FIELD SERVICE INSIGHTS

THE STATE OF AI IN FIELD SERVICE

Exploring Current Applications of AI Technology and Its Potential to Transform the Function

ZUPER™

CONTENTS

EXECUTIVE SUMMARY

This report explores the transformative impact of artificial intelligence (AI) on the field service industry, based on a survey of diverse field service leaders across various sectors.

With 79% of organizations already at least somewhat satisfied with their existing AI implementations and 74% planning to increase their AI investments over the next 12 months, the industry is poised for significant changes over the next five years thanks to this groundbreaking technology. Field service organizations are already realizing significant gains in areas like customer satisfaction, productivity, and business growth thanks to AI.

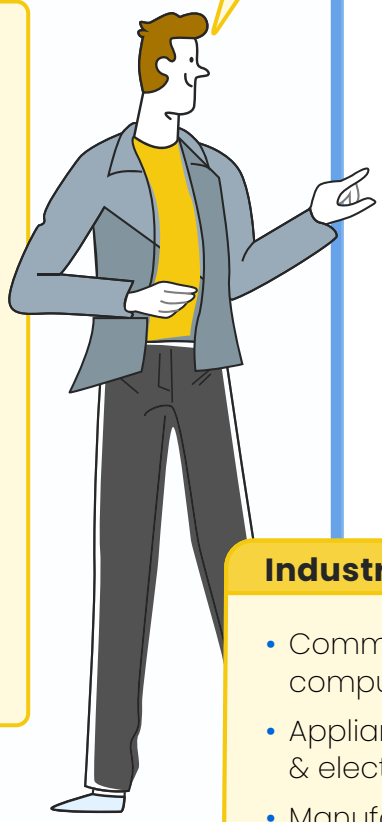
Nonetheless, most organizations still face significant challenges in their attempts to implement artificial intelligence and incorporate it into their operations. Challenges with legacy system integration, data quality issues, and internal resistance are persistent.

As field service leaders develop their AI strategies over the next 12 months, this report will provide valuable insights into what they should prioritize, as well as what steps they can take to improve their outcomes.

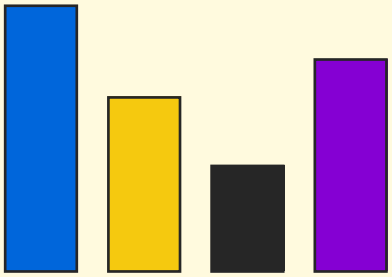
ABOUT THE RESPONDENTS

AI Utilization:

100% use AI in some capacity

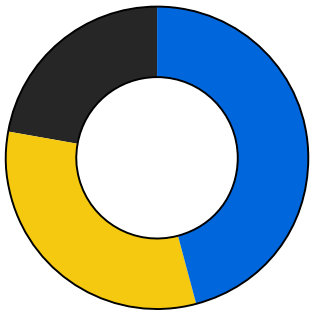


Annual Revenue:



- **35%** $500M +
- **23%** $100M - $500M
- **14%** $50M - $100M
- **28%** $5M - $50M

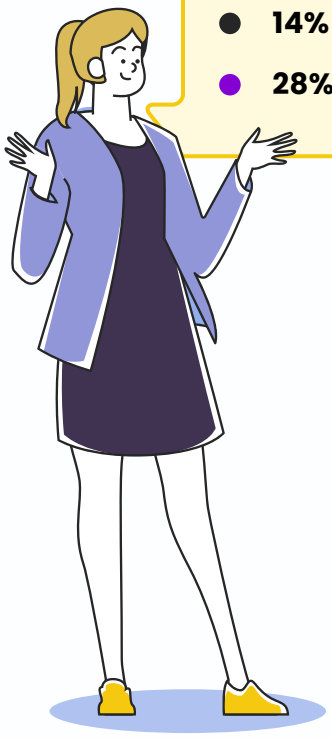
Roles:



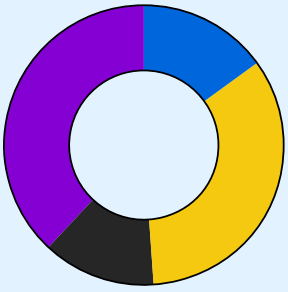
- **46%** Operations
- **32%** IT
- **22%** Field Service

Industries:

- Commercial computers
- Appliances & electronics
- Manufacturing
- Transportation
- Utilities
- and More



Seniority:



- **15%** C-Suite
- **34%** Vice Presidents
- **13%** Department Heads
- **38%** Directors

KEY INSIGHTS

Among the respondents:

High satisfaction with AI:

79% are either very satisfied (25%) or somewhat satisfied (54%) with their current applications of AI in field service.

Increasing AI investments:

74% plan to increase their investments in AI for field service over the next 12 months.

Operational effectiveness improvement:

56% say AI has improved operational effectiveness.

Customer satisfaction boost:

68% say AI has improved customer satisfaction.

Productivity enhancement:

61% experienced improved productivity due to AI implementation.

High interest in AI-driven efficiency tools:

92% are either very likely (36%) or somewhat likely (56%) to invest in an AI-driven tool that proactively identifies new efficiency opportunities.

Diverse AI applications:

