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# CERTIUM ENABLES DFS RADIO SITE UPGRADE AND MODERNIZATION

The successful completion of the radio site upgrade and modernization (RASUM) program enhances the operational efficiency of DFS and improves the cost effectiveness of its air traffic control (ATC) across Germany.

## AT A GLANCE

- ▶ **Customer:** DFS Deutsche Flugsicherung GmbH
- ▶ **Task:** RASUM program on behalf of DFS, the German air navigation service provider (ANSP)
- ▶ **Challenge:** Upgrading approximately 4000 radios across more than 100 sites
- ▶ **Solution:** R&S®RCMSII remote control and monitoring system as part of the CERTIUM ecosystem from Rohde & Schwarz
- ▶ **Key benefits:** Optimized ATC coverage in Germany as well as independent, redundant telecommunications connections and new antenna systems



### The customer

DFS Deutsche Flugsicherung GmbH is Germany's national ANSP and is responsible for the safe, orderly and expeditious handling of air traffic in German airspace. DFS ensures that aircraft and their crews and passengers reach their destinations safely and on time. It is also tasked with protecting the environment and minimizing noise pollution.

### Situation and requirements

In June 2023, Rohde & Schwarz completed the radio site upgrade and modernization (RASUM) program on behalf of DFS. As part of a wider modernization of DFS facilities across Germany, the RASUM program involved upgrading approximately 4000 radios across more than 100 sites.

Radios were networked together via four area control centers (ACC) in Bremen, Langen, Karlsruhe and Munich as well as 15 international airports operated by DFS, including Berlin Brandenburg (BER) and Frankfurt (FRA).

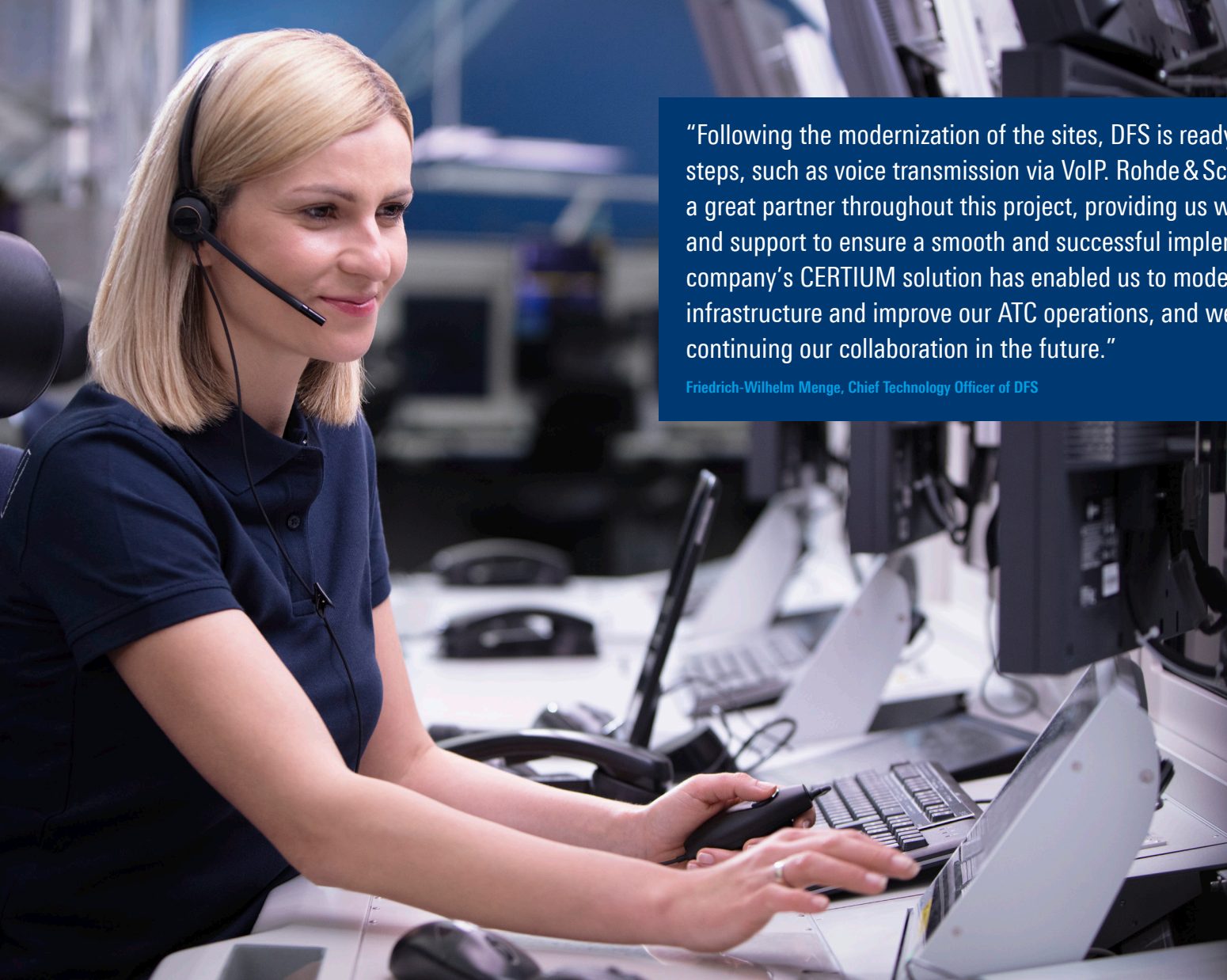
DFS ATC demanded an upgraded communications system with a low failure rate and downtime, 8.33 kHz channel spacing and future-proofing of its voice over IP (VoIP) connections. With this project, DFS has optimized ATC

coverage in Germany as a whole. Independent, redundant telecommunications connections and new antenna systems were set up. The project also covered the renewal and standardization of the buildings and infrastructure of the radio stations.

### Rohde & Schwarz solution

The DFS RASUM program was enabled by the CERTIUM advanced ATC communications suite from Rohde & Schwarz. Specific systems featured in the upgrade include the R&S®RCMSII remote control and monitoring system, which is designed to centrally manage and monitor nationwide ATC operations. R&S®RCMSII enables ATC providers to monitor CERTIUM software defined radios, voice communications systems (VCS), gateways and other SNMP-capable devices from multiple locations.

R&S®RCMSII includes full-stack configuration and management capabilities, which improve cost efficiency and enable precise localization and a rapid response to irregularities. The Rohde & Schwarz solution allows ATC providers to view the status of software defined radios in real time and adjust accordingly to optimize system availability and operating costs.



“Following the modernization of the sites, DFS is ready for the next steps, such as voice transmission via VoIP. Rohde & Schwarz has been a great partner throughout this project, providing us with the expertise and support to ensure a smooth and successful implementation. The company’s CERTIUM solution has enabled us to modernize our radio infrastructure and improve our ATC operations, and we look forward to continuing our collaboration in the future.”

Friedrich-Wilhelm Menge, Chief Technology Officer of DFS



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### Key features of R&S®RCMS II

- ▶ ANSPs can monitor end-to-end connectivity networks with multiserver operations designed for consolidated viewing.
- ▶ Integration into a centralized management system via SNMP, enabling optimal workload distribution. Remote radio software management tools allow ANSPs to operate radio sites from hundreds of miles away.
- ▶ Forward and backward compatibility for close integration with R&S®Series5200 software defined radios.
- ▶ Hot-hot deployment enables multiple servers to be connected simultaneously.

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CERTIUM enables DFS radio site upgrade and modernization  
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