

# Accelerating Customer Satisfaction: Deutsche Telekom's Swift Fiber Rollout Leveraging the Cloud

**Capgemini and Deutsche Telekom use agile development methods to implement a new, highly scalable full-service platform for the planning, marketing, installation, and activation of fiber broadband connections in a very short space of time.**

## Substantial investment in German fiber rollout

Deutsche Telekom is one of the world's largest telecommunications companies and is present in more than 50 countries. In Germany, where the company offers Internet products and services for both private customers and businesses, no other provider is investing more in expanding fiber optic networks. With more than 750,000 kilometers of fiber optic cable laid, Deutsche Telekom is enabling higher bandwidths by gradually replacing the 50-year-old copper lines.

Today, the company is expanding its fiber-optic network throughout Germany and plans to connect an additional 2.5 million households to fiber-optic lines this year. By 2030, Deutsche Telekom aims to provide at least 25 million households with a fiber-optic connection.

During the transition from copper to fiber-optic lines, Deutsche Telekom saw an opportunity to streamline planning and installation processes, which would enhance the customer experience.

## Overview

**Client:** Deutsche Telekom AG

**Industry:** Telecoms

**Region:** Germany

### Client Challenge:

To facilitate the rollout of fiber optics, Deutsche Telekom needed to develop a new digital platform to support both rollout partners and customers while accelerating processes and enhancing the customer experience.

### Solution:

Working with Deutsche Telekom, Capgemini redesigned the Operations Support System (OSS) architecture of the fiber optic infrastructure by developing, evolving, and future-proofing a microservice architecture.

### Benefits:

- User-friendly system increases customer satisfaction
- Reduction in the time required to order and install fiber optic products
- High scalability supports rapid expansion of fiber infrastructure
- Simplified partner integration into deployment processes
- Greater support for expansion of several million annual fiber optic connections



### **A customer-friendly solution for managing the fiber-optic network**

Deutsche Telekom used the opportunity to optimize the planning and installation processes during the transition from copper to fiber optic lines. The goal was to improve the customer experience (CX) by minimizing the number of on-site appointments for customers or property owners. The digital platform provides detailed information and enables sales and expansion partners to access it, reducing the need for communication and avoiding errors.

### **Developing a scalable, multi-tenant cloud solution**

Such a platform requires high scalability, performance, and flexibility. To ensure that the solution possessed all of these traits, Deutsche Telekom decided to identify a partner with expertise in security, privacy, usability, cloud solutions, back-end integration, and agile development. In addition, they needed a partner with a proven track record of successful joint projects that added value to Deutsche Telekom. Capgemini demonstrated the necessary expertise and in-depth knowledge and was selected by Deutsche Telekom as one of its key development partners.

The partners formed a unified team to develop a multi-tenant operations and business support system for fiber-optic infrastructure and a state-of-the-art, multi-tenant and multi-cloud platform to accelerate order processing. Deutsche Telekom and Capgemini used an agile development model based on the Scaled Agile Framework (SAFe), domain-driven design, and DevOps methods throughout the project. The use of open-source software and open standards – including interfaces based on TMF standards – ensured interoperability, scalability and faster implementation.

To ensure that the solution catered to users and addressed their concerns, the project team involved landlords, property owners, and rollout partners to review various iterations and provide feedback. This input guided development through a process of continuous improvement.

Together Deutsche Telekom and Capgemini designed a cloud-based microservices architecture and developed new supply chain processes.

### **Enhanced customer satisfaction, faster order processing, reliable data**

The platform actively engages partners and property owners in the rollout process. If necessary, appointments with customers and property owners can be scheduled through the system. By providing all relevant information to both the field technician and the customer, the number of contacts and inquiries is reduced. In addition, all data is accessible via a mobile app, accelerating the expansion and increasing transparency for all stakeholders. Moving from a paper process to a digital workflow has improved data quality and significantly increased process compliance.

If an on-site plan is not feasible, the entire passive optical network infrastructure is automatically rescheduled in the app so it can be installed and activated immediately. The new connection is available within minutes post installation.

One example of the manner in which this solution addressed customer concerns is appointments. Deutsche Telekom had identified a widespread desire to reduce the need for on-site appointments. With the new platform in place, the company can now make detailed information available digitally. Because sales and expansion partners have access to the platform, they can use this information to reduce communication and eliminate errors.