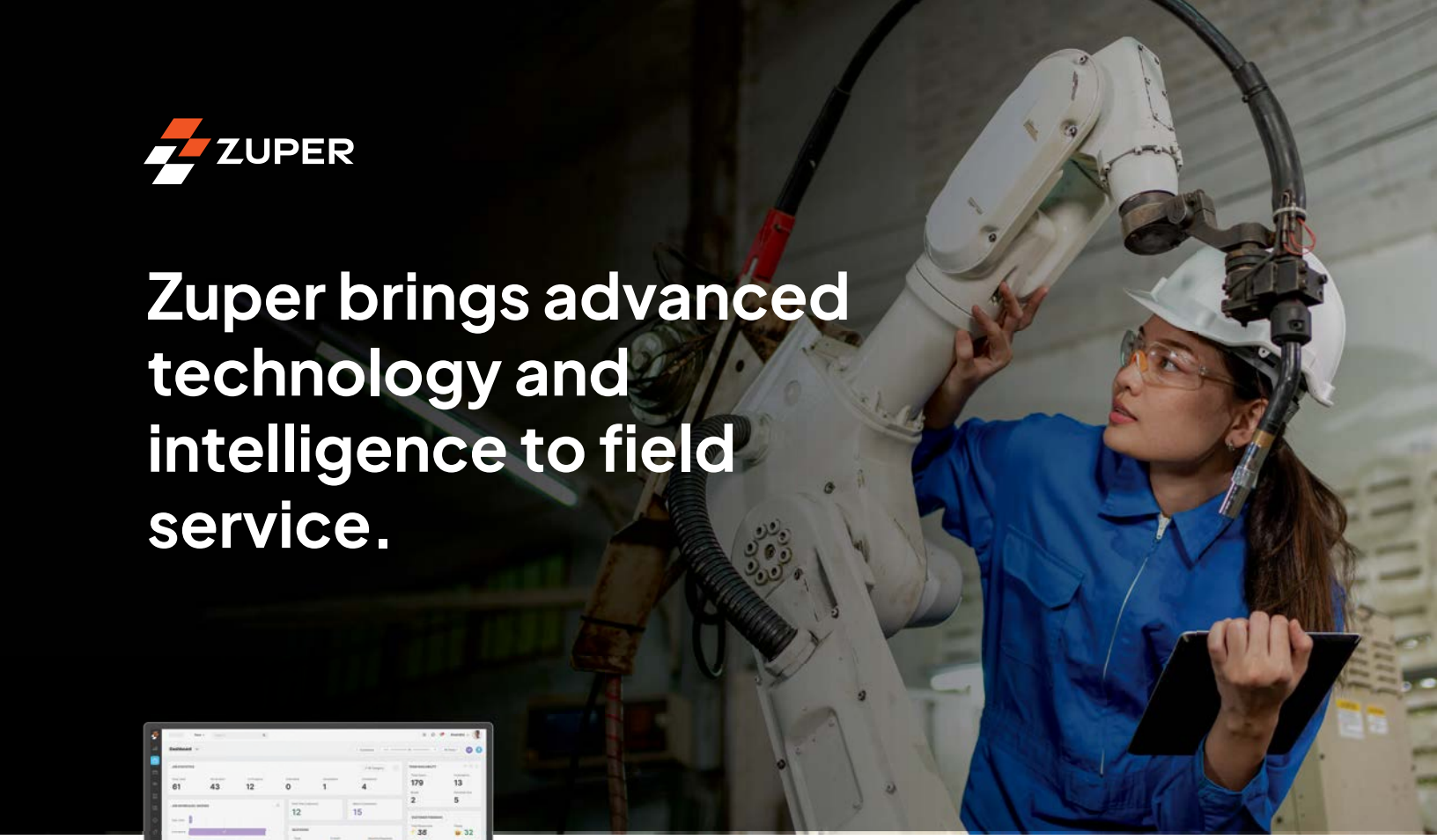
Organizations are using or planning to implement AI across various areas, including scheduling and dispatching (84%), asset management (88%), and training (88%).

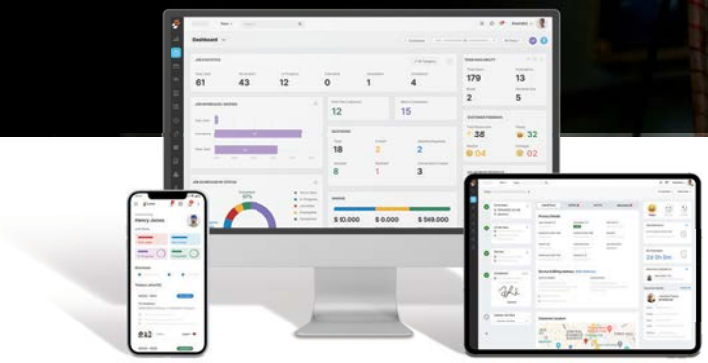
AI benefits across roles:

Most believe AI could be beneficial for technicians (76%), operations team members (83%), and customer service representatives (77%).

ZUPER

Zuper brings advanced technology and intelligence to field service.





“We were drowning in paperwork and had no way to effectively track job progress or performance data. Implementing Zuper’s field service management software was our only hope of scaling our business.”

George Ginis,
CTO, Sail Internet

Transform your field service business today.
Visit **zuper.co** for more information.

Field Service, Your Way

Zuper’s intelligent field service platform turns technology into a competitive advantage. With unrivaled technology and expertise, Zuper enables fast-growing field service organizations to empower technicians, delight customers and grow their business, transforming their field teams into Zuper heroes.

Benefits

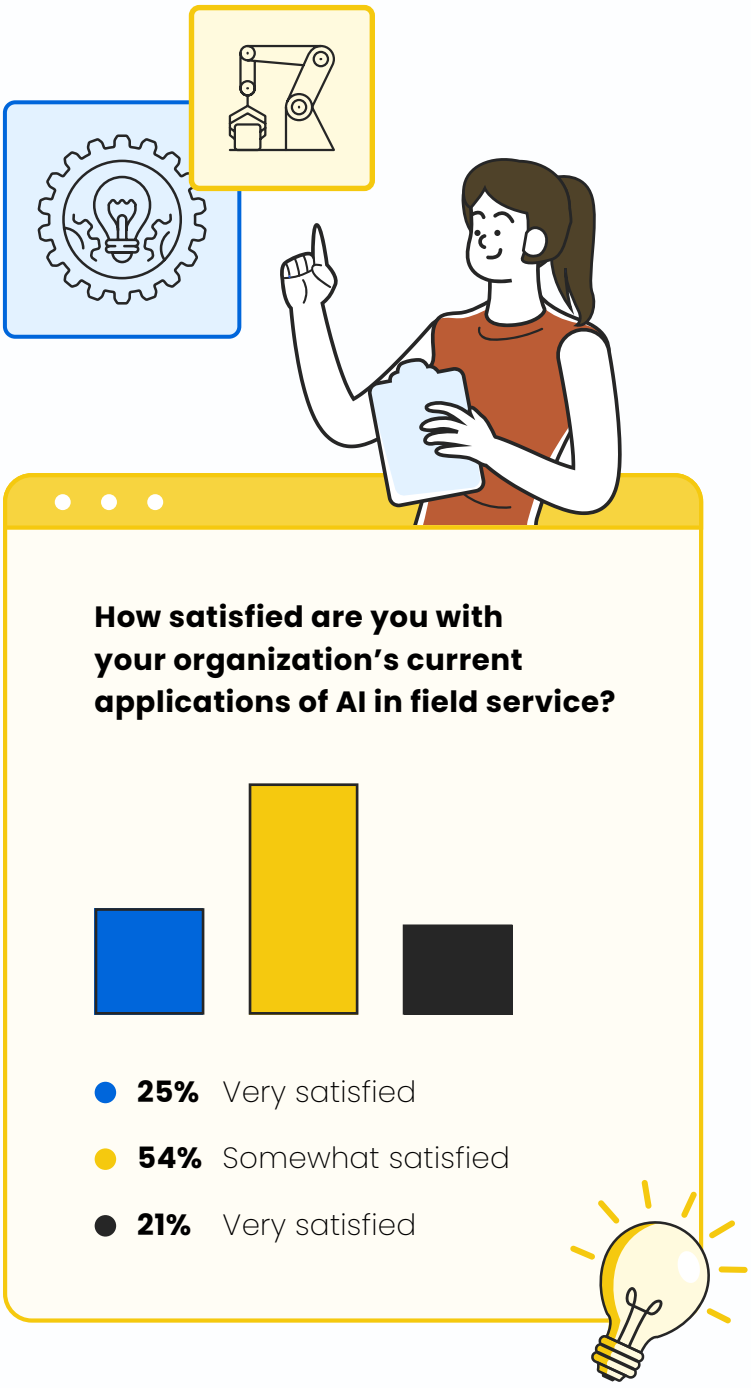
- User-driven configurations empower easy adaptability
- Offers more than 60 best-in-class integrations
- Grows and scales with your business
- Provides no-code workflows and intelligent automation
- Delivers industry-leading customer service

