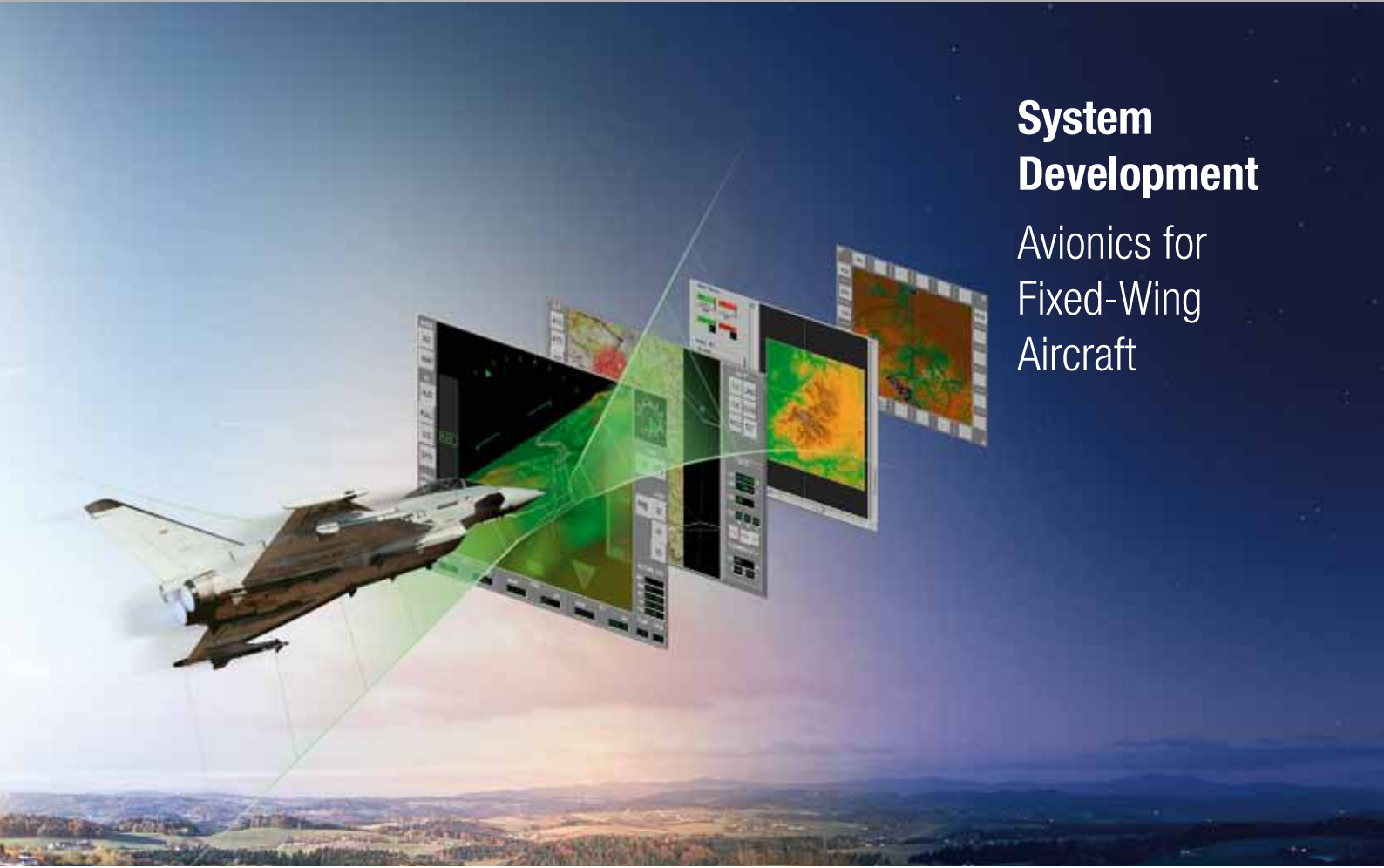


System Development

Avionics for Fixed-Wing Aircraft



Custom-made Solutions

Mission Success with High-Performance Avionic Systems

The abilities of modern aircraft and their mission success depend decisively on advanced, high-performance Avionic systems.

Tailored Solutions based on Experience and Competence

The systematic working on application-specific solutions is an important task for ESG. In this way future-oriented technologies are employed and the adaptation to changing conditions through operational scenarios are taken into account.

Through our participation in all important aircraft programmes, using the most modern technologies we have comprehensive System knowledge and practical experience in the areas:

- ▶ Sensors
- ▶ System Functionality
- ▶ System Architecture
- ▶ Information Processing
- ▶ Man-Machine-Interface
- ▶ System- and Software Development

AIRCRAFT PROGRAMMES WITH ESG PARTICIPATION



1972 to today – TORNADO

- ▶ Avionic System Development
- ▶ Avionic Update
- ▶ Mid-Life Update



1975 to today – Eurofighter

- ▶ Technology Studies
- ▶ Avionic System Concept Production
- ▶ Avionic System Development



1972 to today – Successor MPA (Maritime Patrol Aircraft)

- ▶ Concept and Definition Studies
- ▶ System Studies
- ▶ Feasibility Studies



1990 to today – FTA/A400M (Future Transport Aircraft)

- ▶ Technology Studies
- ▶ Avionic System Concept Development
- ▶ Experimental Programmes (e.g. Tactical Low-Level Flight Guidance)
- ▶ MMC-BITE Development

Improved Mission Efficiency

Experimental programmes for the minimisation of development risks

For Experimental programmes prototypes are developed and investigated and assessed in dialog with the future user in a specially adapted experimental environment and also tested in flight tests. In this way, the implementation risk is minimised as far as possible even in the early development phases.

