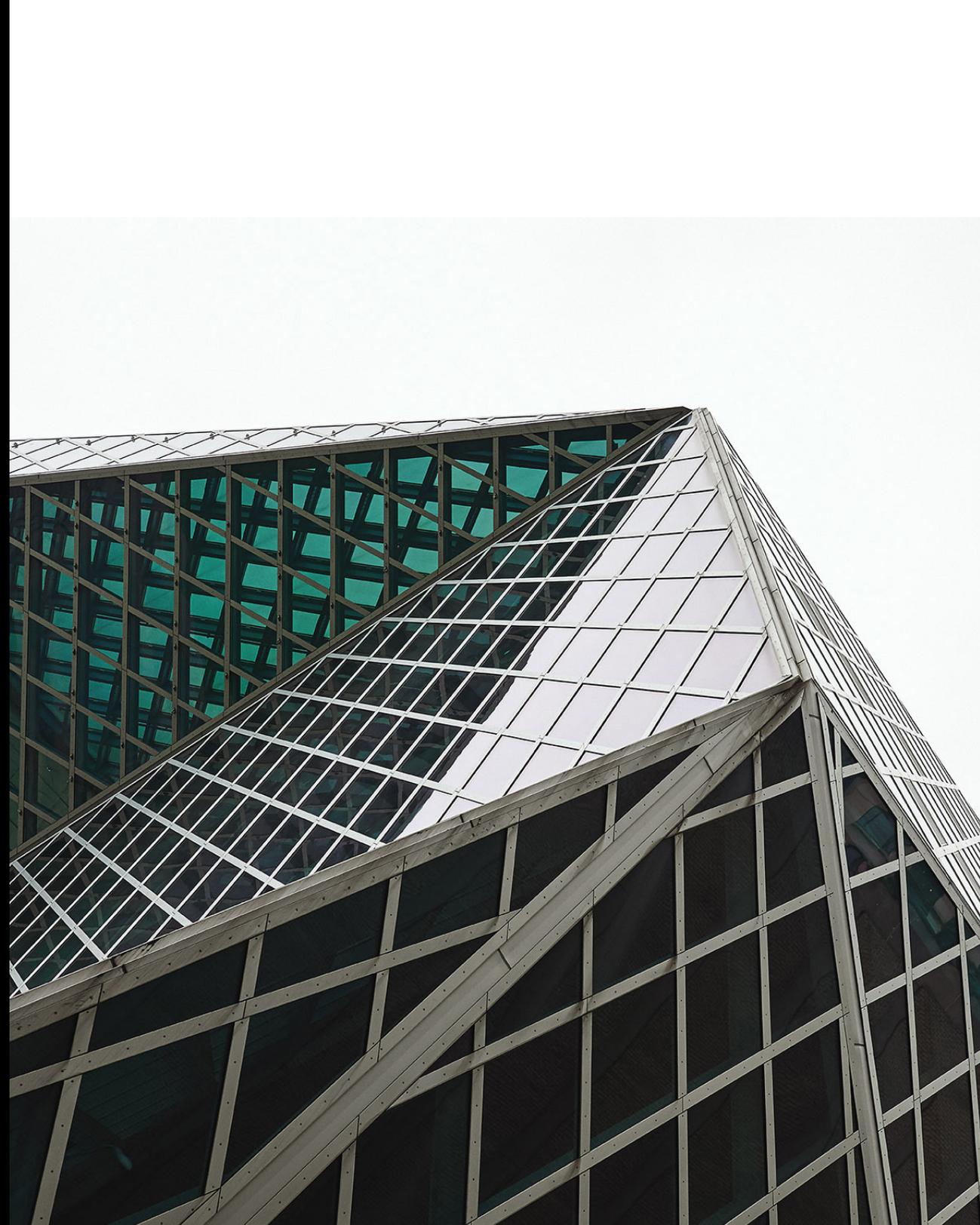




Connected Field Service with Microsoft

Transforming the customer experience



A complete, connected customer experience

Evolving customer expectations, thinning profit margins, and the increasing commoditization of products are bringing new challenges to manufacturers around the globe. As a result, customer experience is becoming a key differentiator across industries. As

26%
of service calls require return visits.¹

81%
of service teams say service has the largest impact on how customers perceive their brand.²

customers demand better, faster service, innovative manufacturers are focused on providing a model designed for success in the field, building customer relationships, optimizing operations, and increasing profitability across their organizations.