THE CURRENT STATUS OF AI IMPLEMENTATION

Artificial intelligence (AI) has emerged as a transformative force in the field service industry, promising to streamline operations, enhance efficiency, and improve customer satisfaction. As organizations increasingly recognize the potential of AI, many are taking steps to integrate new AI-powered technologies into their field service operations.

The survey results indicate a generally positive outlook on current AI applications in field service, with 79% of respondents expressing satisfaction. Specifically, 25% report being "very satisfied" with their organization's AI implementations, while 54% are "somewhat satisfied." This high level of satisfaction suggests that AI is already delivering tangible benefits to many field service organizations.

However, the fact that over half of respondents are only "somewhat satisfied" indicates there is still room for improvement and that current AI applications could be further optimized.



The respondents agree that AI implementation has had a significant positive impact on various aspects of field service operations. The most notable improvements were observed in customer satisfaction, with 68% of respondents reporting enhancements (10% significant, 58% somewhat). This underscores AI's potential to elevate the customer experience, likely through more efficient service delivery and improved communication.

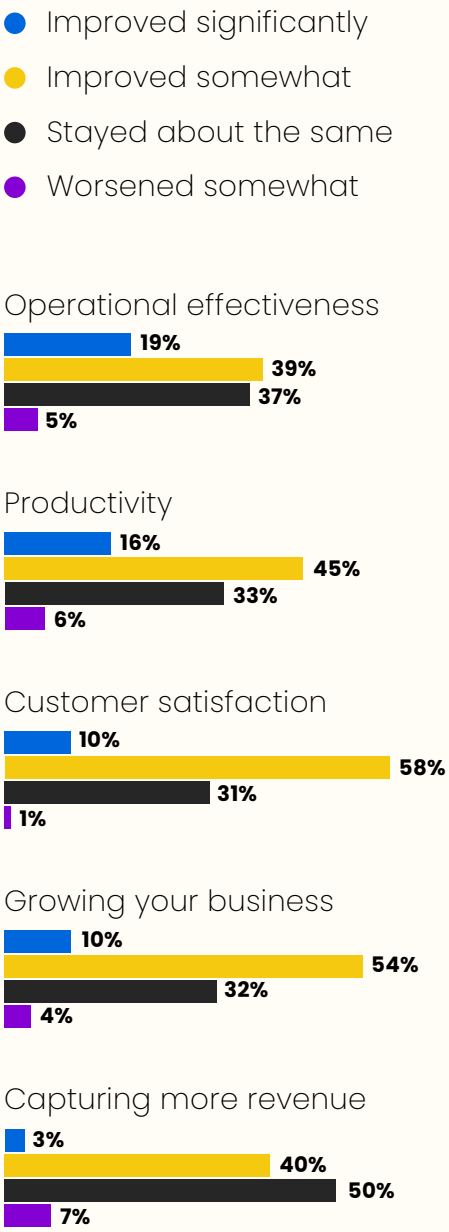
Productivity and business growth also saw considerable improvements, with 61% and 64% of respondents respectively noting positive changes. Notably, 19% of the respondents saw their operational effectiveness improve "significantly" thanks to their AI implementations as well. These findings highlight AI's role in streamlining operations and driving business expansion in the field service sector.

Conversations with the respondents revealed that they are using or planning to use AI in several areas of their field service operations, specifically for the purpose of enhancing the customer experience.

Common themes include:

- Predictive maintenance and issue prevention
- Personalized service and communication
- Automated scheduling and dispatching
- Real-time updates and tracking for customers
- AI-powered diagnostics and troubleshooting

How has the implementation of AI technologies in your field service organization impacted the following aspects of your field service operations?

