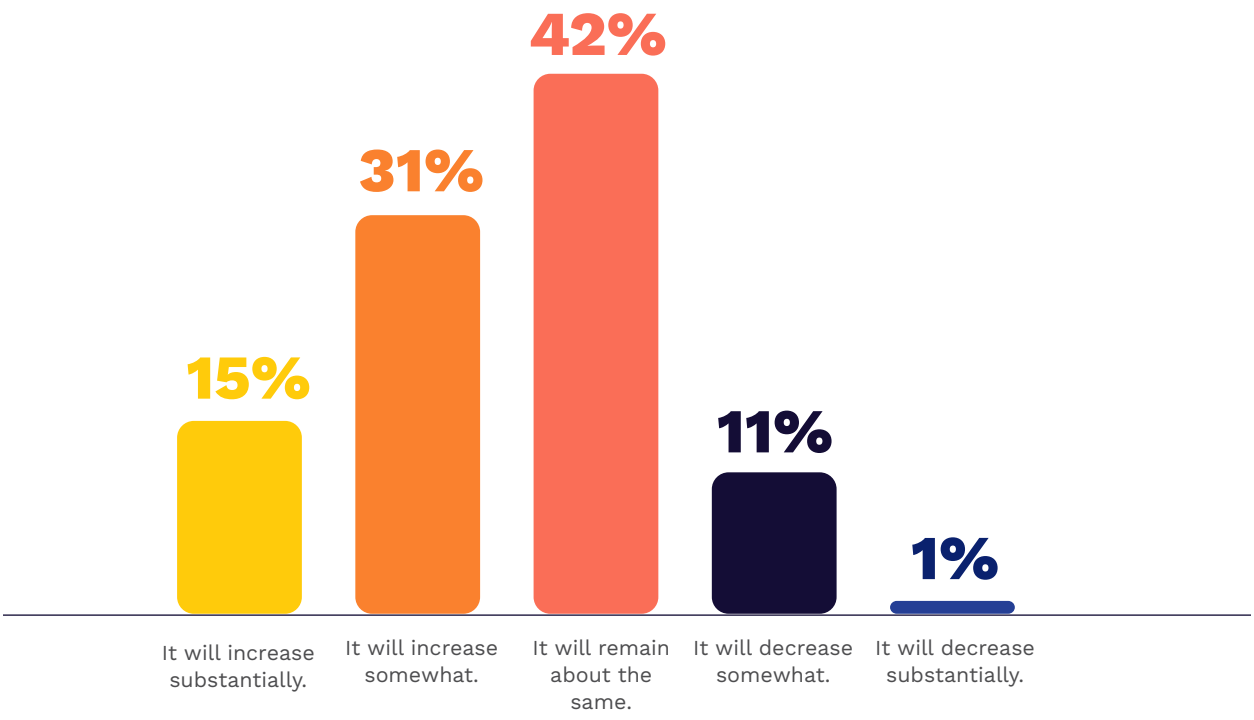


Comparisons between this year's and last year's results also indicate that field service organizations are placing less emphasis this year on the most innovative and experimental technologies. Fewer respondents this year say they have unique technology initiatives, incubator environments, or board- or C-level sponsorship for their technology programs.

However, fewer respondents this year have not yet determined if the new technology they are testing will help their business compared to last year. Furthermore, fewer respondents this year say that adopting new technologies is not a core part of their business strategy currently.

TECHNOLOGY DEPLOYMENTS ARE REACHING SOPHISTICATION

Will your company's field service technology budget increase or decrease over the next 12 months?