47%
increase of uptime through the use of smart devices.³

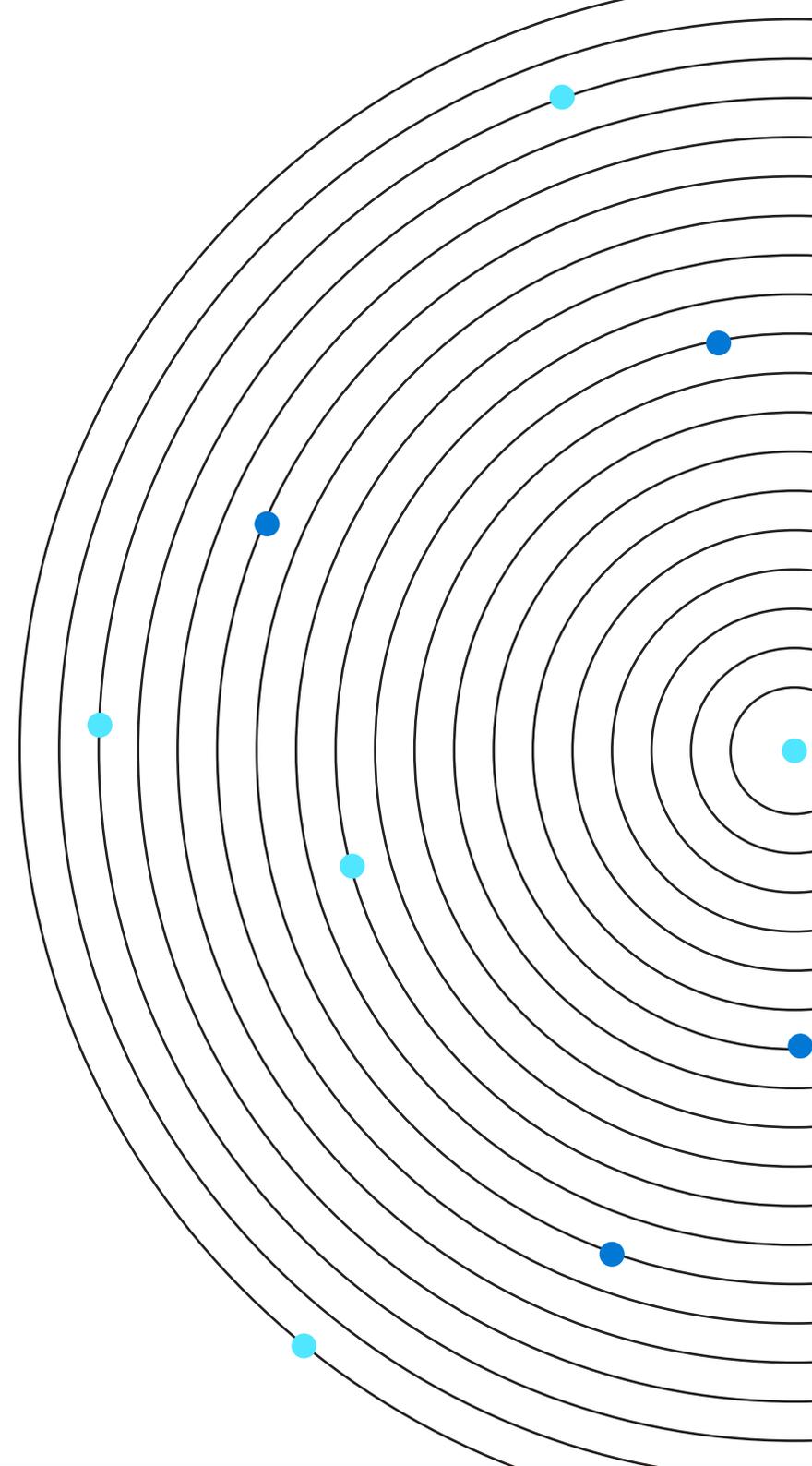
¹ Astea. A Fix for First Time Rates. 2016. | ² Salesforce. Second Annual State of Service. 2017. | ³ MPI. The Internet of Things Has Finally Arrived. 2016.



Digital transformation is enabling manufacturers to create connected networks.

By leveraging Internet of Things (IoT), machine learning, mixed reality (MR), and big data, manufacturers can drive revenue growth, optimize processes, increase productivity, and improve the customer experience.