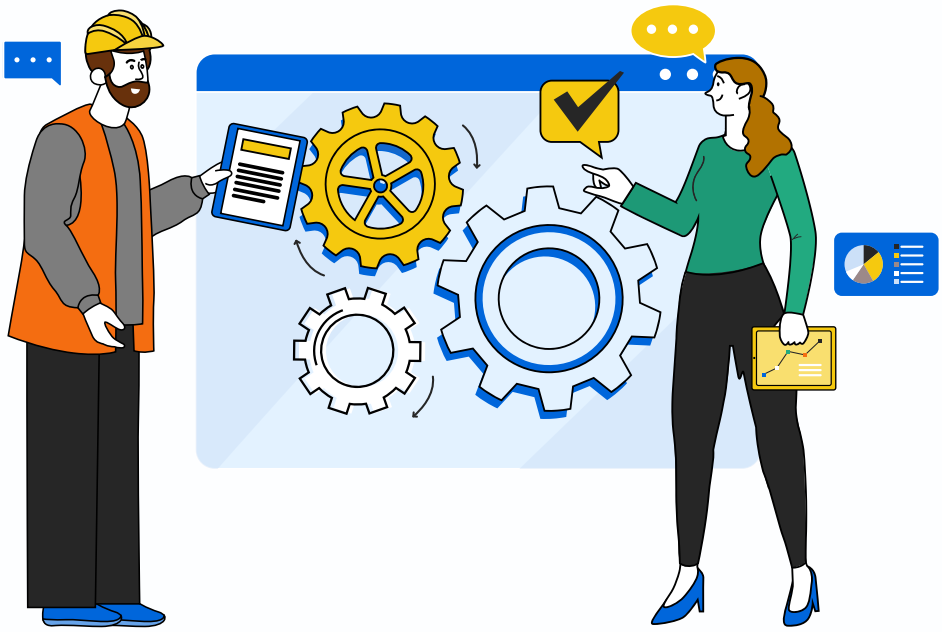


For instance, one respondent mentioned "prioritizing service requests by assessing the urgency of customers," while another highlighted "reducing downtime for customers by scheduling service intervals based on past service history." These applications demonstrate AI's versatility in addressing various aspects of field service, from operational efficiency to customer satisfaction.

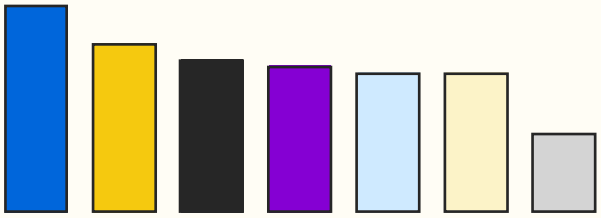
The focus on proactive and personalized service indicates a shift towards more customer-centric approaches enabled by AI technologies. AI can be utilized in this instance to analyze customer and historical data to optimize service intervals, provide technicians with insights about customer needs, and automate job prioritization.

The respondents say the technology is also having an impact on customer interactions, where AI can significantly improve the organization's efforts at "generating feedback from customers for quick improvements in field service operations," according to one respondent. Organizations can use automated solutions to solicit feedback, and then leverage AI-powered analytics to scan customer responses for key suggestions and insights for improvement.

Beyond these capabilities, many field service leaders believe AI will significantly improve their technicians' capabilities and allow them to better service customers. According to one respondent, "AI helps technicians adjust their approach to field service operations to better suit each customer's needs."



Does your current field service management platform empower your technicians with any of the following solutions and capabilities?



- **65%** Subcontracting functionalities
- **53%** In-the-field quote and work order management
- **48%** Job-status alerts via text notifications
- **46%** AI-powered troubleshooting and knowledge access
- **44%** Automatically updated workflows
- **44%** Remote assistance tools
- **25%** A technician-friendly mobile app

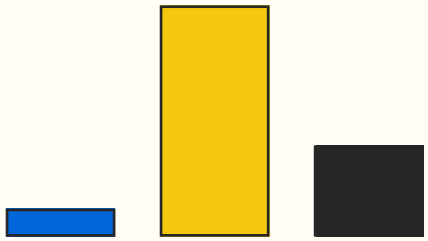
This suggests that AI will be integral to enhancing the solutions currently being used by field service staff, such as standard field service management (FSM) platforms.

Most of the respondents say their current platforms provide technicians with subcontracting functionalities (65%) and in-the-field quote and work order management (53%). However, most of the respondents' current platforms don't have capabilities like job-status alerts via text, remote assistance tools, and, importantly, AI-powered troubleshooting and knowledge access, which only 46% of the respondents currently have.

"We examined where AI could fit into various quadrants in the business. We also discussed its potential in software development, engineering, R&D, and supply chain management. As we delved deeper into these areas, we initially found it challenging to determine if AI would truly be beneficial. However, once we got hands-on experience, we began to see its advantages."

Alfred Zhu, Director of Enterprise Applications and Services, The Middleby Corporation, Field Service East 2024

How will your organization's investments in AI for field service change over the next 12 months?



- **8%** Increase significantly
- **66%** Increase somewhat
- **26%** Stay about the same

Moving forward, AI is likely to become a primary driver of operational changes in these areas, empowering technicians with enhanced capabilities and reducing the amount of manual labor required to address customer needs.

As such, leaders are making a strong commitment to future AI investments in field service. An overwhelming 74% of respondents indicated plans to increase their AI investments over the next 12 months, with 8% planning significant increases.

The current status of AI implementation in field service presents a picture of growing adoption, positive impacts, and continued investment. While satisfaction levels are high, there is still potential for further optimization and expansion of AI applications.

As organizations continue to invest in and refine their AI strategies, we can expect to see even more transformative effects on field service operations, customer experiences, and business outcomes in the coming years.

COMMON GOALS AND CHALLENGES OF AI INTEGRATION

As field service organizations increasingly embrace artificial intelligence, they face both exciting opportunities and significant challenges. The successful application of AI-enabled technologies requires careful planning, strategic decision-making, and a clear understanding of organizational goals.

The survey results reveal a diverse range of AI applications currently in use or planned for implementation within field service organizations.

