



# Field service software: increase field service efficiency

WHITE PAPER



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## Introduction

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Field service management is a great example of how digital transformation can make an often tedious, expensive task not only more efficient, but also profitable. The cloud, artificial intelligence and the Internet of Things make it possible.

Coordinating appointments with customers on-site can be difficult to manage for companies without IT support. There are just too many variables that need to be taken into account. A problem that a field service software can solve easily. And the bigger the field service department, the more costs can potentially be reduced.

Digital field service is relevant for several industries, for example plant manufacturing, energy companies and IT service providers. According to market researchers Gartner, in 2019 only 25 per cent of these companies had a software for field service management in place.



**In this white paper you will learn how a solution for field service management will help you overcome the challenges in field service and how you and your customers will benefit from it. We will also introduce you to Microsoft Dynamics 365 Field Service and the goals one of our customers achieved after implementing the software.**

## Challenges in field service management

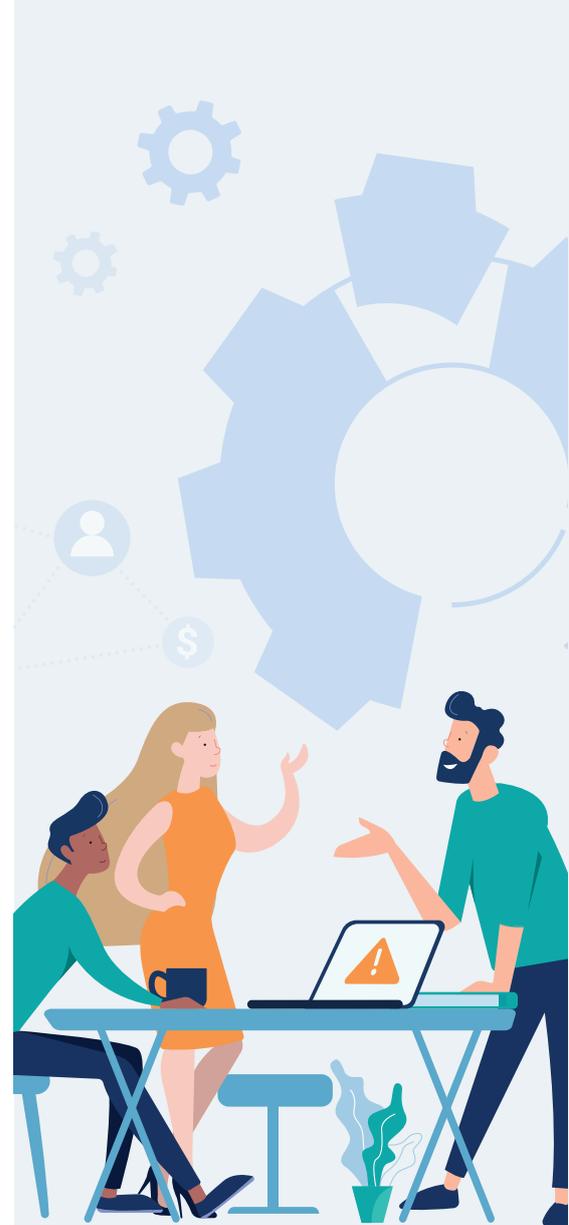
Four Rs are crucial for delivering excellent field service: The **right** technician has to be in the **right** place at the **right** time and carry the **right** tools with them. Sounds simple enough, but successful planning and execution are a big challenge. The more service visits per day, the more complex coordination gets.



The planning and execution of on-site service visits are often affected by misunderstandings (between back office and field service as well as with customers), clashing appointments and unexpected hurdles. Coordination can be a lengthy back and forth.

Many organizations struggle with optimizing their routes, too. Employees need to arrive on-site as fast as possible. Not only to satisfy the customer, but also to save company costs (e.g. fuel or wages). For that, however, you need to consider the optimal service route, availabilities, work time models and customer preferences.

Upon finishing their task on-site, technicians often need to spend valuable time on service reports and documenting materials or working times. It would be more efficient for them to be on their way to the next customer instead.



Even when service visits were planned most efficiently, often they don't work out: Traffic jams, delays, lost tools or out-of-stock replacement parts are hurdles in the way of customer satisfaction. Without flexible digital tools, organizations can usually only react insufficiently.