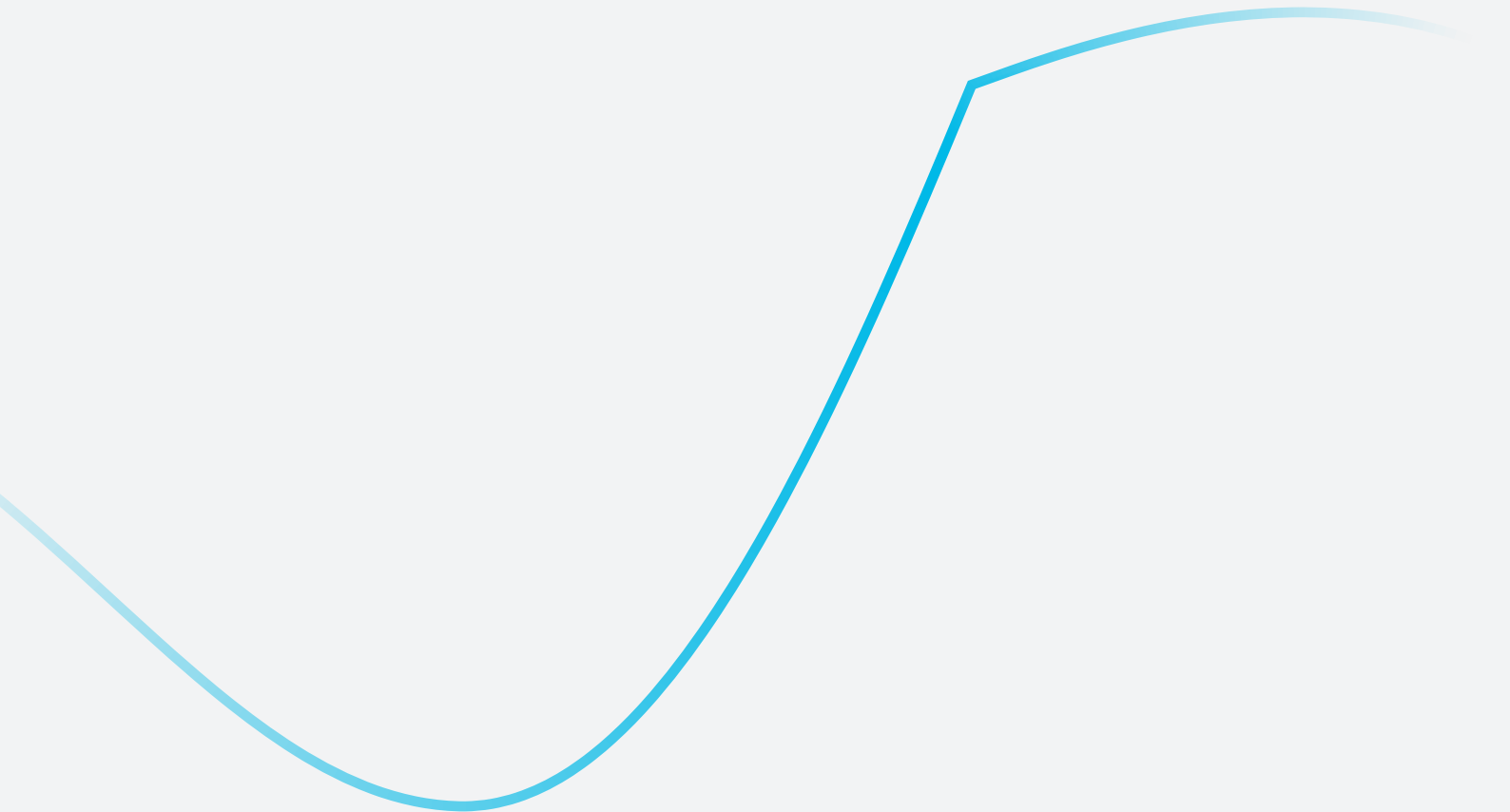
### **Fiber-optic expansion for 41.5 million households in Germany – Deutsche Telekom is leading the race**

The MVP was first tested with a few thousand connections in a small town and then rolled out across Germany. To date, 8.6 million households have been connected to Deutsche Telekom's fiber-optic network, and the company aims to install an additional 2.5 million fiber-optic connections per year. And the impact extends throughout the German Telecoms market. Joint ventures such as Glasfaser Nordwest and GlasfaserPlus as well as various partners such, including local utilities and telecom providers, use the platform to support their own customers. The platform's high scalability ensures that the fiber infrastructure can continue to grow rapidly while maintaining a high level of customer satisfaction.



With Capgemini as our partner, we have benefited from extensive experience, innovation and diverse skill sets, supporting us from the first steps to efficient scaling.”

**Sebastian Simmer,**  
**Vice President E2E Fiber Customer Experience & Operations,**  
**Deutsche Telekom**



## About Capgemini

Capgemini is a global business and technology transformation partner, helping organizations to accelerate their dual transition to a digital and sustainable world, while creating tangible impact for enterprises and society. It is a responsible and diverse group of 340,000 team members in more than 50 countries. With its strong over 55-year heritage, Capgemini is trusted by its clients to unlock the value of technology to address the entire breadth of their business needs. It delivers end-to-end services and solutions leveraging strengths from strategy and design to engineering, all fueled by its market leading capabilities in AI, cloud and data, combined with its deep industry expertise and partner ecosystem. The Group reported 2023 global revenues of €22.5 billion.

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