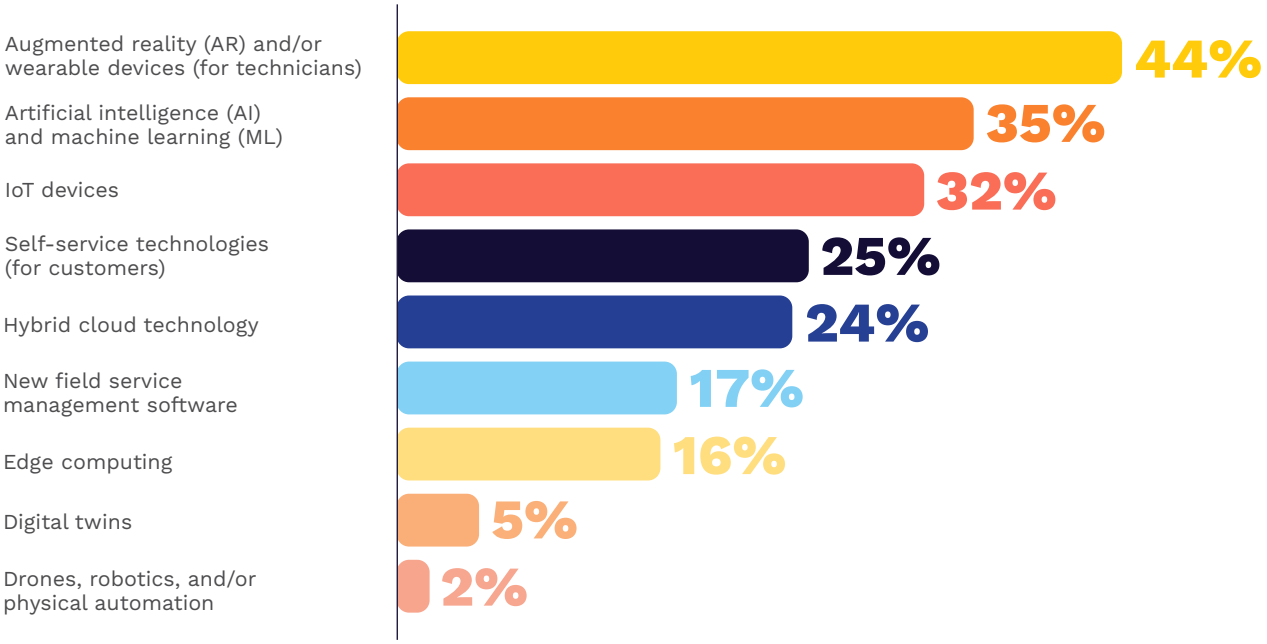


Most of the respondents are also planning to either keep their technology budgets the same over the next 12 months or increase them at least somewhat.

This suggests that technology is still a key priority for field service teams, but organizations may not be investing as much time, money, and effort into new and emerging technologies that require experimentation. This could be because these organizations have already established use cases for technologies like AI and IoT and are currently in the process of implementing them.

TECHNOLOGY DEPLOYMENTS ARE REACHING SOPHISTICATION

Which two of the following field service technologies do you consider most critical to success over the next 12 months?



The two technologies the respondents consider most critical to success are wearable devices for their technicians (44%) and artificial intelligence and machine learning (35%). As we will learn, field service organizations are paying special attention to customer centricity as in-person meetings return, so they are searching for ways to empower their technicians when engaging in face-to-face interactions.

The respondents also indicate that they have no intention of slowing down their investments into automation. AI, ML, and IoT technologies are still a key priority and would allow organizations to deliver new modes of digital, predictive, and real-time service.

SERVICE TEAMS ARE ONLY SOMEWHAT SATISFIED WITH THEIR CAPABILITIES

The way field service departments deliver service has changed, but many of the fundamentals remain. Field service teams aspire to deliver customer-centric services that extend the value of their assets and help to create meaningful relationships with their customers.

The respondents confirm this in verbal responses. However, they also identify some specific areas where their organizations have changed the way they deliver service over the past two years.

Several respondents say they have made significant investments into self-service for customers and remote support for both customers and technicians.

"Additions have been made in terms of self-service portals that run on RPA and personalized attention to ease the pressure on field service personnel," says a C-level IT leader at a utility company.

"In the past two years, we have increased online support and reduced field services as our remote capabilities increased and our technology and products got smarter," says a VP of operations at a domestic computer company.

Similarly, a service director at a commercial computer company says, **"Further developments have been made to the remote-workforce with technology and training considering the challenges that the pandemic bought us in the past couple of years."**

Other notable changes the respondents mention include "digitized route optimization," "the comprehensive use of cloud solutions," "sustainable solutions," and "dynamic scheduling."

Some respondents note that the current landscape is still volatile, so challenges to technology adoption remain. But thanks to their existing technology strategies, field service teams have streamlined processes and reduced the number of necessary in-person technician visits for customers.

