



**Your End-to-End Engineering Partner**

# Engineering Know-How Meets Manufacturing Expertise

**Comprehensive engineering expertise, long-standing experience and global coverage – the FERCHAU Aviation Group is your ideal partner for multinational development projects in the Aerospace and Defence sector and adjoining industries. By not only combining state-of-the-art development know-how with consulting, but also with manufacturing, qualification and rollout, we provide flexible end-to-end solutions along the entire value chain. A powerful international partner network rounds off our cross-sector portfolio.**



## Aviation

- Civil and military aircraft
- Helicopters
- UAV
- Cabin and cargo
- Airframe and systems
- Avionics
- Simulators and demonstrators
- Wire harnesses



## Space

- Satellites
- Launchers
- Payloads
- Ground support equipment
- Test equipment
- Wire harnesses



## Defence

- Maritime, air, and land systems
- Electronic warfare
- Cyber defence
- Tactical operations
- Command and control
- Mission planning
- Virtual training and simulation



## Manufacturing Industries

- Machinery and plant equipment
- Special industrial equipment
- Test benches
- Jigs and tools
- Demonstrators and prototypes
- Industrial automation

**4+1** areas: systems, mechanical, electrical and electronic, software engineering plus production

**11** sites in Germany, France, Spain and the United Kingdom

**600** engineering specialists

### The key to success

- Decades of experience in Aerospace and Defence
- Successful know-how transfer to adjoining industries
- One-stop-shop: end-to-end engineering plus manufacturing services from a single source
- Multinational set-up (DE, FR, ES, GB)
- Established global partner network
- Ready for the next level of digitalisation

## End-to-End Support from a Single Source

The FERCHAU Aviation Group covers the entire engineering life cycle, ranging from study and analysis to implementation, certification and maintenance. We manage and provide complex work packages with all services from a single source, including the coordination and strategic development of a well-established portfolio of reliable global partners for cost and know-how optimisation. **Our constant striving for innovation guarantees high-quality work according to state-of-the-art standards**, e.g. when we apply novel model-based system engineering

techniques to develop complex systems.

**We drive digital transformation across our entire portfolio**, for example by applying data analytics methods for product life cycle management, using extended reality for virtual battlefield simulation and developing embedded connectivity systems for the aircraft cabin. **But our competence is not limited to engineering:** customised small and series production of, for example, aircraft cabin simulators, special industrial equipment and test benches complements our portfolio, making us a true end-to-end partner for your challenging projects.

### Systems Engineering

Consulting, deployment, and implementation:

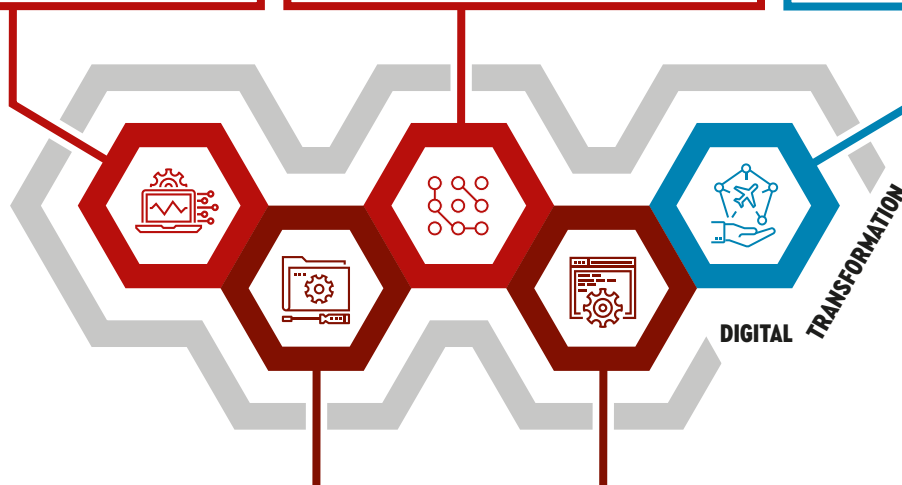
- Studies and concepts
- Architecture definition and specification
- Requirements-based engineering (RBE)
- Model-based systems engineering (MBSE)
- Configuration and change management
- Reliability, availability, maintainability, safety (RAMS)
- Prototyping, qualification and certification
- Testing and verification
- Project and interface management
- Vendor management

### Electrical and Electronic Engineering

- Analogue and digital circuit design and simulation
- Printed circuit board design and layout
- Housing, frame, box, rack, and harness design
- Embedded systems
- PLCs and control software design and implementation
- LabVIEW test stand applications
- Power supplies and power management systems
- Safety and environmental testing and certification
- Technical documentation
- Obsolescence management
- Integration and qualification

### Customised and Serial Production

- Ground support equipment
- Simulators and mock-ups
- Test systems
- Special industrial equipment
- Prototypes and demonstrators
- Wire harnesses



### Mechanical Engineering

- Studies and concepts
- 2D/3D conceptual and detailed design
- Structural analysis and verification
- Mechanical and thermal analysis
- Technical documentation
- System integration
- Product conformity and risk assessment
- Manufacturing coordination

### Software Engineering

- Architecture and modelling
- Design (object-oriented, multi-threaded)
- Implementation and integration
- Data collection, analysis, mining, visualisation, prediction via machine learning
- Testing (including code review, performance tests, test automation)
- HMI/MMI design
- Independent validation and verification
- Technical documentation
- Classical (V-model) and agile methods

More information about our expertise

[ferchau.com/go/aviation](https://ferchau.com/go/aviation)

Connecting People and Technologies  
for the Next Level