



DFS Aviation Services
A brand of experience

DFS PHOENIX

Air & Ground ATM system

Introduction

The PHOENIX system is a **Linux-based, multi-purpose surveillance data processing system (SDPS)** applicable to many ATC use cases. It has been designed, developed and maintained to process, analyse and display surveillance and flight plan data.

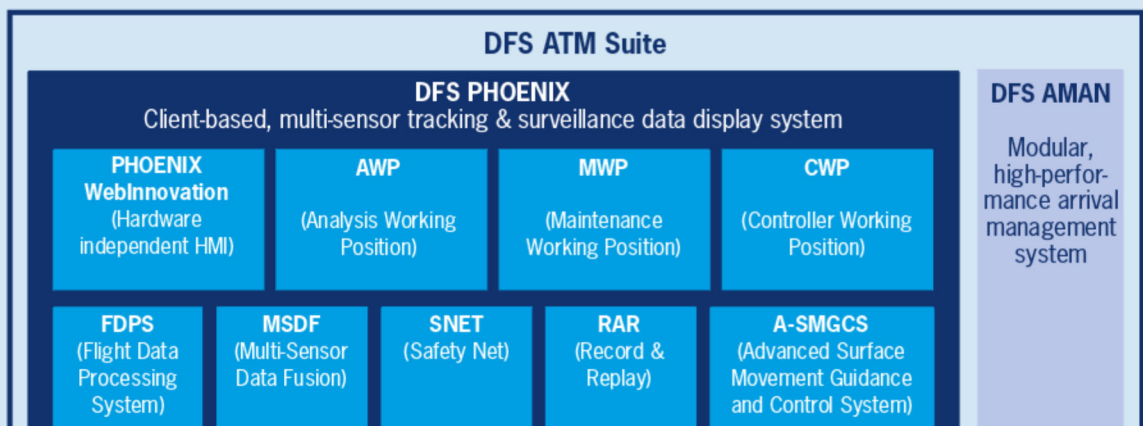
It was initially developed as an **in-house system at DFS Deutsche Flugsicherung** and is used as the main ATS fallback system for both lower and upper airspace in Germany. Over the last years, the system has been extended to include additional components. This **wide scope of features and the sophisticated development** have already convinced **numerous international partners** to adopt the system.

Today, the **modular design** of the PHOENIX software, with **50 components** in total, provides **functionalities such as tracking, flight plan handling and information processing**. All this is delivered on a **modern, intuitive HMI**.

Features

- The system can process **up to 50 sensors and track up to 5000 targets simultaneously**
- **FDPS functionality** for tower and centre, including sectorisation
- **Safety Net (SNET)** functions according to EUROCONTROL standards and alert provisions
- Advanced surveillance testing and simulation with **Analysis Working Position (AWP)**
- All necessary **support functions** available (monitoring/control, configuration and maintenance)
- All **common communication interfaces supported**, such as direction finder, weather information interfaces, ICAO/AFTN and ADEX-P, all according to ICAO standards
- **All major sensor data formats supported**

The modular DFS PHOENIX is an important centrepiece of the DFS ATM Suite.





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Use cases

- Tower & Approach Control
- Ground Surface Control
- Upper & Lower Airspace Control
- Primary & Fallback System

The PHOENIX system at Frankfurt Airport enables ATCOs to maintain an overview of the air and ground situation at one of Europe's largest airports.



Benefits

- **Developed by DFS ATM experts**
- **Increased capacity** due to a reduced controller workload thanks to a modern HMI with a wide range of controlling and monitoring features
- **Extensive implementing and operating experience** through the use of PHOENIX by DFS and international ANSPs
- **Ease of implementation and customisation** thanks to the high adaptability and scalability of the system
- **Cost efficiency** due to the ability to implement PHOENIX on standard hardware

References

- **Germany**
DFS has been using PHOENIX at all DFS towers as the primary system for air & ground and in all centres as the fallback system. Additionally, PHOENIX is also used by numerous regional airports in Germany.
- **Brazil**
In 2010, the multi-sensor tracker, a core component of the PHOENIX system, was delivered as the new main tracker for the whole country.
- **Italy**
Since 2018 PHOENIX MSDF has been a part of the new A-SMGCS architecture at Linate Airport and since 2019 at Malpensa Airport..
- **Kazakhstan**
In 2011 the PHOENIX system was installed at Almaty International Airport and later taken into operation at the tower in Taldykorgan.