SERVICE TEAMS ARE ONLY SOMEWHAT SATISFIED WITH THEIR CAPABILITIES

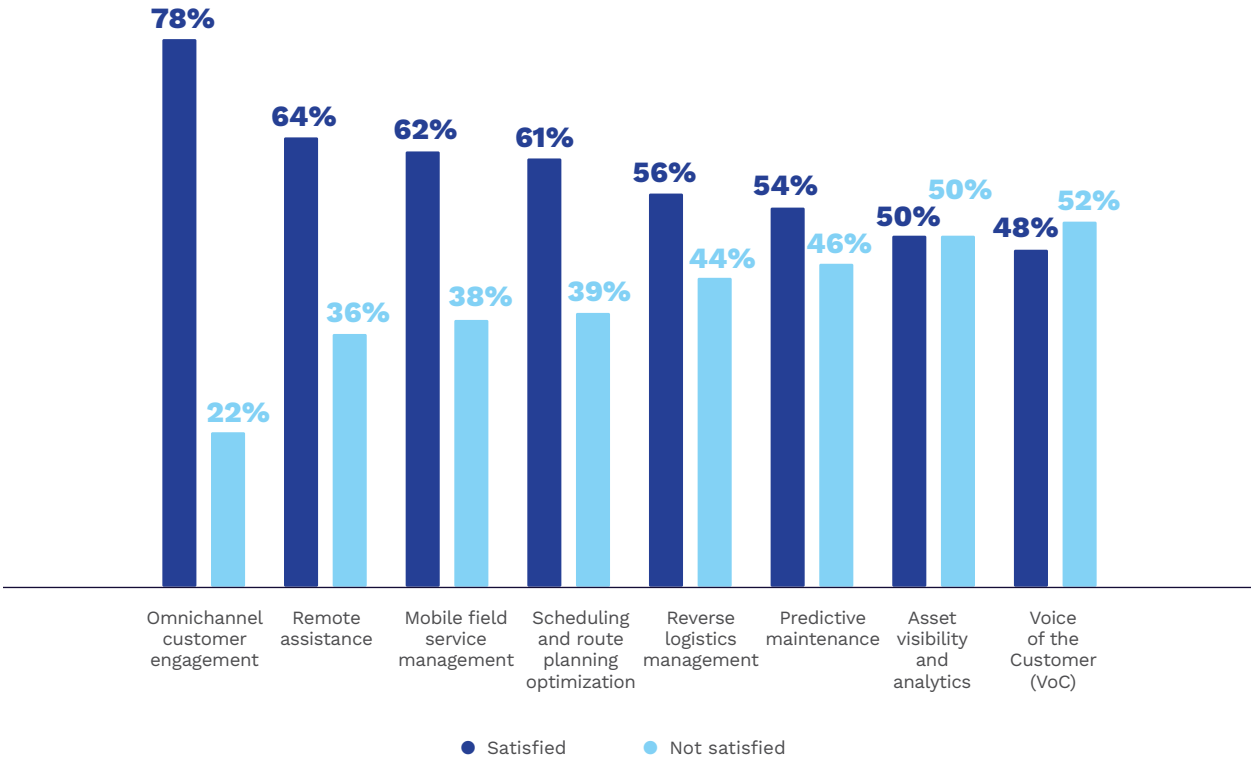
To what extent are you using data analytics from your equipment for field service?

Achieving this type of lean and efficient operating model is wholly dependent on the organization's technology capabilities, as well as its ability to leverage data.

Currently, about half of the respondents (48%) say their use of data analytics from their field service equipment is "intermediate," while about one-quarter (24%) say their use is "basic." Some of these organizations have some diagnostic and predictive maintenance capabilities thanks to technologies like IoT sensors, but others can only collect basic informational data from their deployed assets.

SERVICE TEAMS ARE ONLY SOMEWHAT SATISFIED WITH THEIR CAPABILITIES

Are you currently satisfied with the technologies you use for each of the following aspects of your service operation?