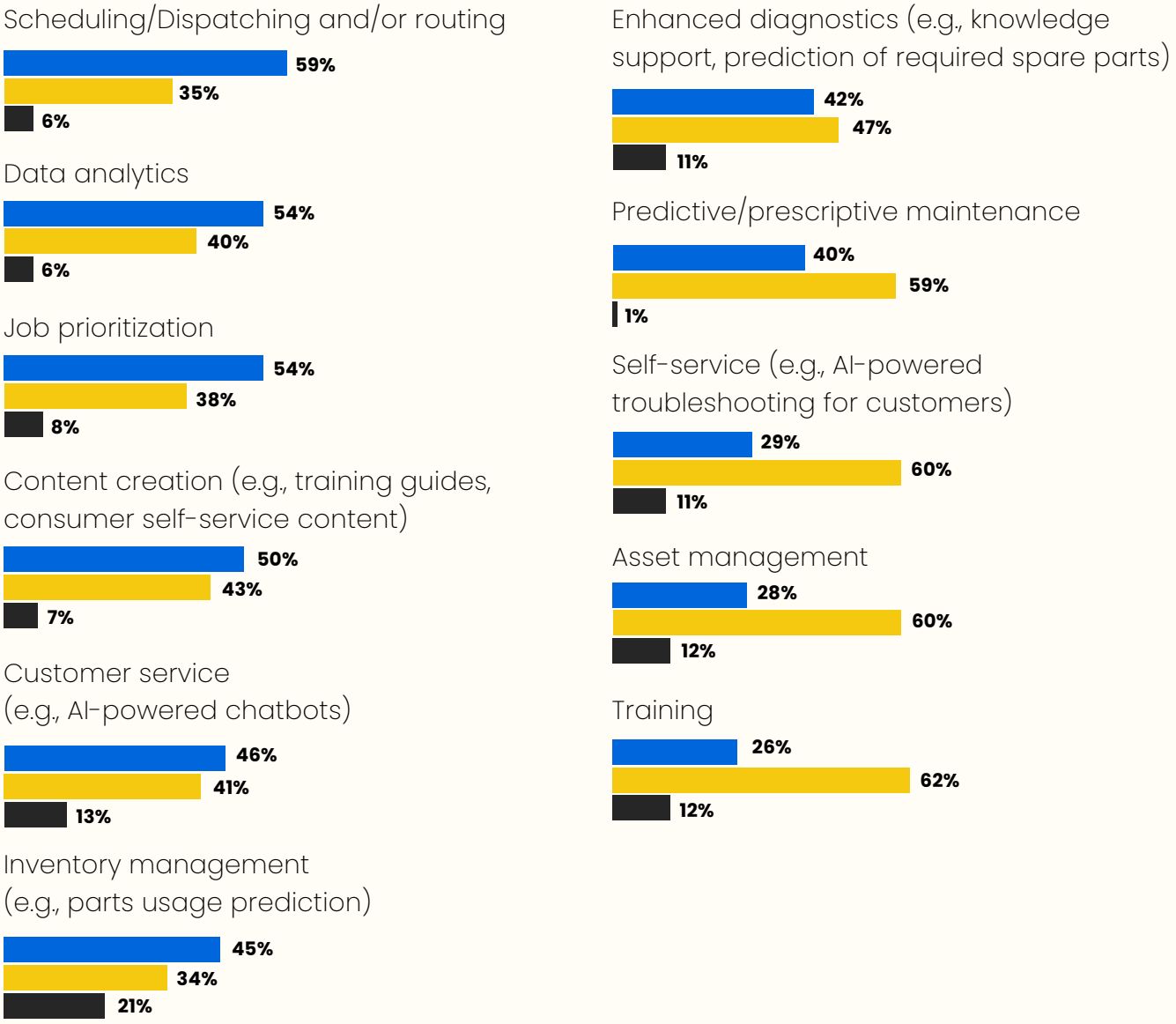
Scheduling, dispatching, and routing emerge as the most widely adopted AI applications, with 59% of respondents already using AI in this area and an additional 35% planning to implement it within the next 12 months. These areas are critical to reducing costs, optimizing employee time, and improving customer outcomes, and AI can significantly reduce employee errors and associated manual processes.

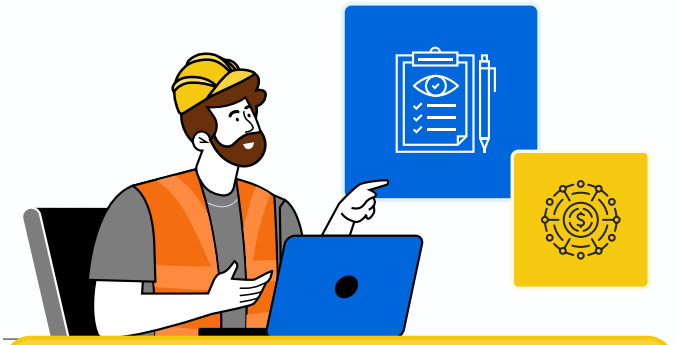
Data analytics and job prioritization also show significant current adoption, both at 54%, with plans for further implementation in the coming year. This trend highlights the growing importance of data-driven decision-making in field service and the recognition of AI's capabilities in extracting actionable insights from complex datasets.

Areas like predictive maintenance, self-service, asset management, and training show relatively low current adoption rates of 40% or lower. However, most of the respondents plan to implement AI in these areas in the next 12 months. This suggests a growing focus on creating more proactive service operations where both customers and employees are empowered with critical knowledge and tools.

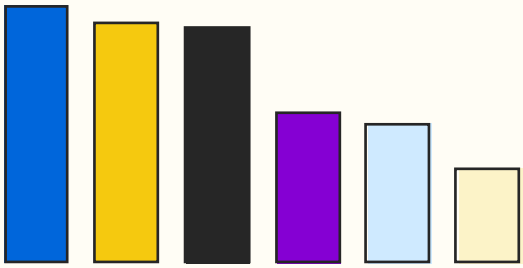
In which of the following areas of field service is your organization currently using AI, and in which are you planning the implementation of AI in the next 12 months?

- We are already using AI in this area.
- We will implement AI in this area in the next 12 months.
- We have no plans to implement AI in this area in the next 12 months.





Which one of the following two goals do you consider most important in terms of new AI capabilities in your field service operation?



- **46%** Enhance safety and compliance
- **43%** Optimize resource allocation
- **42%** Enhance service efficiency
- **27%** Reduce operational costs
- **25%** Improve customer satisfaction
- **17%** Gain a competitive advantage

The respondents are also planning their AI integrations around specific priorities for their field service functions. The two goals they consider most important to achieve through their AI capabilities are enhancing safety and compliance (46%) and optimizing resource allocation (43%). Notably, 42% also consider enhancing service delivery one of their top two priorities for AI.

This focus on enhancing safety and compliance reflects the critical importance of risk management and regulatory adherence in field service operations. This is particularly important in industries with stringent safety requirements, such as manufacturing, medical and scientific devices, utilities, and heavy equipment.

Optimizing resource allocation and enhancing service efficiency align well with the study's findings suggesting high adoption rates of AI in scheduling and dispatching. This indicates that field service leaders recognize AI's potential to streamline operations and improve overall productivity.

Interestingly, while improving customer satisfaction is often cited as a primary driver for technological adoption, it ranks lower on the list of AI implementation goals. Only 25% of the respondents consider it one of their top two priorities for the technology.

