



Institute of Flight Guidance
At a glance



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The DLR Institute of Flight Guidance develops innovative air traffic concepts – from the idea down to the implementation. The goal is to ensure an air transport system that is safe, efficient, environmentally friendly and reliable.

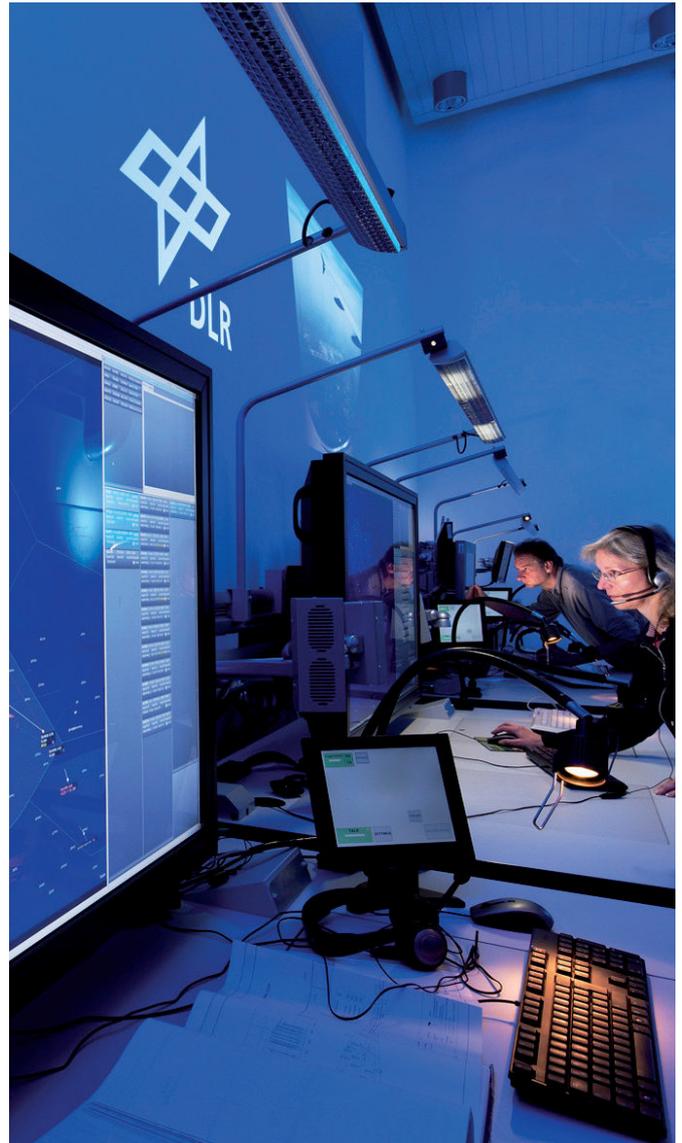
In the field of Air Traffic Management (ATM) and airports, the Institute acts as a supplier of know-how and ideas while balancing the conflicting interests between basic research and applied science. As the largest German research facility for flight guidance, it strives to deliver solutions to one of the greatest challenges in aviation – how to increase the efficiency and capacity of air transport in a safe and green way. This is possible thanks to the optimal interaction of high-performance flight management systems on aircraft with highly automated air navigation services. One key task of the Institute is to explore how the interplay of flight guidance on board and on the ground can be optimized.

To deal with the complex issues that exist in aviation today, the Institute draws on the wide-ranging expertise in its six departments. Together, these departments are developing new support functions for on board the aircraft and on the ground and are exploring holistic approaches towards optimizing comprehensive processes at airports. Furthermore, they are developing new ATM procedures and concepts as well as evaluating their effects. Special emphasis is placed on the human-oriented development and validation of new concepts in a realistic work environment.

Focal points

The Institute focuses on several key topics:

- Airport and Ground
- Traffic Management
- Air Traffic Management
- Unmanned Aircraft Systems
- Human-centered Automation
- Validation Methodology and Tools



Air Traffic Management and Operations Simulator (ATMOS)



Modular fixed-base cockpit simulator GECO



Airport and Control Center Simulator (ACCES)



360° Apron and Tower Simulator (ATS)

Air Traffic Validation Center

Simulators, sensor systems and flight testing equipment together form the Air Traffic Validation Center of the DLR Institute at the research airport in Braunschweig. This includes:

- Apron and Tower Simulator
- Airport and Control Center Simulator
- Air Traffic Management and Operations Simulator
- Fast-time simulators
- Cockpit simulators
- Flight testing equipment
- Satellite-based precision landing systems
- Ground movement control and airport management systems at Braunschweig and Hamburg airports

The center offers researchers all of the right tools for testing and evaluating new ideas, concepts and technologies in Air Traffic Management.

Promoting cooperation

Through its diverse research work, the Institute is involved in numerous projects with domestic and international partners from science, industry and politics. Moreover, the Institute supports young scientists by holding lectures at different universities and mentoring PhD researchers and students at the Institute.

Key data

Site	Braunschweig
Director	Prof. Dr.-Ing. D. Kügler
Employees	140
Internet	DLR.de/FL



Airbus A320-232 D-ATRA



Eurocopter EC 135 ACT/FHS

DLR at a glance

DLR is the national aeronautics and space research centre of the Federal Republic of Germany. Its extensive research and development work in aeronautics, space, energy, transport and security is integrated into national and international cooperative ventures. In addition to its own research, as Germany's space agency, DLR has been given responsibility by the federal government for the planning and implementation of the German space programme. DLR is also the umbrella organisation for the nation's largest project management agency.

DLR has approximately 8000 employees at 20 locations in Germany: Cologne (headquarters), Augsburg, Berlin, Bonn, Braunschweig, Bremen, Bremerhaven, Dresden, Goettingen, Hamburg, Jena, Juelich, Lampoldshausen, Neustrelitz, Oberpfaffenhofen, Oldenburg, Stade, Stuttgart, Trauen, and Weilheim. DLR also has offices in Brussels, Paris, Tokyo and Washington D.C.

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German Aerospace Center

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