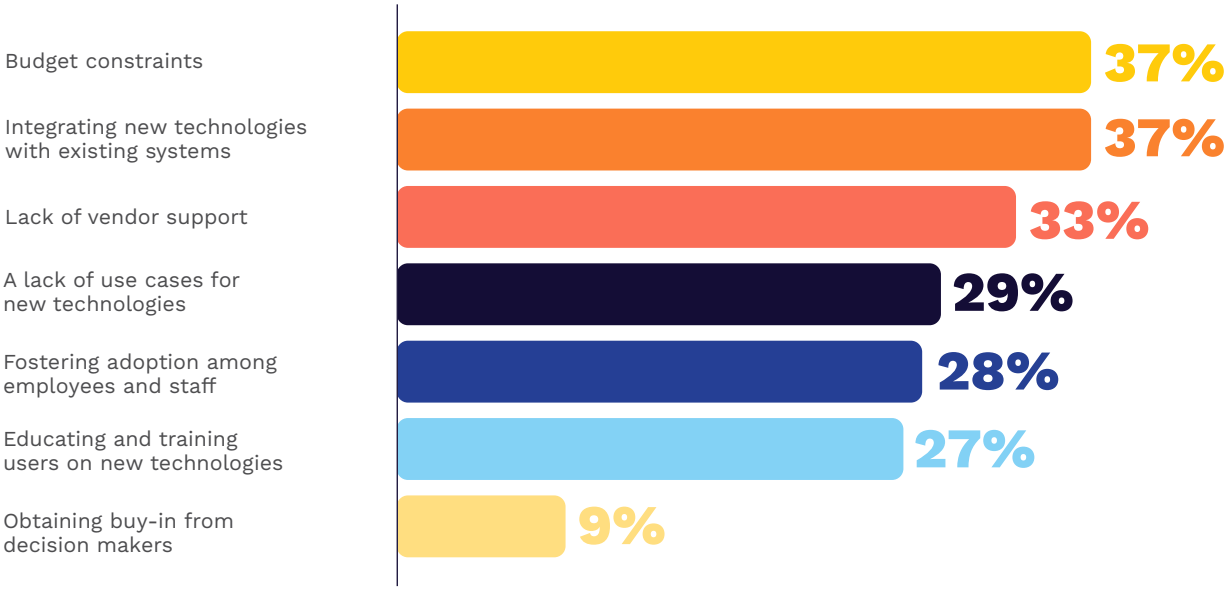
As a result, some field service teams are not entirely satisfied with the technologies they use for multiple aspects of their operations. For example, most of the respondents are not satisfied with the technology they use to hear the voice of the customer (VoC). This would suggest that they need more solutions that would allow for customer inputs or more tools that could deliver quantitative insights into customer outcomes.

Half of the respondents aren't satisfied with their asset visibility and analytics, either. This suggests that they need to deploy more sensors to monitor their assets alongside the software necessary to analyze results.

However, most of the respondents say they are satisfied with the technologies they use for other capabilities, especially omnichannel customer engagement, remote assistance, mobile field service management, and scheduling and route planning optimization. Field service teams have adopted a range of cloud-based solutions over the past few years to deploy these capabilities.

SERVICE TEAMS ARE ONLY SOMEWHAT SATISFIED WITH THEIR CAPABILITIES

Over the past two years, which two of the following have been your most significant challenges when attempting to adopt emerging field service technologies?



The two most significant challenges preventing organizations from realizing more advanced capabilities are budget constraints and difficulties when integrating new technologies with existing systems. About one-third of the respondents also say a lack of vendor support is a significant challenge. Some organizations may need to seek out new vendors who provide real-time support for customers and can design integrations to ensure new solutions and legacy systems speak to one another.

