

# Capgemini showcases the *power of GenAI at GlasfaserPlus* in predicting fiber-optic rollout delays

Capgemini's GenAI solution for fiber rollout helps planners to optimize workforce allocation and enables proactive communication with all stakeholders.

Complex projects like the expansion of fiber optic networks are influenced by a diverse set of mostly external factors, such as municipality permits, approvals, the field worker availability of construction partners, and weather conditions. Unsurprisingly, the expansion of fiber optic networks cannot always be planned months in advance. Delays happen and dealing with them is part of the day-to-day work of telecom companies.

GlasfaserPlus, a joint venture of Deutsche Telekom and IFM Global Infrastructure Fund, specializes in rural network expansion and is on its way to become one of Germany's leading fiber optic infrastructure companies. When attempting to provide next generation

**Client:** GlasfaserPlus

**Region:** Germany

**Industry:** Telecommunications

**Client Challenge:** GlasfaserPlus set out to identify and implement a solution that would enable it to more effectively address the delays to complex projects caused by a wide range of primarily external factors.

**Solution:** The organization worked with Capgemini to address the challenge using advanced Gen AI technology and developed a solution that improves the analysis of construction delays in the rollout of fiber-optic networks.

**Benefits:**

- Streamlined and automated the gathering, reading, documenting, and classifying project data
- Optimization of workforce allocation, thereby reducing costs and increasing speed
- More proactive communication with all stakeholders
- Improved overall customer experience

internet-service to nearly the entirety of Germany, the real challenge was the sheer number of parallel projects numbering in the thousands.

Because of this scale, GlasfaserPlus' back-office receives a massive amount of miscellaneous documents via different channels, including faxes, letters, and emails, as well as unstructured comments from construction workers and legitimate and unjustified claims from municipality mayors or partner companies. Every piece of data requires meticulous reading, classification, and documentation so that the company can use it to calculate construction delays.

To help streamline this process, GlasfaserPlus engaged Capgemini to help identify and introduce an effective solution.

### Streamlining delay calculation with Gen AI

After reviewing the company's needs and existing processes, a small, efficient team of Capgemini intrapreneurs suggested the application of an advanced Gen AI system to handle the data while ensuring compliance with data-privacy and data-protection regulations. Once GlasfaserPlus stakeholders signed off on the plan, the project team began the development process.

The result was a solution that uses a Large Language Model (LLM) to convert unstructured data – in the form of PDF documents – into structured data. The system analyzes and evaluates these documents based on

well-formulated prompts developed collaboratively by GlasfaserPlus and Capgemini. Throughout the development process, the project team followed an iterative approach while working with GlasfaserPlus' IT department to respond to specific challenges.

Following this automated review, the Gen AI solution extracts the most important core information and stores it in a predefined, structured format. As a result, GlasfaserPlus employees now gain access to easy-to-read data that enables them to rapidly and effectively predict delays to fiber optic expansion projects.

### Innovation supported by continual improvement

After eight weeks of close collaboration, GlasfaserPlus and Capgemini released the Gen AI solution, which immediately began delivering business value. Moving forward, the final solution will help to further minimize time-consuming back-office-tasks related to delay management of scaled network-expansion projects.

Following the successful development and launch of the solution, GlasfaserPlus and Capgemini are now working to improve the system by making it more robust, adding different features to automate monitoring and reporting, and connecting additional data-sources to a meet even more diverse set of requirements. In doing so, GlasfaserPlus will continue to differentiate itself and define market-leading services within the German telecom market.



*When the business side approached us in IT with the requirements, we did not see a viable solution based on conventional means. Fortunately, our colleagues from Capgemini, who were already working on the project, were able to draw on their expertise and the broad knowledge in Capgemini's background. Without Capgemini, it would probably have taken much longer to tackle these problems."*

**Henk van Es,**  
**Head of IT, Glasfaserplus IT Services GmbH**

# 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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