# Cluster Operation and Maintenance

The Operation and Maintenance cluster focuses on maintenance and logistic support for aircraft availability and its influencing sub-domains of reliability, maintainability and maintenance supportability, as well as domain-related technologies.

Maintenance and logistic support are key elements to ensure safe operation and high availability of aircraft and pro-active life cycle management of fleets, as well as efficient aircraft operations. New aircraft and modifications, in response to new technology and changing operational requirements, also drive the need for concurrent development of technologies for maintenance and logistic support.

The cluster focus is currently mainly on development that capitalizes on digitalization and the rapidly increasing availability of diverse operation data and maintenance data and information. To enable more efficient operations and maintenance, research is performed on how to support future operators, e.g. with decision support that process and refine available information and put it in to the context of different stakeholders and actors in their unique operations. The parts of the cluster research that is related to human aspects is coordinated with the HMI and Decision support cluster. Another focus is to develop life cycle management methods and tools for optimized phase-in and phase-out of aircraft and equipment, considering needs for improved availability and at the same time enable cost reduction.

Examples of challenges addressed in current research are:

- How should information models for technical maintenance planning be designed, to provide efficient decision-support for maintenance activities in an operational context?
- How should specific operations and maintenance -related data and information be visualized and made 'intractable', to provide high-usability and effective decision support for operational aircraft maintenance actors in an operational environment?
- Looking at all aircraft lifecycle phases, what methodologies and tools could be developed for operation and monitoring of Performance Based Logistics and Contractor Logistic Support, and optimized decommissioning?
- Technologies for analysis of maintenance in Performance Based Logistics contracts