CUSTOMER-CENTRICITY WILL DRIVE DECISIONS IN THE FUTURE

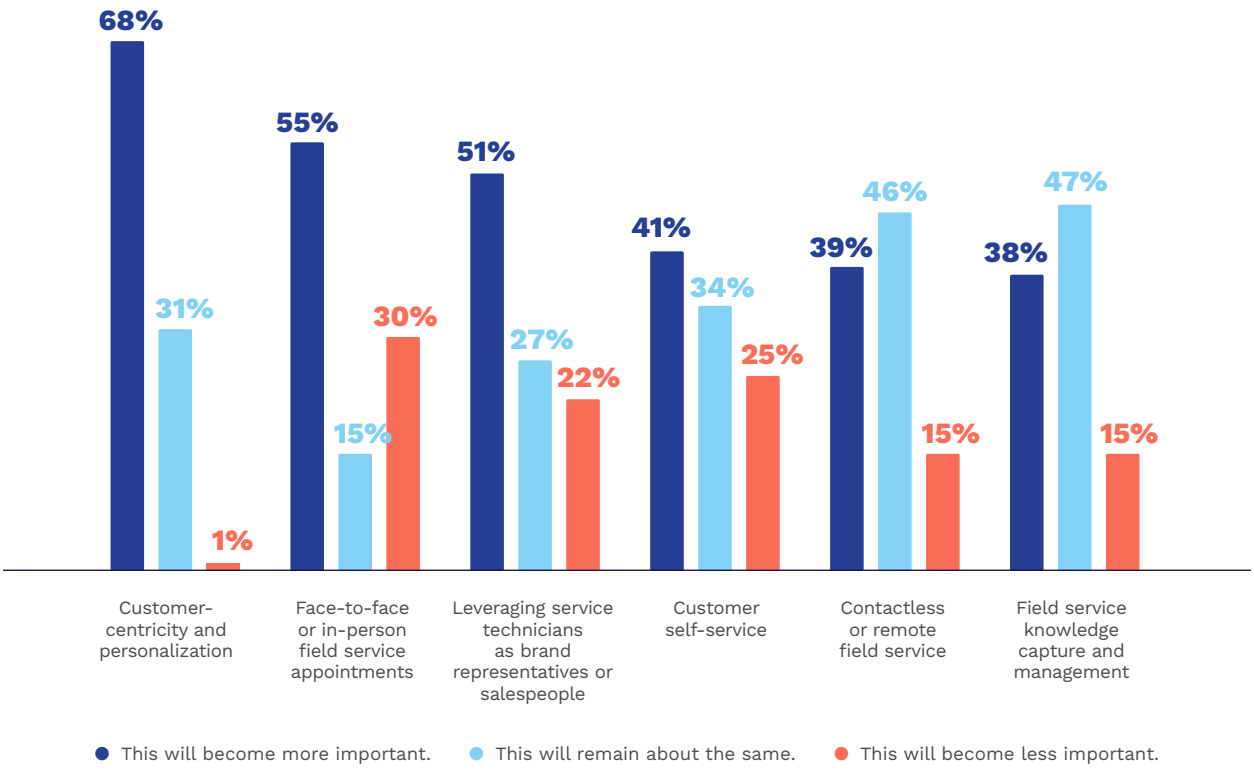
Customer-centricity is the practice of putting the customer first in all decisions. This means understanding the customer's needs and wants and making sure they are always kept in mind when planning field service operations.

Satisfied customers are more likely to try new products and services, such as long-term service contracts, self-service tools, and other programs that generate value for both the customer and the company.

When field service departments focus on making their operations customer-centric, it shows in everything they do. This can help build trust and confidence, and support business growth.

CUSTOMER-CENTRICITY WILL DRIVE DECISIONS IN THE FUTURE

How do you expect the following elements of field service to change in importance over the next three years?



At 68%, most of the respondents agree that customer-centricity and personalization will increase in importance over the next three years. Only 1% of the respondents believe they will decrease in importance.