Microsoft is helping organizations to transform their organizations with end-to-end solutions that connects data, people, and equipment. With connected field service solutions, manufacturers can deliver a profitable field service that deepens customer loyalty. Using these solutions provide manufacturers with higher visibility across their organization while minimizing downtime, reducing costs, and increasing customer satisfaction and sales through cross-selling and upselling opportunities. As a result, manufacturers are transforming their market offerings to deliver a rich set of value-added business services and provide a complete, connected customer experience.



Together with Microsoft, we are on the leading edge, combining our technologies to leverage the Internet of Things and people to help realize business and social innovations in this hyper-connected world.

Ryosuke Mori

Vice President, Global Strategic Alliances,
Fujitsu Ltd.

Less downtime more satisfied customers

Connected field service solutions enable manufacturers to transform their products and services. IoT capabilities allow devices to be connected and monitored, furnishing visibility into equipment performance. This paves the way for organizations to move from a costly break/fix model to a proactive, predictive service model—gaining awareness of equipment failures before they happen and the ability to systematically

prevent them. Through data insights gleaned from these solutions, manufacturers can recommend more effective equipment to cross-sell and upsell to their customers. Together with scheduling, mobile, and resource optimization, these capabilities minimize downtime, accelerate repairs, increase technician productivity, and improve customer satisfaction.





With Connected Field Service solutions, manufacturers can:

Reduce downtime with proactive alerts from connected devices.

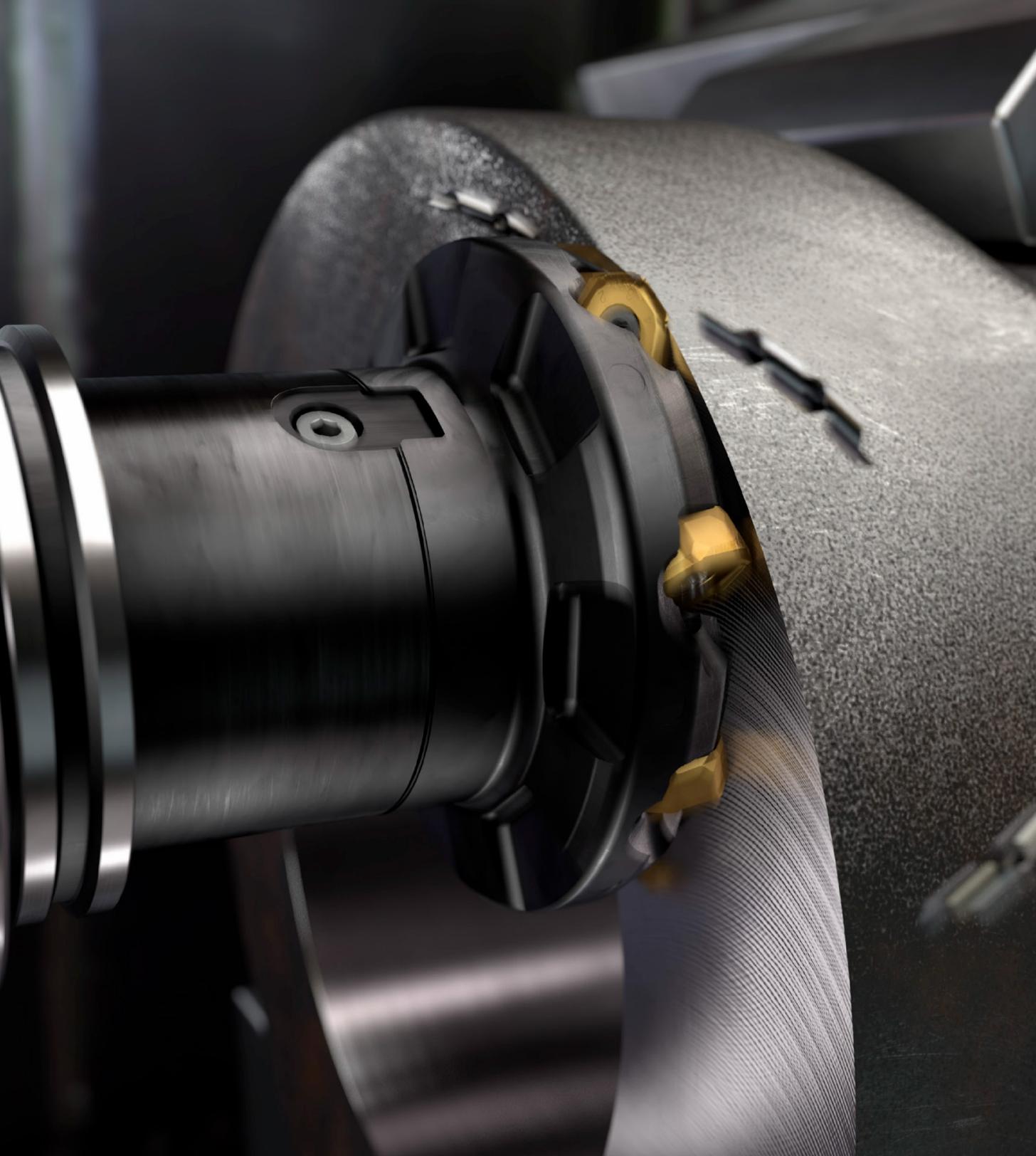
Accelerate repair times by ensuring service technicians are fully equipped to deliver a first-time fix.