#### **Great field service means:**

- The right person at the right time in the right location
- is prepared for anything
- and carries everything with them to deliver the perfect service.

## Benefits of field service software

Many organizations that offer field service do not use dedicated software for planning. Instead, they often have several different and disconnected IT solutions in place.

To make something as important as field service management as efficient and cost-effective as possible, an all-in-one solution should be implemented. It usually covers the following aspects of **field service**:



Case management



Service planning and coordination



Connect technicians/  
provide on-site support



Remote monitoring and potential maintenance with IoT



Automation with artificial intelligence



Customer communication



Inventory management



Billing



Data analysis/  
Reporting functionalities

**IT-based field service management comes with many advantages – for the service provider as well as its customers.**



### Benefits for service providers

**A field service software:**

Optimizes and boosts work order processing

Supports service planning

Makes spontaneous appointments easier

Supports technicians on-site

Improves first-time fix rate

Enables remote support and predictive maintenance

Improves customer satisfaction and customer experience

Lowers field service costs



### Benefits for customers

**What a service provider with field service software means for customers:**

Less organizational effort in service maintenance cases

Improved communication with the service provider

Shorter time frames until maintenance

Reliable schedules

Longer uptimes of plants and machines

Lower outage costs

Second service visits become unnecessary

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Predictive maintenance and proactive service in particular can help organizations stand out among competitors.

In many industries, customer service experience is already decisive and will only become more important to the success of organizations. Why? Because in a globalized market, service is an opportunity to stand out and of critical importance company wide. People are more likely to criticize bad service than praise good service. Even when the product itself does what it should, poor customer experience can be detrimental to your business.



### Without field service software

- ✗ Complicated service planning
- ✗ Bad overview of skills, qualifications and availabilities of employees
- ✗ Inefficient order distribution and long routes as a result
- ✗ Poor preparation of technicians for their service visit
- ✗ High probability of follow-up services
- ✗ Dissatisfied customers due to low reliability
- ✗ Difficult customer communication
- ✗ Lack of communication between office and field service
- ✗ Unnecessary empty trips
- ✗ Reactive maintenance



### With field service software

- ✓ Automated, IT-based service planning
- ✓ Up-to-date information at any time regarding important aspects of resource management
- ✓ Artificial intelligence calculates most effective routes
- ✓ Transparency regarding customer history, manuals, support of mobile apps (e.g. manuals and remote guidance)
- ✓ Improved first-time fix rate
- ✓ Improved customer communication and satisfaction
- ✓ Automated notifications to customers, potential self-service offers
- ✓ Constant communication via app
- ✓ Optimized service visits
- ✓ Predictive maintenance

# Microsoft Dynamics 365 Field Service: a field service revolution

Microsoft's field service solution is called Dynamics 365 Field Service. The cloud application covers the entire process of field service management – starting with the order until customer communication and inventory management, and ending with key figures analyses. It simplifies the planning, execution and evaluation of technical service cases with the help of automation, artificial intelligence and a mobile app for the field service team. It also enables you to connect devices and plants with IoT technology.

## SIMPLIFIED PROCESSES

Less paperwork, simplified coordination, improved communication with technicians and customers are some results of process optimization. You also save both money and time with mobile apps and Connected Field Service.