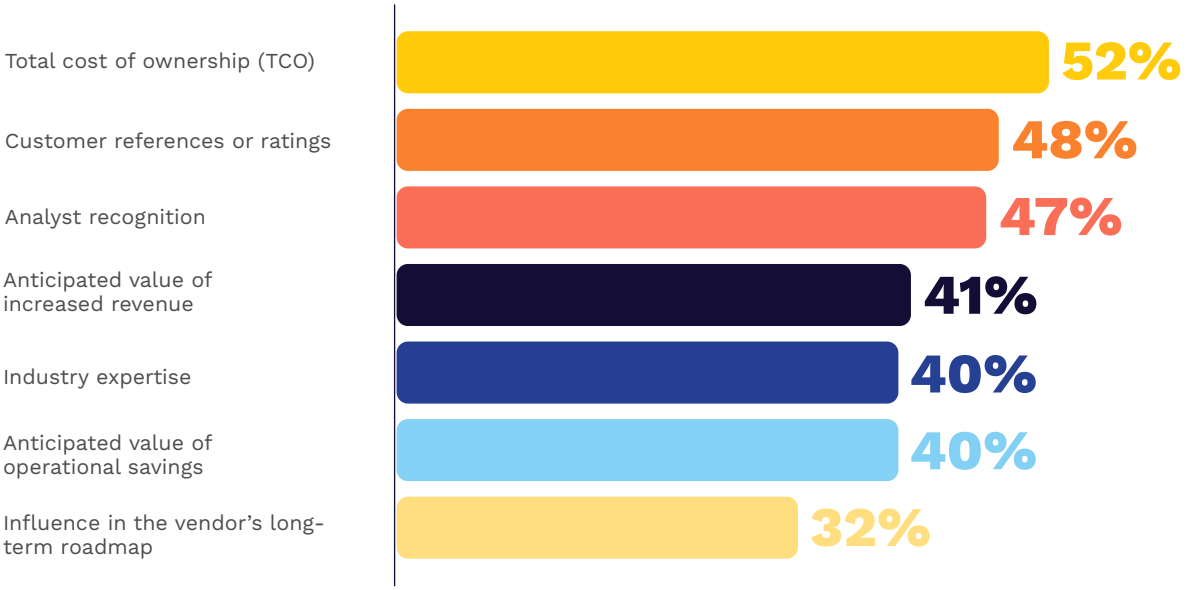
Similarly, most of the respondents also believe that face-to-face field service appointments will become more important. Most believe leveraging service technicians as brand representatives will become important as well. However, 30% think they will be less important in three years.

This suggests that there is a divide between field service organizations based on how they foresee customers acclimating to self-service, remote service, and automated functions within the service department. These factors are likely to be important in the future, but how they operate alongside traditional service visits may depend on the company, its products, and its customers.

For example, only 41% of the respondents believe customer self-service will be more important in three years.

CUSTOMER-CENTRICITY WILL DRIVE DECISIONS IN THE FUTURE

When assessing technology vendors, which main factors drive your decision?