Lower maintenance costs by dispatching the right technician only when needed.

Gain enhanced visibility into products, services, company, performance, and customer satisfaction.

Address issues faster by monitoring devices remotely and keeping customers in the loop.

Maximize upselling and cross-selling opportunities with deeper insight into customer usage and trends.



“

With this solution we are able to reinvent the art of manufacturing. Tools, machines, processes working together, all the way from the customer to the sales interaction, helping us deliver an unprecedented level of field service.

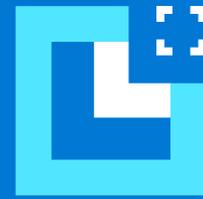
Klas Forsström

President, Sandvik Coromant

Transforming field service

Working with Microsoft, organizations around the world are delivering more profitable field service and deepening customer loyalty with end-to-end field connected field service solutions. Using innovative Microsoft technology (including IoT, machine learning, and mixed reality), connected field service can help organizations to optimize operations and expand their service capabilities.

Explore how five organizations are transforming field service with Microsoft.



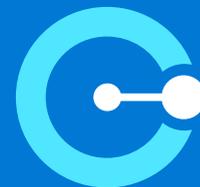
Remote monitoring and predictive maintenance



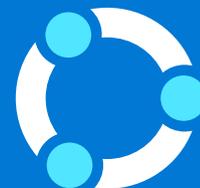
Service alerts



Technician dispatching



Field enablement



Global visibility



Remote monitoring and predictive maintenance

View product usage, issues, and repair history from a central portal to diagnose problems and deliver predictive maintenance.

ThyssenKrupp, the global elevator manufacturing company, wanted to better compete in their industry by boosting their preventive maintenance capabilities to greater heights and offering dramatically increased uptime.



thyssenkrupp



Remote monitoring and predictive maintenance



Process

Using the Microsoft Azure IoT Suite, ThyssenKrupp captures elevator data—such as motor temperature, shaft alignment, cap speed, and door function—and transmits it to a single dashboard. This provides real-time data visualization of immediate issues and information for future management.



Results

- Reduced costs
- Increased elevator uptime
- Developed real-time data visualization and awareness of issues

Related products:

- Microsoft Azure IoT Suite
- Microsoft Azure
- Microsoft Power BI
- Windows Server



We wanted to go beyond the industry standard of preventative maintenance, to offer predictive and even preemptive maintenance.

Andreas Schierenbeck
CEO, ThyssenKrupp Elevator

[Read the case study](#)



Service alerts

Get instant notifications and alerts about device health to automate the service request generation process using predefined rules.

Ecolab—a leading global provider of water, hygiene, and energy technologies and services—is helping companies worldwide operate more sustainably.





Process

Inside production facilities, equipment based on Ecolab's Nalco 3D TRASAR™ Technology sends data to a highly secure analytics and storage platform on Microsoft Azure. The technology monitors and controls streams for water-intensive processes, and collects and analyzes water usage data in real time.

By connecting to thousands of sensors in facilities worldwide, their platform improves efficiency and reduces water, energy, and operational costs.



Results

- Delivered real-time sensing data from over 36,000 water systems
- Scaled delivery of water management solutions
- Established operational benchmarks from millions of data points

Related products:

- Microsoft Azure IoT Hub
- Microsoft Azure IoT solution accelerators
- Microsoft Azure Machine Learning
- Microsoft Dynamics 365 for Field Service
- Microsoft Dynamics 365 for Sales
- Microsoft Power BI



We need to collect and analyze massive amounts of information. Now, we can identify opportunities and gaps, provide the right solutions and, most importantly, manage our customers' process so that they can get closer to net-zero water usage.