This could suggest that organizations view AI's impact on customer satisfaction as an indirect result of improved operational efficiency and service quality, rather than a direct objective of AI implementation.

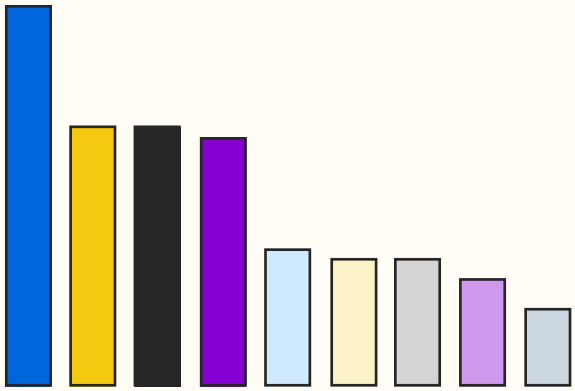
The respondents have high hopes for AI in their field service operations, but they also recognize that they need to be careful and deliberate in their implementations, as the technology must align well with the organization's current systems, needs, and overarching objectives.

Compatibility with existing systems stands out as the most crucial concern surrounding AI adoption, as 52% of the respondents cite it as one of their top three most important considerations. This highlights the practical challenges of integrating new AI technologies into established IT infrastructures and underscores the importance of interoperability in AI solution selection.

Customer expectations (40%) and regulatory requirements (40%) tie for the second most important consideration. This balance reflects the dual pressures faced by field service organizations: meeting evolving customer needs while ensuring compliance.

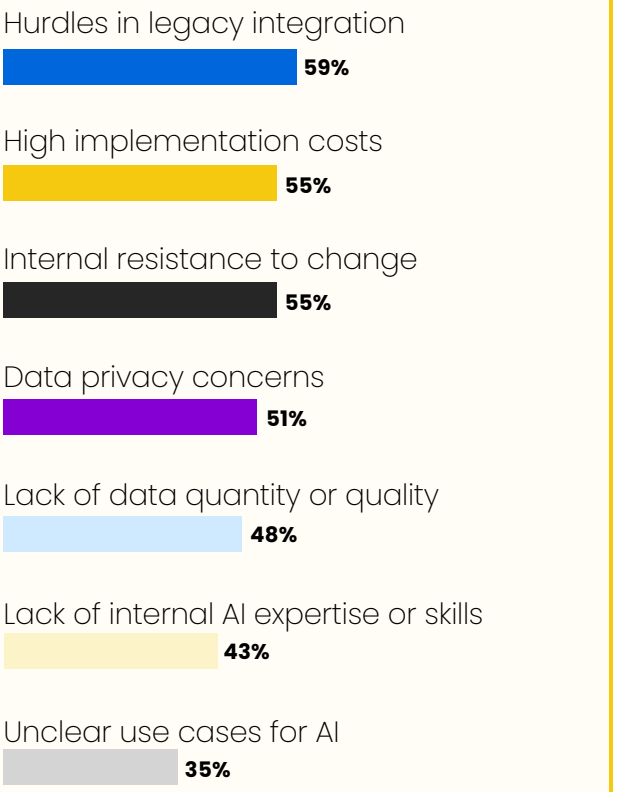
Finally, the scalability and flexibility of AI solutions (39%) also rank among the respondents' top three considerations. Organizations are looking for AI solutions that can grow and evolve with their changing needs, rather than static, one-size-fits-all solutions.

Which of the following three considerations are most important to you in terms of new AI capabilities in your field service operation?



- **52%** Compatibility with existing systems
- **40%** Customer demand and expectations
- **40%** Regulatory and compliance requirements
- **39%** Scalability and flexibility of AI solutions
- **28%** Return on investment (ROI)
- **27%** Initial and ongoing costs
- **27%** Availability of skilled personnel
- **25%** Vendor reputation and support
- **22%** Impact on operational efficiency

Which of the following challenges have you experienced while implementing AI in your field service operation?

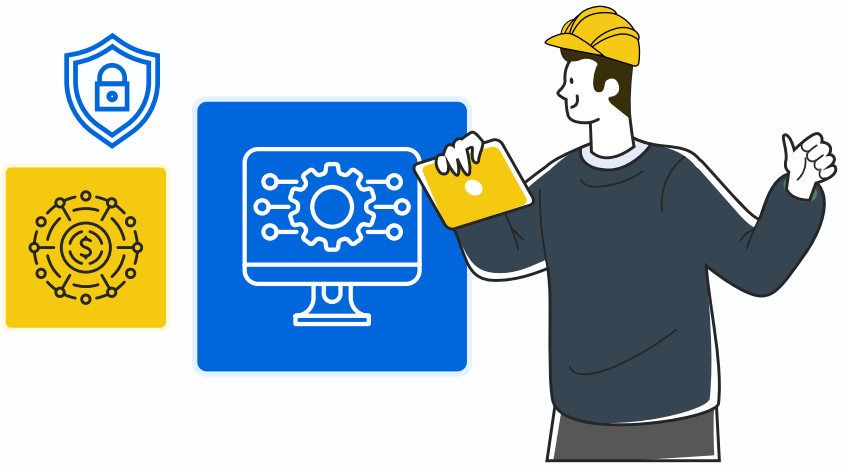


Naturally, AI implementation comes with some significant challenges, many of which the respondents have already experienced.

At 59%, the most common AI implementation challenge among the respondents is legacy integration. This is followed by internal resistance to change (55%), high implementation costs (55%), and data privacy concerns (51%).

To effectively navigate these challenges, teams should prioritize establishing a robust framework for change management to reduce resistance. They can also reduce resistance by involving employees early and often in the AI implementation process. Additionally, investing in scalable solutions that align with existing infrastructure can alleviate integration issues and costs over time.

Addressing data privacy proactively through comprehensive policies and technologies can build trust and ensure compliance, further facilitating a smooth AI adoption. These considerations suggest that a strategic and inclusive approach is crucial for the successful integration of AI into field service functions.



As noted, most of the respondents say they have experienced challenges with legacy integration when implementing their AI solutions. The survey also found that 78% of the respondents' current field service management platforms integrate only "somewhat effectively" with other software tools in use by their organizations. Another 14% say their field service management platforms are "not very effective" at integrating with other tools.