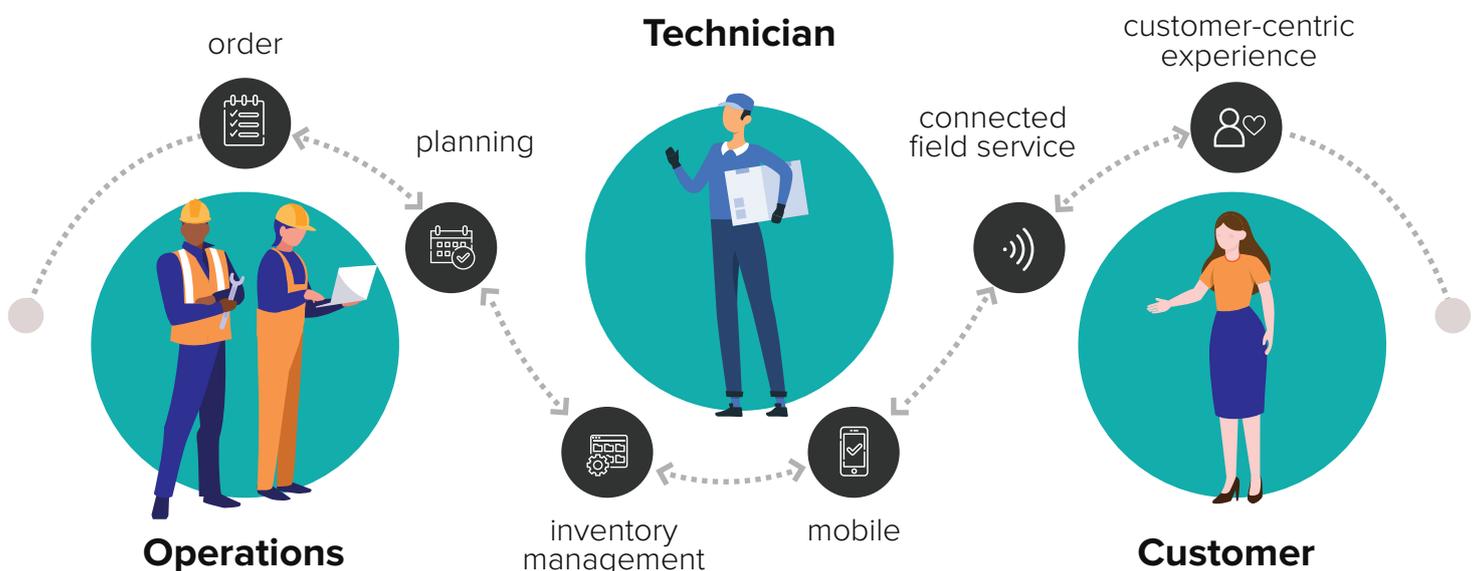
## PRODUCTIVE SERVICE

Equipped with comprehensive information about customers and their service history and the right tools and parts, your technicians will be able to work more efficiently on-site, significantly improving your first-time fix rate.

## SATISFIED CUSTOMERS

Customers demand and depend upon reliability from their service providers. Better planning, fewer on-site-service visits and fewer interruptions of operations improve the service experience enormously and boost satisfaction.

## Field service management in Dynamics 365 Field Service





## Work order

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Workflows in Dynamics 365 Field Service start with the order. Orders are generated in different ways, for example when a maintenance is due that was agreed upon in the service contract, when a customer reports a malfunction or when an IoT sensor sends an alert. An order includes details about the estimated processing time, the priority and the customer. By categorizing an order, for example as an installation or a repair, technicians can acquire additional helpful materials such as knowledge articles.

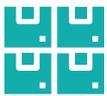


## Planning

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Afterwards dispatchers take care of assigning the right technician with the necessary equipment based on the details included in the work order. Dynamics 365 Field Service supports them with AI-based planning tools. These tools visualize for example all on-site appointments that need to be planned and automatically calculate optimized routes and schedules if required. The so-called schedule board and the included map view help plan resources as reasonably as possible. Their current orders, the order status and the schedules of field service employees are displayed there. New orders can be dragged and dropped easily to a resource's schedule.

The screenshot displays the Dynamics 365 Resource Scheduling Optimization interface. On the left, a map view shows a geographical area with various locations marked by colored pins. The map includes labels for areas like Woodway, Mountlake Terrace, Richmond Highlands, Kenmore, Kirkland, Bellevue, and Renton. On the right, a resource booking grid is shown for Monday, 12/16/2019, with a time axis from 8:00 AM to 3:00 PM. The grid lists resources such as Abraham McC..., Brady Hannon, Edgar Doming..., Joseph Gonsal..., Kris Nakamura, Luke Lundgren, Matthew Evers..., Ricardo Seely, Samuel McBride, Simon Raley, Victor Timm, and William Conto... Each resource's schedule is represented by horizontal bars indicating work order durations. For example, Abraham McC... has work orders from 8:00 AM to 9:00 AM (2 hrs 9 min), 9:00 AM to 10:00 AM (2 hrs 32 min), and 10:00 AM to 11:00 AM (2 hrs 33 min). The interface also includes a search bar for resources, a filter menu, and a 'Booking Requirements' section at the bottom.