Christophe Beck

Executive Vice President and President, Nalco Water, an Ecolab company



Technician dispatching

Dispatch technicians using optimized routes and skills-based assignments and resources.

Michelin extends their premium customer service model to a seamless, on-site customer experience with Michelin OnSite, where they send technicians into the field to perform installations and repairs for customers.



Technician dispatching



Process

Using a CRM customer records system, Michelin schedules availability for their technicians and customer inventory. A self-service customer portal allows customers to choose their tires and an appointment time online, creating an automated process to go from the customer to the technician. Customer records and product information enables technicians to meet customer needs and solve any problems that arise.



Results

- Created a seamless, automated customer experience from purchase to installation
- Gained greater visibility into inventory and purchase patterns
- Delivered real-time understanding of product availability

Related products:

- Microsoft Dynamics 365 for Field Service



As we continue to grow and build, the Microsoft platform is going to help us manage the routing and schedule and keep us on top of the customer expectations—that's critical to our business.

Kevin Doyle

Initiative Leader, Michelin OnSite

▶ [Watch the video](#)



Field enablement

Empower service technicians with complete customer insight, real-time guidance, and cross-team collaboration.

Tetra Pak, a packaging company in the food industry, is employing digital tools that enable its cloud-connected machines to predict exactly when equipment needs maintenance. When repairs are needed, Tetra Pak service engineers use Microsoft HoloLens headsets to more quickly diagnose and fix machine issues, even in remote locations.





Process

To streamline machine diagnostics and repair for customers, Tetra Pak service engineers use HoloLens devices. Service engineers can make a Skype call to a Tetra Pak service center and speak to an expert with deeper knowledge of a specific machine. The expert remotely guides the engineer through a repair, reducing the time needed to fix the problem. This solution also cuts the repair costs by removing the need to dispatch another service engineer to assist.



Results

- Analyzed data patterns from more than 5,000 packaging lines to predict maintenance timing
- Saved customers more than \$30,000 by predicting and preventing future breakdowns
- Cut fix times by enabling remote guidance via MR headsets

Related products:

- Microsoft HoloLens



This is how we take the global expertise that we have available somewhere in Tetra Pak and bring it to the fingertips of the engineer in the countryside in Chile or Pakistan.