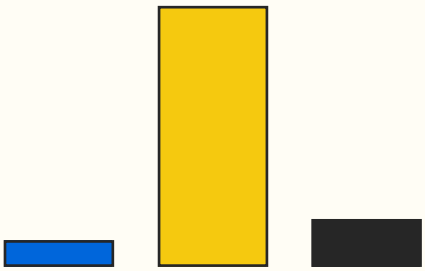
Organizations may need to partner with solutions providers or consultancies to resolve integration challenges, especially for must-have legacy systems that can't be replaced.

Nonetheless, the survey results paint a picture of a field service industry actively embracing AI, with clear goals and a nuanced understanding of the challenges involved. As organizations continue to navigate the complexities of AI integration, addressing data quality issues, ensuring system compatibility, and building internal expertise will be crucial for realizing the full potential of this technology.

"Our distributors, who provide service, are both our partners and our customers. Similarly, we view our end customers as partners, even though they're ultimately purchasing our equipment. We strive to build partnerships with everyone we interact with. As we explore the concept of effortless customer service, we're considering our current data capabilities, connected solutions, and AI technologies to enhance our customer relationships."

Keven Hilbert, Director of Customer Service, Henny Penny, Field Service East 2024

How effectively does your current field service management platform integrate with other software tools your organization uses (e.g., CRM, ERP systems)?



- **8%** Very effectively
- **78%** Somewhat effectively
- **14%** Not very effectively

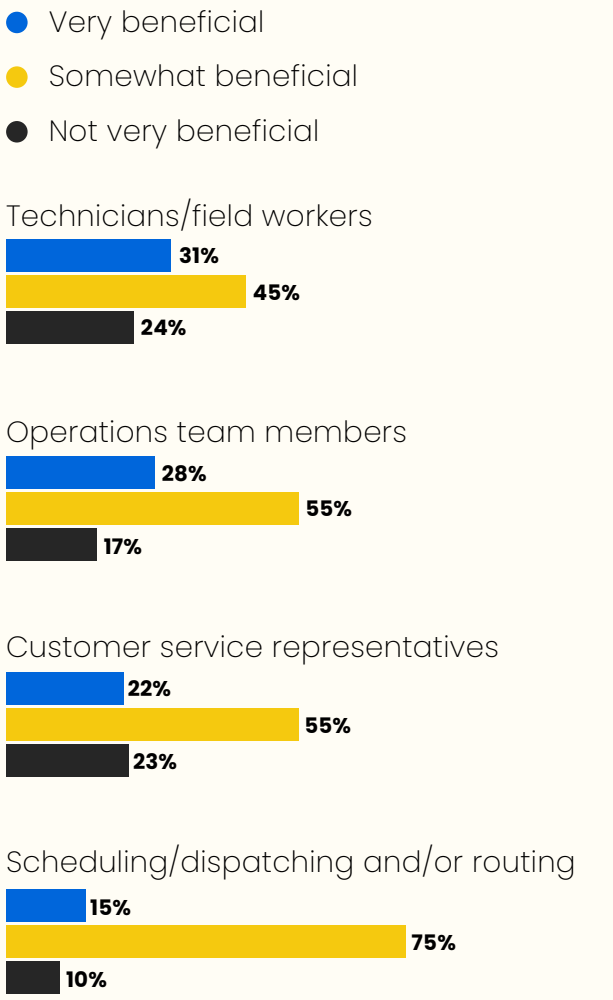
AI'S IMPACT ON FIELD SERVICE OPERATIONS

As we've learned, artificial intelligence has the potential to rapidly transform field service operations, offering unprecedented opportunities for efficiency, productivity, and customer satisfaction. Organizations are already discovering the immediate benefits of this technology as well as the potential for long-term transformation.

This impact is being felt throughout different areas of service and among different roles within the function. The study found that AI is expected to benefit various stakeholders within field service organizations, albeit to different degrees.

Technicians and field workers are seen as the group most likely to gain significant advantages from AI, with 31% of respondents viewing AI as "very beneficial" for this group and 45% considering it "somewhat beneficial." This aligns with previous results from the study which suggested AI will have a direct and substantial impact on the core activities of field service operations, potentially through improved diagnostics, real-time support, and optimized scheduling.

To what extent do you believe the following stakeholders or functionaries within your field service organization could benefit from AI?



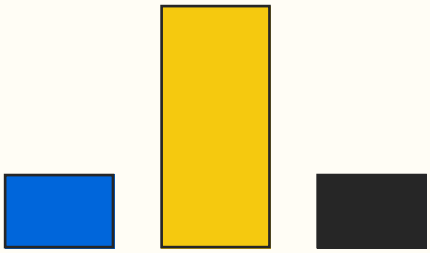
Operations team members are also expected to benefit considerably from AI, with 28% of respondents viewing AI as "very beneficial" and 55% as "somewhat beneficial" for this group. Notably, 90% of the respondents agree that AI will at least be "somewhat beneficial" to professionals working in scheduling, dispatching, or routing as well.

This indicates that AI is seen as a valuable tool for streamlining back-office processes, enhancing decision-making, and improving overall operational efficiency. Conversely, the high percentage of respondents saying the technology will benefit field workers and operations teams underscores the potential of AI to create synergies across different aspects of field service organizations.

While customer service representatives are still expected to benefit from AI, the perceived impact is somewhat lower. Only 22% of the respondents view AI as "very beneficial" to customer service reps, while 55% view it as "somewhat beneficial". This suggests that while AI is expected to enhance customer service capabilities, there may be a perception that human interaction remains crucial in this role.

Next, the survey results indicate a mixed picture regarding organizations' capabilities in proactively identifying new efficiency and improvement opportunities in field service operations. While 22% of respondents report being "very effective" at this task, the majority (56%) describe their organizations as only "somewhat effective". Another 22% admit to being "not very effective" in this area.

How proactive is your organization at identifying new efficiency and improvement opportunities in your field service operations?