## Inventory management

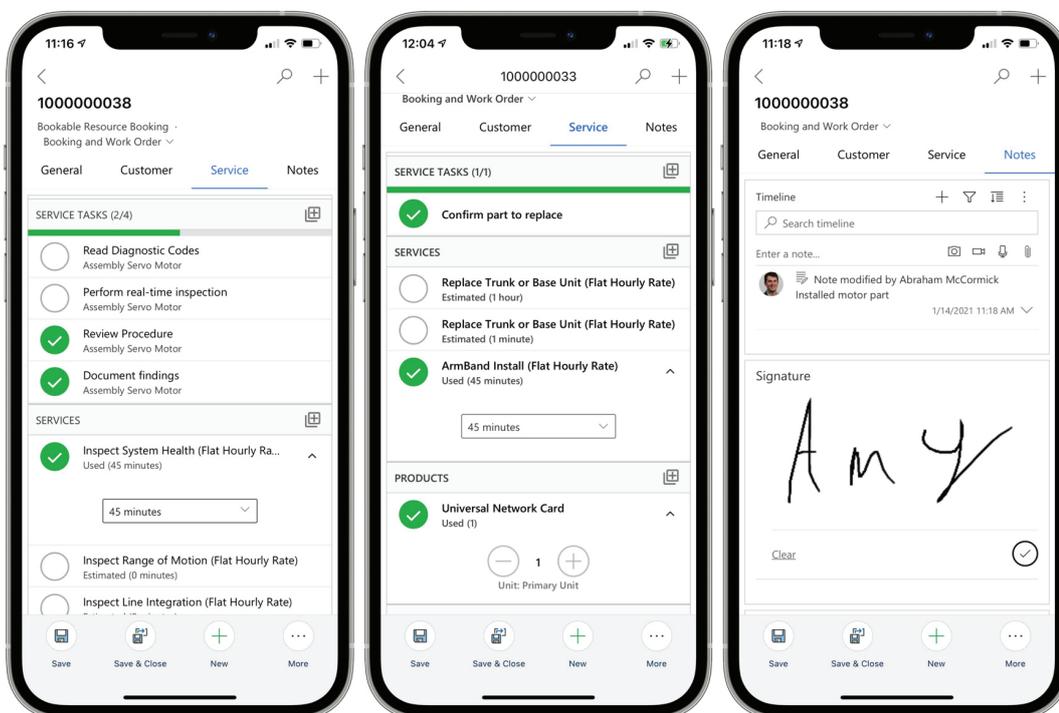
The integrated inventory management provides a real-time overview of tools and replacement parts in warehouses or vehicles as well as of work orders and returns. This ensures their availability on time or triggers a re-order and correct distribution.

Dynamics 365 Field Service lets you document the history of objects, for example when a plant is installed or fixed, or which room it is located in.



## Mobile app

The Dynamics 365 Field Service mobile app comes with great advantages, too. The mobile application for smartphones or tablets assists field service technicians during maintenance, repair and installation before and during their appointments on-site – no matter whether they are online or offline.



### The mobile Field Service app enables technicians to:

- access customer information and order histories
- open appointments in a calendar view
- open street maps to help them navigate to the customer site
- create reports, have them signed digitally and distribute them
- invoice products and services
- scan bar codes
- save notes, voice-to-text, photos or videos from customer site
- create time entries and request vacations

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The app lets you access details about the job, for example to-dos, solutions to problems, information about spare parts and product configurations or the customer history. With just one click you can tick off completed work steps and note which products or spare parts are in use.

The back office can track the activities of the field service technicians in real-time via the mobile app. All field service needs to do is share their location with their colleagues.

Push messages from the mobile Field Service app inform technicians about new assigned tasks, provide status updates, and remind them to document their on-site work.

Technicians are able to create follow-up tasks from within the app, if necessary. By doing so, certain information is taken from the existing service order automatically.



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At the same time, it is possible to send out automated notifications to customers via email or SMS to let them know that a technician is on their way or running late.

Organizations that use Dynamics 365 Remote Assist can connect this application with the Field Service app. That establishes a connection to the support team who then can guide technicians during a maintenance task or fixing an error, for example by using the Microsoft HoloLens.