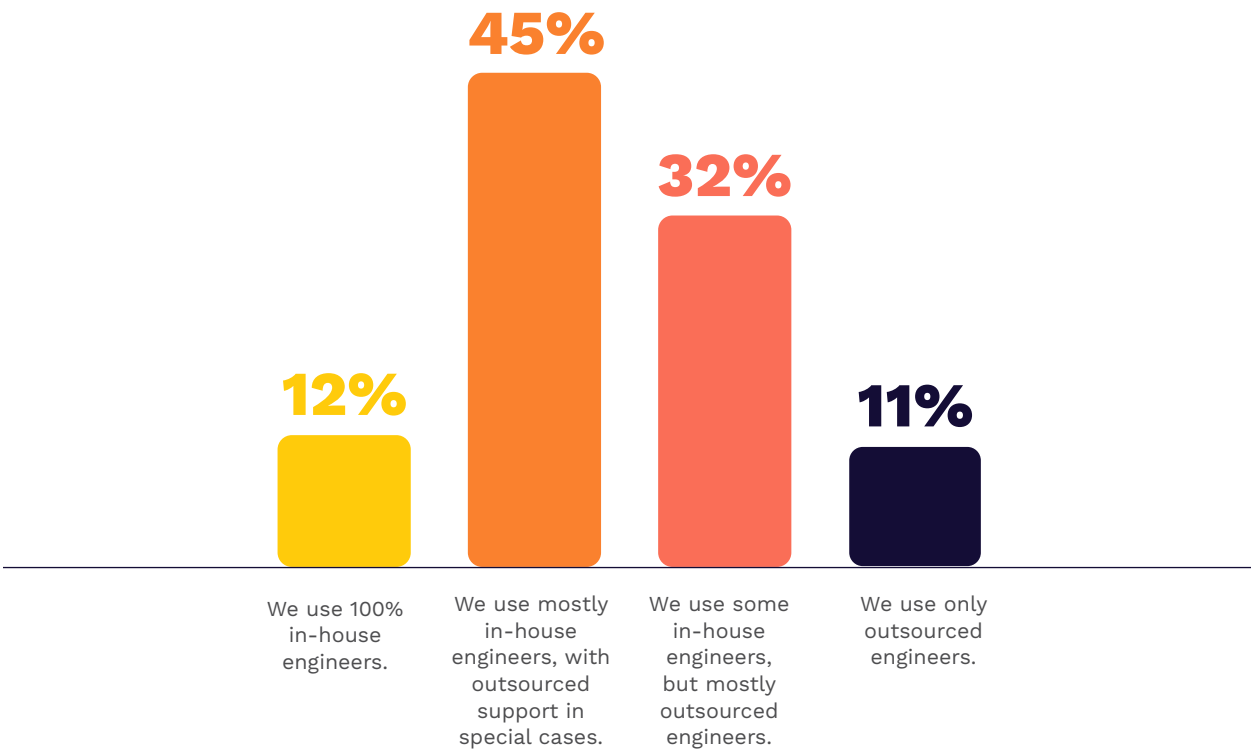


One thing the respondents are likely to agree on is that both remote and in-person service appointments will be powered by technology. The relationships field service teams have with their technology vendors often determine how effectively that technology gets used. Most organizations need a significant level of support to integrate new solutions and ensure they generate value quickly.

The top factors the respondents use when assessing technology vendors are the total cost of ownership (TCO), customer references and ratings, and recognition by analytics. In other words, most field service organizations hope to work with established technology vendors that have high marks from their customers and quantitative evidence demonstrating how their solutions reduce costs.

CUSTOMER-CENTRICITY WILL DRIVE DECISIONS IN THE FUTURE

How many of your engineers sit within your organization, and how many are outsourced?