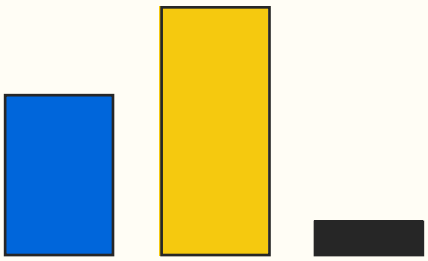


- **22%** Very effectively
- **56%** Somewhat effectively
- **22%** Not very effectively

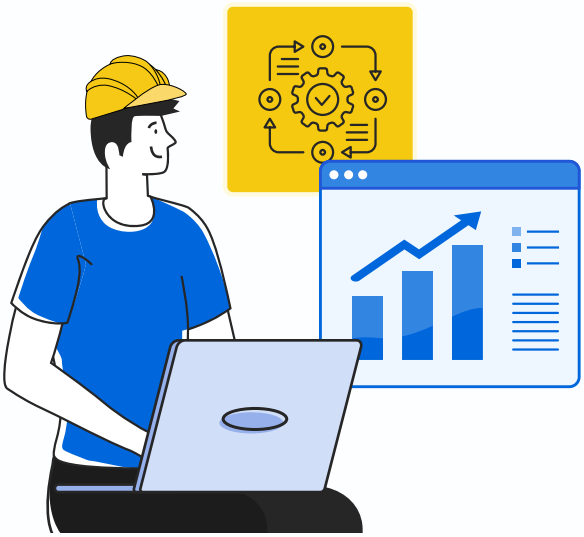
These findings suggest that while there is awareness of the importance of continuous improvement, many organizations struggle to consistently identify and implement efficiency enhancements.

This gap in proactive improvement identification presents a significant opportunity for AI implementation. AI-driven analytics and process monitoring tools could potentially fill this gap by continuously analyzing operational data, identifying patterns, and suggesting improvements that human analysts might miss.

How likely are you to invest in an AI-driven tool that proactively identifies new efficiency and improvement opportunities in your field service operations on your behalf?



- **36%** Very likely
- **56%** Somewhat likely
- **8%** Not very likely



For these reasons, more than one-third of the respondents (36%) are very likely to invest in an AI-driven tool that proactively identifies new efficiency and improvement opportunities. Most (56%) are somewhat likely to invest in one.

Organizations are looking to AI not just as a tool for making direct enhancements to operations but also as a strategic asset in identifying opportunities for improvement. This aligns with the earlier findings on the perceived benefits to stakeholders due to this technology. It also highlights a forward-thinking approach in the field service industry.

As organizations continue to invest in and refine their AI strategies, we can expect to see more seamless integration, improved proactive efficiency identification, and ultimately, a significant enhancement in overall field service performance and customer satisfaction.

"When we have access to data from our products and can analyze it properly using AI tools, we gain valuable insights. We can now monitor the product's health status accurately. This knowledge helps our technicians manage warranties more effectively, and we can even identify if a customer is using the our product incorrectly, leading to faster deterioration than expected."

Rajib Bora, Vice President of Field Services, XALT, Field Service East 2024

CONCLUSION: HOW AI WILL TRANSFORM FIELD SERVICE IN FIVE YEARS

Field service leaders anticipate significant changes to the way they operate due to AI implementation over the next five years. The most common themes that emerged from conversations with the respondents paint a picture of a more efficient, proactive, and customer-centric field service landscape.

Many respondents envision AI playing a crucial role in predictive maintenance, with equipment sending out service alerts before critical issues arise. This shift is expected to reduce downtime and improve customer satisfaction significantly.

AI is also anticipated to enhance technician capabilities through real-time guidance, automated support, and improved training methods, including through simulations. Employees' day-to-day activities are expected to become more streamlined, with AI optimizing scheduling, resource allocation, and inventory management.

Additionally, there's a strong emphasis on AI's role in improving decision-making processes, data analysis, and customer insights, leading to more personalized and efficient service delivery. These advancements are likely to result in faster issue resolution, improved first-time fix rates, and overall enhanced operational efficiency.

The responses also highlight potential challenges and areas of focus for field service organizations as they navigate AI-driven transformation. There's an implicit recognition that while AI will automate many routine tasks, it will also require technicians and employees in other roles to develop new skills, particularly in customer engagement and complex problem-solving. Organizations will need to carefully manage this transition, ensuring that their workforce is adequately trained and prepared for these new responsibilities.

> "Prioritization is key when transforming from a cost center to a profit center. The opportunities are vast, and it's easy to get distracted. Create a five-year strategic plan and work backwards, planning projects, budgets, and goals year by year. We may want all the awesome tools like AI and automation, but it's crucial to start with the basics: data, standards, operating procedures, and processes."

Kenny Brown, Senior Director of Business Technology, Alcon, Field Service East 2024

KEY SUGGESTIONS

Prioritize AI implementation in scheduling, dispatching, routing, and resource allocation to maximize operational efficiency.
These focus areas have the highest adoption rates among field service leaders and can quickly yield tangible benefits.

Leverage AI to enhance safety and compliance in your field service operations.
Safety and compliance were among field service leaders' top goals for AI implementation.

Use pilot programs, skills training, and effective change management to ensure the adoption of new AI capabilities among your friend service staff.
Internal resistance to change was one of the most pressing challenges facing field service leaders in their attempts to integrate AI.

Invest in a robust data infrastructure and work with AI experts to integrate new solutions with existing systems. Legacy integration was a top challenge among the respondents. Usable data will be critical to enable systems to work in congruence on predictive analytics, insights generation, and task automation.

ABOUT THE AUTHOR

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 **fieldserviceusa.wbresearch.com.**

ABOUT OUR PARTNER

ZUPER™

Zuper is redefining field service operations with the industry's most advanced and intelligent field service management platform. Trusted by thousands of users worldwide and integrated with more than 60 best-in-class tech solutions, Zuper is empowering field service organizations with technology their teams love to use, helping them boost operational efficiency, enhance profitability, and increase revenue. Zuper provides fast-growing businesses with a competitive advantage, enabling them to delight customers in every interaction and drive growth. Operating since 2020 and headquartered in Seattle, Zuper is on a mission to transform field teams into Zuper heroes.

For more information, visit **zuper.co**.

The State of AI in North American Field Service

Exploring Current Applications of AI Technology and Its Potential to Transform the Function

EVENT PRODUCER:

Maureen Azzato
Portfolio Director, Field Service

RESEARCH CONTACT:

Chris Rand
Research Manager, Future Branches Insights
Chris.Rand@wbresearch.com

WRITTEN BY:

Mike Rand
Content Director, rand&rand