### Advantages of the Field Service mobile app



no paper trail



better data quality  
because  
information is  
gathered right  
on-site



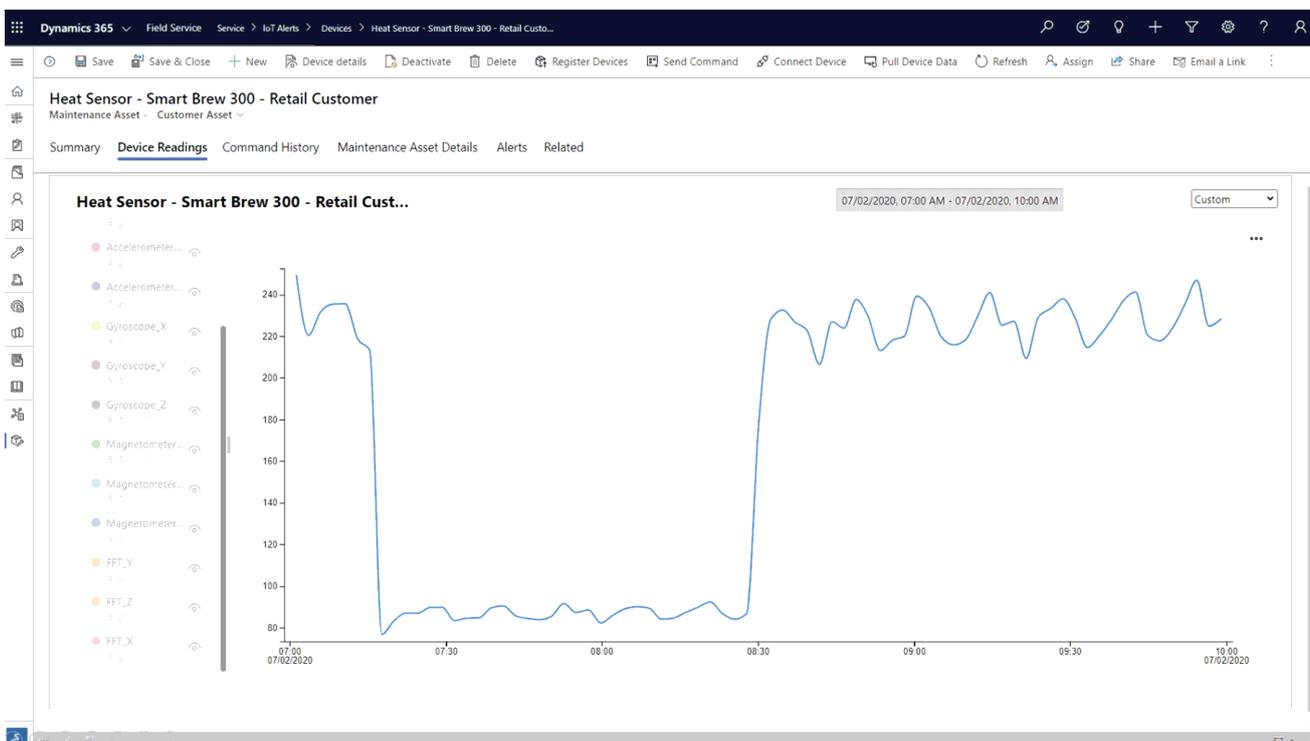
time savings  
because all data  
can be recorded  
in the app even  
offline



## Connected Field Service

In many organizations technical field service costs more money than it generates. Connected Field Service was developed to help change that. By using IoT technology, it enables remote monitoring and predictive maintenance of facilities and machinery, and companies can switch from a service model that is all about fixing problems to a proactive or just-in-time service model.

Connected Field Service decreases the down time of machinery, because some service cases can be resolved before the customer even notices that there is something wrong. In some cases, expensive and time-consuming tasks on-site can be avoided altogether. And if the situation renders the presence of a technician necessary, data measured via sensors on the machinery helps allocate the right one.





## Customer-centric experience

To keep customers up to date regarding the current status of their order and to allow them to improve their planning, Dynamics 365 Field Service includes different communication tools. For example, customers can be notified automatically when a technician starts making their way to the customer, there are delays, the appointment is confirmed or when it needs to be rescheduled. Not just technicians and customers can stay in touch with these tools, but back office and field service, too. This improves communication, collaboration and coordination before, during and after on-site jobs.

Furthermore, Field Service offers the possibility to integrate a customer portal where customers can submit service orders, plan activities and manage documents.



# Customer life cycle with Microsoft Dynamics 365

The Dynamics 365 app suite consists of several apps that help to offer superior customer service. The different modules cover the entire service life cycle of a company – from landing a deal to project execution until after-sales services.