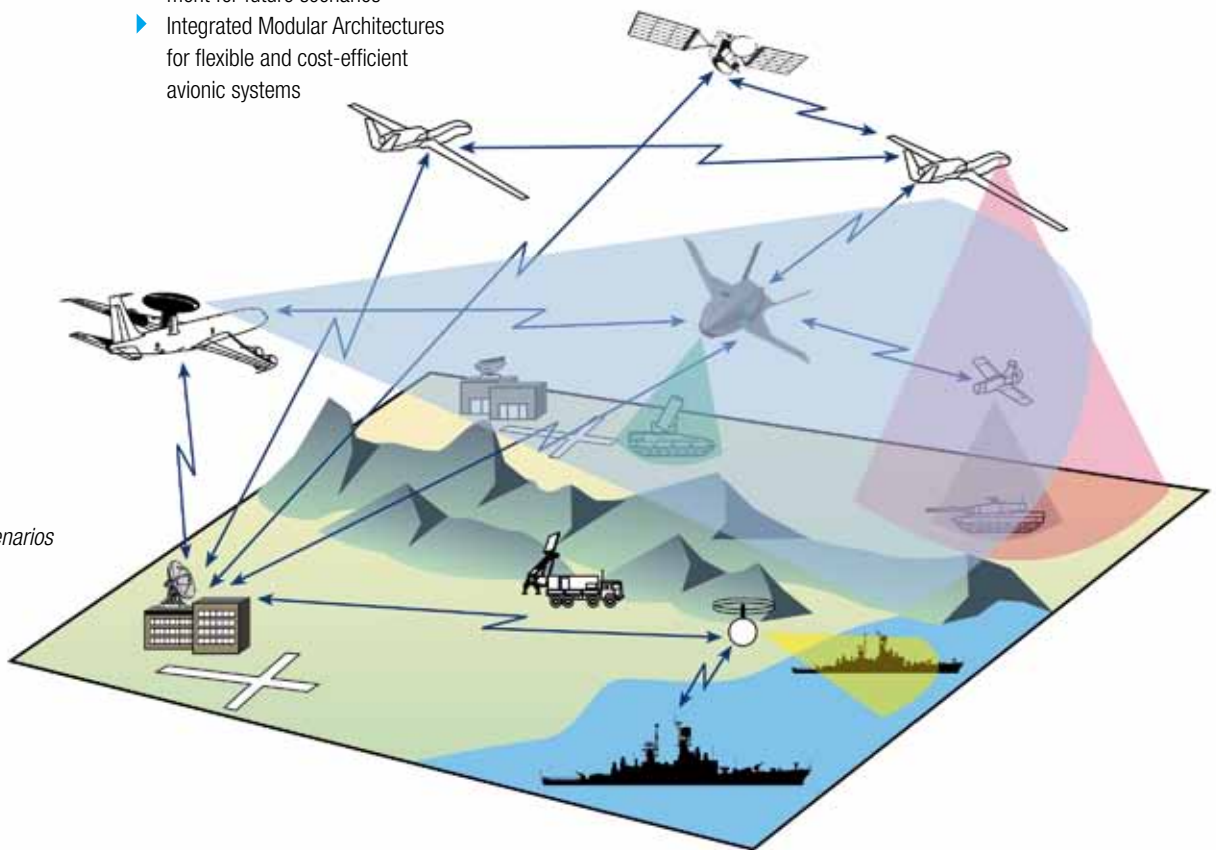
Major areas of the experimental programmes are:

- ▶ Man-Machine-Interface for mission management
- ▶ Visual flight guidance assistance for night and bad weather use
- ▶ Assistance systems for the improvement of crew situational awareness
- ▶ Mission management systems for the improvement of missions success
- ▶ On-Board information management for future scenarios
- ▶ Integrated Modular Architectures for flexible and cost-efficient avionic systems

Adaptation to Changing Challenges

The functional integration in integrated systems is main focus for ESG. Through a complete system approach measures for advanced, complex avionic systems are developed, in order to counter the growing challenges of future operational scenarios.

Complex Employment Scenarios in a "System of Systems"



ESG TECHNOLOGY PROGRAMMES

- | | | |
|--|---|---|
| ▶ IMA Integrated Modular Avionics | ▶ TIMMS Tactical Information and Mission Management System | ▶ ETAP European Technology Acquisition Programme |
| ▶ CAMA Crew Assistant Military Aircraft | ▶ GPWS Ground Proximity Warning System | ▶ Flight Route Planning |
| ▶ EVS Enhanced Vision System | | |