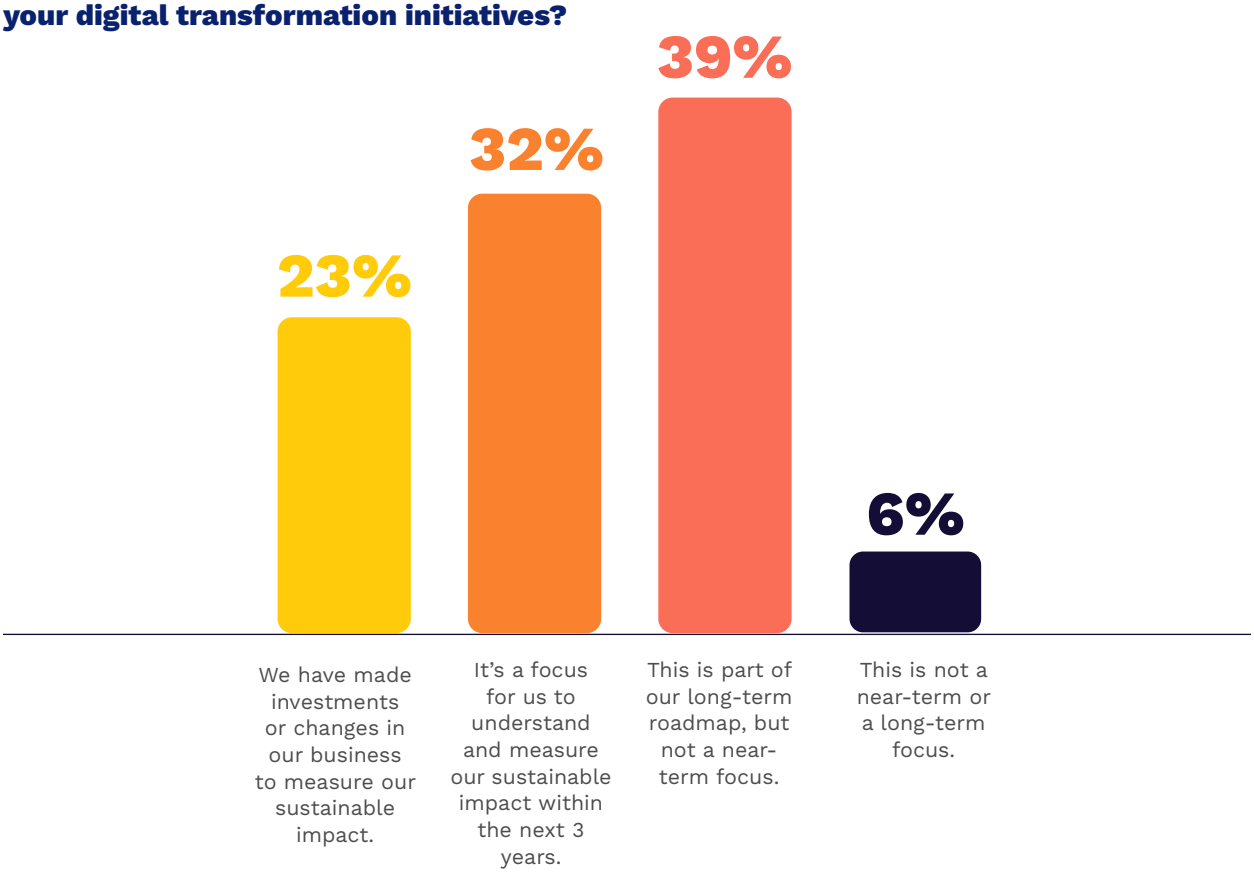


Many field service organizations will also need to establish long-standing partnerships with agencies, contractors, and other types of outsourced companies to scale their services. Most of the respondents use outsourced technicians and engineers in some capacity, including 32% who use mostly outsourced engineers and 11% who only use outsourced engineers.

Outsourced or not, technicians and engineers represent the brand every time they show up for a service appointment. Field service organizations must be able to partner with outsourced specialists who match their standards, both in terms of capability and customer-centricity.

CUSTOMER-CENTRICITY WILL DRIVE DECISIONS IN THE FUTURE

To what degree is sustainability part of your digital transformation initiatives?



Finally, most field service organizations are focused on sustainability, but fewer than one-quarter say they've made investments or changes in their business to measure their sustainable impact. Most will either make these changes in the next three years or as part of a much more long-term strategy.

Although sustainability and customer-centricity may seem like separate strategies, they are ultimately intertwined. Both consumers and B2B organizations are becoming more aware of corporate sustainability commitments. In the future, some companies and consumers may require vendors to meet sustainability guidelines before they consider becoming a customer at all.

CONCLUSION: A REVOLUTION IN FIELD SERVICE

The field service industry is on the cusp of a new era. Organizations are becoming empowered by emerging technologies that have the potential to revolutionize how field service teams operate. From predictive maintenance and augmented reality to chatbots and field service management software, there is a multitude of tools and technologies that field service organizations can adopt to drive efficiencies and improve customer outcomes.

Based on the results of this study, it is evident that field service organizations must embrace emerging technologies to remain competitive. However, some companies have been faster to adopt new tools and technologies than others.

As a first step, field service leaders should work to overcome internal challenges to technology adoption, then lay out a plan for which technologies are best suited to their overarching business strategies. They must also generate use cases for technologies to encourage internal buy-in. Once a technology has been identified, they must take time to partner with vendors that will provide them with the support they need to implement, maintain, and continue to draw value from their new tools.

KEY SUGGESTIONS

- **Establish a plan for which technologies are best suited to your overarching business plans.** Use incubators or pilot programs to develop use-cases for specific technologies. This will help you more effectively achieve buy-in from decision makers.

- **Partner with established technology vendors that have high marks from their customers and quantitative evidence for how their solutions reduce TCO.** These partnerships will be important to your success in delivering on customer expectations. They will also be key to generating value from your service agreements.

- If you haven't already done so, **consider adopting AR and wearable devices for your technicians.** These are popular technologies among the respondents and will likely become more important for training and remote support purposes.

- **Combine the use of AI, ML, and IoT sensors to develop more predictive maintenance capabilities for your assets.** If you haven't already used these technologies, consider beginning a trial to determine how much value they can deliver for your customers and the business.

- **Develop a formal voice of the customer program to acquire customer feedback about your field service program.** Customer-centricity is now essential for field service operations, but most of the respondents were not satisfied with their existing VoC capabilities.

ABOUT THE SPONSORS

SERVICEMAX

ServiceMax's mission is to help customers keep the world running with asset-centric field service management software. As the recognized leader in this space, ServiceMax's mobile apps and cloud-based software provide a complete view of assets to field service teams. By optimizing field service operations, customers across all industries can better manage the complexities of service, support faster growth and run more profitable, outcome-centric businesses.

For more information, visit **www.servicemax.com**.

ABOUT THE AUTHORS

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FIELD SERVICE

We launched Field Service in 2002 and have been dedicated to supporting the growth of the service industry ever since. What started off as 100 people in a room discussing the future of service has become 500 senior-level service executives being inspired while learning and developing their company as well as their careers.

For more information, please visit **https://fieldserviceeu.wbresearch.com**.