

Case study

Construction company needs cellular to make on-site trailers operational immediately



Image courtesy of Bilfinger SE

Bilfinger SE uses Ericsson Cradlepoint routers for day-1 connectivity anywhere and failover between multiple carriers

Customer:
Bilfinger SE

Industry:
Construction

Use Case:
Day-1 connectivity

Success story highlights

Challenge — For industrial construction work with immovable deadlines, Bilfinger SE needed a connectivity solution to quickly connect construction trailers to internal networks. Also, the technical nature of projects meant that on-site engineers regularly used cloudbased design applications, generating hundreds of gigabytes of data each month and regularly exceeding SIM card data limits, resulting in network outages.

Solution — Bilfinger now leverages the flexibility of cellular broadband through Ericsson Cradlepoint cellular routers — enabling day-1 connectivity, dual-modem and multi-carrier functionality, and centralized network management.

Benefits — With always-on connectivity available in construction trailers, workers collaborate with off-site teams at will and make precision design adjustments, irrespective of SIM card data limits. Leveraging multiple carriers through cellular routers ensures seamless failover during power outages, and IT teams can push out critical updates while managing the network from a single pane of glass.

"Cradlepoint's solution is simple and quick to set up — theoretically, even a non-IT person could do it — and it's also cost-effective."

Harald Klause, regional IT business partner, Bilfinger Global IT

Background and challenges

Bilfinger SE is an international industrial services provider that engineers, constructs, and maintains facilities for the oil and gas, pharmaceutical, chemical, and energy sectors. With widely recognized expertise in upgrading highly technical systems, Bilfinger is often called upon to refit critical components of power plants — high-stakes projects that hinge on precise execution and dependable connectivity for on-time completion.

The construction of a new facility takes place over a period of years, and teams typically tap into existing or new wired network connections in on-site construction trailers. However, laying a new fiber line can take longer than the entire duration of important maintenance projects, meaning that Bilfinger needed a connectivity solution that could be installed in days instead of months. The team decided it needed the flexibility of LTE.



Image courtesy of Bilfinger SE

The conditions on a construction site are more difficult. Typically, our construction containers are located in an open area that is not accessible via cable — for example, in a parking lot. And who puts fiber in a parking lot?” Klause said.

Crews use on-site trailers to make internal Voice over Internet Protocol (VoIP) calls, access design files, and record project updates in the Bilfinger Enterprise Resource Planning (ERP) system. Engineers collaborate with their counterparts at headquarters. The need for communication requires a high volume of data.

“We run up against data limits after just 15 to 18 days on a site like the one in Frankfurt. In a month, we need between 100 and 120 GB,” Klause said.

Solution

For day-1 connectivity of on-site construction trailers, Bilfinger chose Ericsson Cradlepoint cellular routers with dual modems for automatic multi-carrier failover; SIM-based auto carrier

selection; and robust Wi-Fi. Additionally, NetCloud enables the IT team to centrally monitor, manage, and troubleshoot connectivity at each site — from anywhere.

Benefits

Day-1 connectivity

By choosing near ubiquitous cellular broadband for connecting construction trailers, crews are able to focus on hitting project deadlines for high-stakes jobs, rather than waiting for wired connections.

Automatic network failover

Bilfinger now uses two cellular routers in worksite trailers — each router has two modems, and each modem features two SIM cards — enabling automatic failover and eliminating network downtime caused by maxed out SIMs.

“With the Ericsson Cradlepoint router device, there have been no outages triggered by bandwidth limitations,” Klause said.

Centralized and simplified network management

With cloud-based configurations and management through Ericsson NetCloud Manager, tasks that had been performed by on-site crew such as firmware and info security updates are handled from headquarters. The Bilfinger IT team can view easy-to-read connection and security dashboards and troubleshoot certain issues remotely instead of in person.

“This solution is simple and quick to set up — theoretically, even a non-IT person could do it — and it’s also cost-effective,” said Klause.

Learn more at cradlepoint.com



“When facilities need to be shut down we have very sharp run times. Deadlines must not be tampered with because of high downtime costs and the subsequent impacts on other parts of a project.”

Harald Klause, Regional IT business partner
Bilfinger Global IT

