Optimization of Field Technician Operations

Development of an Application for Managing Field Service Teams

Leipziger Stadtwerkeis a municipal energy company that supplies electricity, gas, and heat. It is the market leader in electricity and heat in Leipzig and is also one of the ten largest companies of its kind in Germany.

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Leipziger Stadtwerke

Infrastructure of Leipziger Stadtwerke

approx. 3,350 km
of power grid

approx. 1,084 km
of gas network

approx. 496 km
of district heating network

600 employees
taking care of the infrastructure

Leipziger Stadtwerke provides services to

More than 200,000
households in Leipzig

Industry challenges

Stadtwerke, as municipal utility companies, are responsible for managing widely distributed urban infrastructure. A key component of their system is the efficient work of field service teams who handle telecommunication devices, meters, and sensors.

In many cases, task scheduling for these teams is still done manually. Technicians report to the office and receive their assignments for the day by hand. The lack of centralized information accessible in one place makes it difficult to estimate the actual completion time for work orders. Additionally, technicians are often required to maintain paper-based documentation, which increases the time needed to complete tasks. As a result, Stadtwerke face the need to improve the efficiency of field operations.



Leipziger Stadtwerke's needs

Stadtwerke required an intelligent tool to optimize field team operations while serving as an information source for technicians regarding the devices in the network.

The solution had to support technicians in their daily tasks and challenges, such as:

01. Installation and maintenance of various types of meters (different manufacturers, different features).
02. Assisting with customer interactions, including verification of their devices and handling cases with no physical access.
03. Classifying readings that deviate from expected values and documenting anomalies.
04. Annotating devices with comments and photos.
05. Accessing detailed information about specific devices.

It was essential to develop a mobile application that field workers could safely use throughout the working day.

Solution delivered by ConnectPoint

ConnectPoint developed and implemented the Mobile Dispatch Application for smartphones and tablets, enabling efficient management of field technician operations.

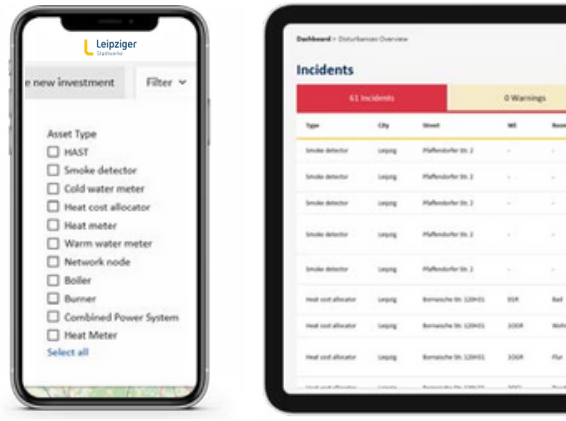
Thanks to Mobile Dispatch, tasks are assigned automatically, taking into account the technician's location and real-time traffic, to minimize travel time. The application also offers navigation to the job site, full access to task details, and documentation capabilities including taking photos and adding comments.

Key features of the application include:

01. Integration with external systems for optimal task assignment and processing.
02. Map view with job locations and a daily task list (e.g., readings, new installations, device replacements).
03. Route planning on Google Maps with point-to-point navigation.
04. Ability for the user to reschedule or delete a task independently.
05. Automatic access to device history.
06. Meter reading support through structured input fields (e.g., reading value, expected range, justification for outliers) with instant synchronization to dispatch center upon confirmation.
07. QR code scanner for auto-filling fields assigned to the meter.
08. Customer contact details available directly in the app for instant communication.
09. On-site payment collection – integrated with the payment system.
10. Real-time data validation to ensure data quality at the point of entry.

About ConnectPoint

ConnectPoint is an IT company supporting the digital transformation of the industrial, energy, and utility sectors. The company specializes in IT/OT and IoT integration, combining deep industry knowledge with expertise in OT, Big Data, GIS, Business Intelligence, and Machine Learning. It builds systems that enable effective collaboration between Operations, IT, and Business.



Benefits of the implementation for Stadtwerke

Within just 15 months, Leipziger Stadtwerke gained a tool that optimized the operations of field service teams and delivered the following benefits:

01. Each technician receives a current daily task list in the app, along with an optimized travel route, significantly saving time.
02. All data is centralized and accessible from a single location after login.
03. Task-related information is structured and updated immediately after completion.
04. The application supports and streamlines the meter data collection process.
05. A standardized and automated data collection method through flexible mobile forms has replaced unreliable and time-consuming paper documentation.