Johan Nilsson

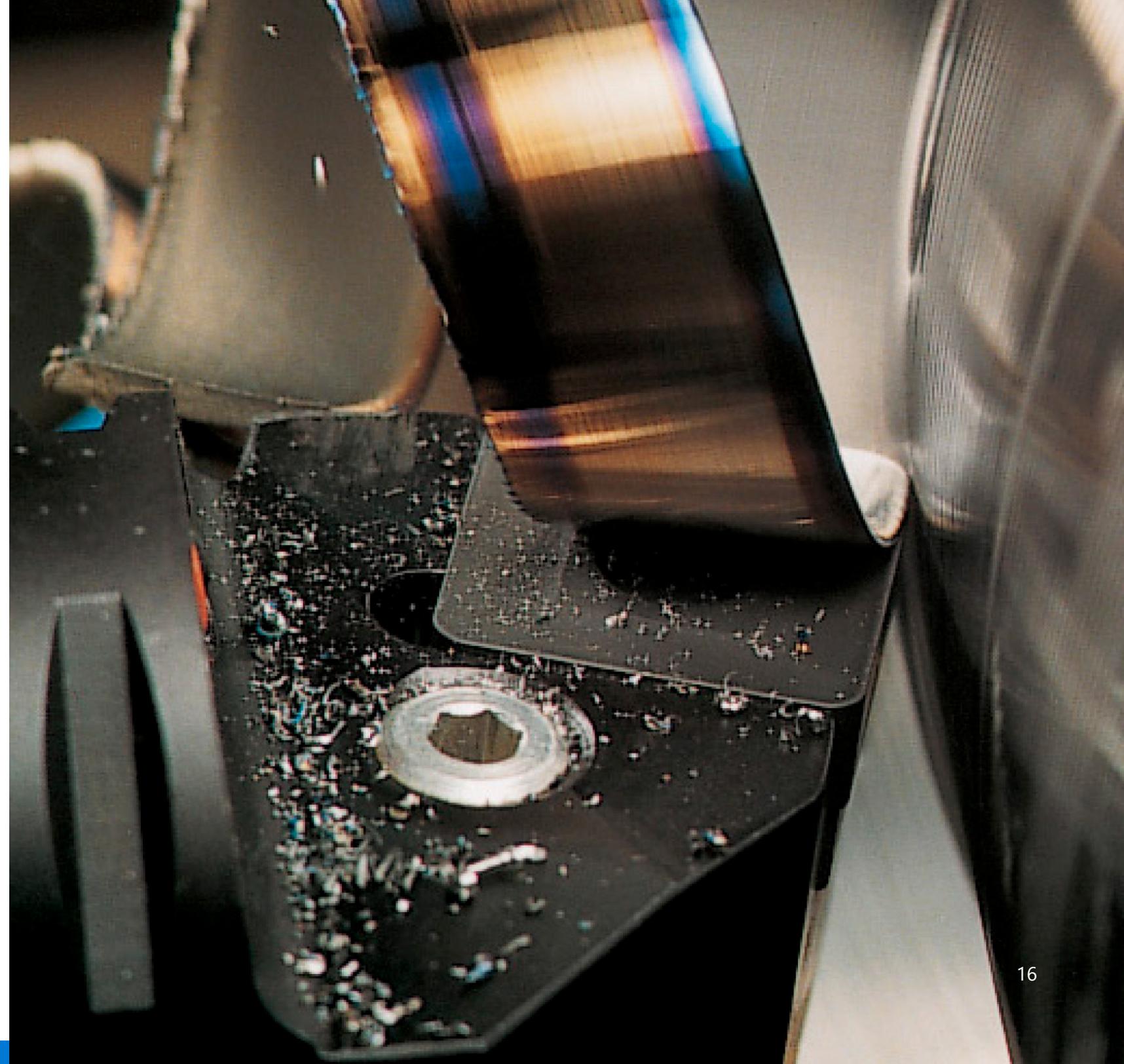
Vice President, Tetra Pak Services



Global visibility

Equip technicians with sales data so they can take advantage of cross-selling and upselling opportunities, making data-driven recommendations based on their customers' usage and demonstrated needs.

Sandvik Coromant, part of the Sandvik Group, is a global engineering organization that produces machining tools and tooling systems for the manufacturing industry. Sandvik Coromant's employees have years of in-depth knowledge of machining and tooling processes in multiple industries. These proficiencies enable Coromant's specialists to offer a personalized approach to help their customers. However, these technical experts can't be everywhere all the time. Therefore, Sandvik Coromant decided to digitize their knowledge to make the information available to all parts of the production loop. Plus, by applying analysis tools, they were able to provide intelligent feedback—both to the relevant machines and their human operators.





Process

The predictive analytics manufacturing solution includes an in-house shop floor control tool that collects machining and tool data. It then sends the data to Microsoft Azure for real-time analysis using machine learning algorithms from Cortana Intelligence.

Machining data is also collected from sensorized cutting tools through Azure IoT. With the help of Azure Machine Learning and Streaming Analytics, Sandvik Coromant added embedded intelligence to these tools to capture data that can be used to automatically adjust equipment, notify technicians when maintenance is needed, and alert plant managers of a potential failure.



Results

- Reduced the time needed to make emergency shutdown decisions from two seconds to 100 milliseconds
- Provided instant feedback to customers to improve efficiencies
- Delivered cost savings of millions of dollars

Related products:

- Microsoft Azure IoT Hub
- Microsoft Azure IoT solution accelerators
- Cortana Intelligence Suite
- Microsoft Dynamics 365 for Field Service

 [Read the case study](#)



We are looking to convert the knowledge our people have in their heads into a digital format and apply machine learning tools that can look at the data, optimize it, and adjust configurations to optimize production. It will not replace the operator, but will give the operator another tool to improve production.

Nevzat Ertan

Chief Enterprise Architect and Senior Manager,
Sandvik Coromant

The Microsoft Difference

Microsoft is committed to innovation and developing new capabilities to drive business value across the manufacturing industry.

By working with Microsoft, organizations can take advantage of:

The most comprehensive portfolio available for sales and service

The Microsoft commitment to an open platform, connecting existing devices and software to tailor Microsoft solutions to a manufacturer's needs

Highest number of global compliance certifications in the industry, allowing customers to maintain ownership and control of their data without compromising its safety

End-to-end solutions that leverage both the intelligent edge and the intelligent cloud

Partner ecosystem with access to an unparalleled network of innovators

Scalable cloud solutions that are available in more regions than any other provider



“What truly impressed me with our Microsoft collaboration was that it was not about selling us a product. It was about building something and addressing the world’s water challenge together.”

Christophe Beck
Executive Vice President and President, Nalco
Water, an Ecolab company

Get started today.

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