



# Reliability and Safety in Aviation and Space

## OUR SCOPE OF AVIATION AND SPACE RESEARCH

- Maintenance planning and planning optimization
- **Reliability and safety – tools based on knowledge modelling**
  - **Our solutions are based on own conceptualization and proper semantics:**
    - **Conceptualization of safety methods**
    - **Domain models of aircraft systems, failures, operational procedures etc.**
- Unmanned aircraft systems – HW and SW up to integration into airspace
- Human factor performance evaluation – through psychophysiological state
- Aircraft operation optimization
- Airport simulations
- CNS systems analysis and modelling

## RESEARCH SCOPE IN RELIABILITY AND SAFETY

- Designing safe systems, Safety management, Investigation
- All types of aviation organizations, including regulators and the military
- Applying modern safety engineering, system safety approach, