



Transform asset whisper patterns into exceptional CX outcomes

Three ways AI and IoT fuel high-impact field service performance

Executive summary

Modernizing your field service capability with advanced technologies like AI, IoT, augmented reality (AR) and machine learning (ML) can help you detect whisper-quiet data points and use them to create a proactive field operation that improves your employee experience and provides a differentiated customer experience (CX). Applying them to these three areas will help you see accelerated results:



1. **Manage customer data across channels.** A consolidated view of your customer and your assets in a mobile format informs and empowers field service technicians to deliver a positive, consistent service experience from anywhere.
2. **Give assets a voice.** Understand what your assets are communicating about their performance and predict what they will do to continually improve products and service, increase uptime and reduce (or eliminate) service calls altogether.
3. **Train the training.** Improve product performance and refresh service knowledge by automating training competencies, providing real-time updates to knowledge centers, and optimizing self-service options for employees and customers.

Whether you're just getting started, simply looking to get more from data in the cloud or need to add predictive functionality to brand assets, Avanade can help.

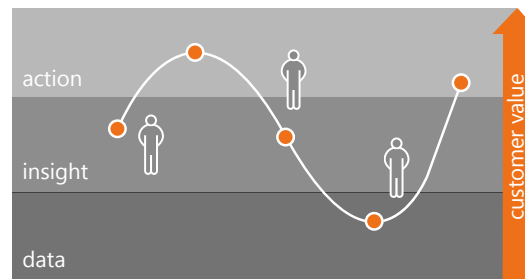
Your assets are quietly screaming for attention

Errors, prior service calls, equipment vibrations, pressure: Customers and assets are leaving a trail of soft whispers in the form of distinct data points. Subtle and innocuous on their own, these data points quietly accumulate, forming whisper patterns that can warn about screamingly loud problems like product failure, service downtime, and a poor employee or customer experience.

But what if you could eliminate some of that noise altogether by addressing customer needs and solving problems before they ever happen? Is your field service team tuning in to the right indicators to anticipate potential problems and proactively resolve them? If not, your employees and customers may switch to a competitor who keeps their ear to the ground and provides a superior experience.

The challenge for most brands is not collecting data, but creating action-based use cases for data wrapping where – by combining analytics and AI and customer intimacy (achieved via CRM and IoT) – they can play an active role in the customer's problem-solving process.¹

Data wrapping use cases fall anywhere along the customer journey



Data wrapping occurs when companies combine a product or service with analytics with the intention of increasing the customer value proposition.¹

Future-ready organizations anticipate patterns across customer touchpoints and assets to help their field service teams be more predictive. Armed with the right intel, technicians can help customers with preventive, fast and reliable service that sets the brand experience apart. By enabling customers and asset data patterns to help shape the brand experience, organizations can benefit from increased loyalty, operational efficiency and growth. They are also better equipped to move from traditional product models to service models, taking advantage of potential new revenue streams.

This guide shares how AI, IoT and ML combined can help your field service operations anticipate and understand asset whisper patterns to improve both the employee and customer experience.

¹ MIT CISR: "Creating Customer Value Using Analytics," Barbara H. Wixom, Ronny Schüritz, MIT CISR Research Briefing, Vol. XVII, No. 11, November 2017

To modernize, organizations should evolve their field service operations to be more intelligent, predictive and capable of offering a differentiated customer experience. Effective data wrapping of service assets can help organizations to:

Bring predictive intelligence to field service

1. Manage customer data across channels

Understanding your customers' complete experience – from interest to purchase and ongoing engagement – is now business critical so you can anticipate their needs throughout their lifecycle. By making this 360-degree view accessible on phones and tablets, your field service technicians can be empowered from anywhere to act with a more personalized, relevant experience befitting each customer.

How? By processing customer, asset and operations data patterns and applying them to service, AI-enabled CRM can help you assign the optimal technician for each job – based on skills, service history, location, available tools and more. This setup allows for connections between people, inventory,

product and sensor data and external factors (weather, traffic) to be continuously calculated and improved.

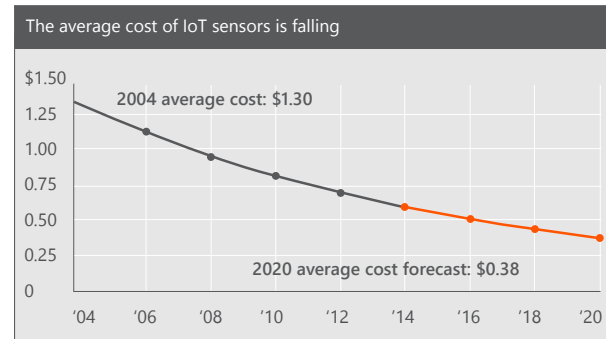
Well-trained AI can offer instant actionable recommendations to improve driver routes and properly equip technicians for each work order. It uses patterns to predict what type and quantities of inventory are typically needed for each job given conditions and technician skill level, and identifies which warehouse levels are sufficiently stocked. We connect AI with CRM like Microsoft Dynamics to make this more fluid, visible and practical across the entire service operation.

This removes guesswork on the dispatcher or technician's part, which can lead to more favorable experiences for both the technician and the customer: The service is completed on time, quickly, at low cost and with minimal (ideally, no) inconvenience.

2. Give assets a voice

Field service teams can make the greatest impact on customer experience and brand loyalty by anticipating and preventing problems before they ever happen. To do this, modern field service operations give customer assets a “voice” by enabling them to communicate back to the organization’s CRM via sensor and monitors.

The low cost of a voice
The average cost of an IoT sensor is approaching 38 cents.



source: [“The average cost of IoT sensors is falling,”](#) The Atlas, 2017

These connected assets are leaving a quiet data trail indicating past, present and future performance. Being able to wrap that data around potential asset outcomes – like impending failure or sub-optimal performance – can help the field impact customer experience. Advanced analytics and AI can identify performance patterns and help you predict when maintenance or replacement is imminent. By capturing these insights in CRM and understanding what may go wrong and what is needed to fix it, organizations can swiftly dispatch the right technician with the proper tools, or even push digital updates remotely to the asset to prevent the problem.

Out of sight ≠ out of mind

Technicians sometimes need remote assistance. We help clients close the distance gap through digital twins; the solution combines CRM and asset sensor data with augmented reality, allowing an off-site expert to render their own real-time view of the service scene and provide first-time fix resolutions from afar.

Not only can this proactive approach help to bypass the painful downtime and service scheduling experience, but it can surface new revenue-generating and rewarding customer experience opportunities, too. Empowered with relevant and highly specific asset information connected to their 360-degree customer view, technicians can assume a profit-generating role as customer advocates, positioned to upsell products or services on-site that better suit the customer’s future needs.

By 2020, 10% of emergency field service work will be both triaged and scheduled by artificial intelligence.²

² "Magic Quadrant for Field Service Management," Gartner Inc., Jim Robinson, Michael Maoz, Jason Wong, September 27, 2017

3. Train the training

Through their whisper-quiet search patterns and website interactions, customers and technicians reveal gaps in product or service knowledge that can be remedied with more self-service content. Machine learning and AI can help prioritize and accelerate the process to provide a better employee and customer experience.

By crawling for customer search history on self-service portals and similar channels, ML can help identify what customers need, when and how often, and report it back to product and customer retention teams to update knowledge-base and FAQ-level content. Automating the content build for this self-service knowledge channel can reduce unnecessary service calls.

Meanwhile, AI uses natural language processing and other technologies to "see" across channels and scrub high volumes of service calls, service orders, work orders and more to identify patterns that highlight gaps in knowledge or technician skills. For instance, when top technicians consistently spend time troubleshooting the same problems, deeper training may be needed. This is helpful for service to new product releases, increasing average first-time fix rates right away.

Applying insights to self-service channels can also improve the service scheduling experience, a frequent employee and customer experience friction due to its general inconvenience factor. Giving customers the ability to set up appointments themselves is a great start, especially when that data feeds back into your CRM.

We also recommend wrapping this data around conversational design for AI-powered chatbots to directly communicate with the customer – sending text messages with technician details, location and ETA to provide some comfort and level of expectation. Enabling customers to actively participate in their service scheduling experience can reduce "where's my tech?" inquiries and reminds them to be present during their service appointment – decreasing technician downtime and reschedules.



Case study:

Intelligent field service in action

CHALLENGE

A global manufacturer of water, hygiene and energy technologies and services needed to improve asset tracking and maintenance, speed up technician scheduling and reduce sales time spent requesting work orders.

SOLUTION

We helped the enterprise create a process that increased asset tracking and work history to 95%, provided real-time job status updates and faster parts/equipment tracking, and neared 96% work order creation in 48 hours or less. We scaled this up to support their 10,000 annual work orders without any FTE increase or overtime.

Why Avanade?

Avanade's team of experts can help get the most from your technology investment to create a more intelligent, connected field service operation.



1,000+ dedicated sales and service specialists



End-to-end customer experience expertise, from strategy to design, technology implementation and managed services



Over **3,500** analytics professionals and **400** AI practitioners worldwide



Accolades and industry recognition:

- Avanade was named a leader in The Forrester Wave™: Microsoft Dynamics 365 Services, Q4 2017
- Awarded Microsoft 2018 Alliance SI Partner of the Year for 11th consecutive year
- Microsoft 2018 Global Finalist for the Dynamics Customer Service Award



No. 1 worldwide in Microsoft Dynamics certifications

Get started

It's time to leave legacy operations behind. To equip your field service operations with advanced capabilities, connect with us to request a Business Value Assessment today.

Upgrading your CX through your contact center, too? We can help you connect and modernize your [intelligent contact center](#) experience.



About Avanade

Avanade is the leading provider of innovative digital and cloud-enabling services, business solutions and design-led experiences, delivered through the power of people and the Microsoft ecosystem. Majority owned by Accenture, Avanade was founded in 2000 by Accenture LLP and Microsoft Corporation and has 35,000 professionals in 24 countries.

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