In addition to Field Service, these applications include Dynamics 365 Customer Service and Dynamics 365 Project Operations.

- 1<sup>st</sup> level customer support (contact center)
- input channel for all service activities (omnichannel)
- first instance to detect or manage issues and problems (Q&A tree)
- knowledge base supported self-healing options



Dynamics 365 Customer Service

- managing and planning projects
- integration into the sales process
- planning and managing several tasks and resources over a prolonged period of time



Dynamics 365 Project Operations

- installation and maintenance of customer assets
- (periodically) recurring work orders
- optimizing the planning of numerous cases and resources



Dynamics 365 Field Service

**Dynamics 365 Customer Service** enables fast, personal and interactive customer service on all channels.

Self-service portals are an easy way to give customers the possibility to solve problems by themselves. There they get access to articles and videos from a knowledge database that instruct them how to fix malfunctions themselves. That saves time for both the customer and the company. If neither the instructions from the database nor a service agent are able to help the customer solve the issue, the case can always be handed over to Field Service where it will be turned into a work order.

**Dynamics 365 Project Operations** supports with selling services and the handling of project business – from planning to resource management up to time tracking and billing.

Many companies that offer technical field service, execute projects before. These can be managed in Project Operations, so they can be transferred seamlessly into subsequent work orders in Field Service later.

	Customer Service	Field Service	Project Operations
people involved (per task)	many	few	many
time required per task	minutes up to hours	hours up to days	weeks up to months
tasks	ticket management	repairs, installations, maintenance	roll-out/ implementation
device used	desktop	mobile	desktop or mobile

# Case study: Dynamics 365 Field Service in a TIC company

As digitalization partner proMX guides companies through the implementation of Microsoft Dynamics 365 Field Service. The following case study displays which challenges our customers often struggle with and what goals we can reach together with digital transformation:



## The project:

**Size:** Large (2,000+ employees)

**Products:**  Dynamics 365 Project Service Automation

 Project Gantt

 Dynamics 365 Field Service

 Power Apps (portal)

**Summary:**  The new project management solution supports project managers in keeping better track of project tasks and project status

 Dynamics 365 Field Service was optimized to improve collaboration between field service technicians and customers

 The new customer portal based on Microsoft Power Apps connects seamlessly to the company's CRM system

## About the company

The technical inspection organization is market leader in three European countries. It performs checks, inspections and certifications in many different areas including, but not limited to, buildings, food, heating systems and motor vehicles. Their customers are both freelancers and companies of all sizes as well as private persons. The company employs about 2,000 people.

## Challenges

To offer their customers the best possible service, the company chose Microsoft Dynamics 365 Field Service. It was time to streamline the app's processes and make them more efficient. That meant to create a work environment where project managers, dispatchers and field service inspectors can collaborate frictionlessly. Additionally, customers should be involved actively to create a better customer experience and save time on both ends.

After several dissatisfying digitalization partnerships, the organization found proMX. With their help they finally wanted to achieve a more efficient use of the application. proMX had to customize the app to the company's requirements.



**Optimized processes**



**Improved customer  
experience**

## Solution

proMX implemented another Dynamics 365 app: Project Service Automation. In this solution project managers can create project tasks based on customer agreements. The proMX add-on Project Gantt helps them to keep track of all project processes in detail.

Using the low code platform Power Apps, proMX implemented a customer portal with an interface to the company's customer relationship management system. Here, customers can access data, like contracts, error reports or other documentations.

The moment the company has planned a project, for example the safety inspection of an elevator, the related tasks are being transferred to the schedule board in Field Service where dispatchers assign them suitable resources. Once the job on-site is planned, a suggestion for an appointment is published on the customer portal. Customers can easily confirm the appointment and forward it to subcontractors or other contacts. Or they decline it with or without comment.

When customers confirm it, the project task converts into a work order and appears on the field service employee's or inspector's mobile via the Field Service app. In case a project task is denied, it circles back into a queue to be re-addressed by a dispatcher who either reschedules the appointment or initiates another action.

## Results

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The customized and extended Field Service solution helps the inspection company offer their customers a better experience because they are now able to manage their data themselves and are actively involved in finding the right date for an appointment.



# We offer a helping hand in your digital transformation

The ideal digital transformation partner is not only an expert in theory and technology but also in its customer's industry. Our consultants are familiar with the processes, priorities and challenges of different sectors. Contact us!

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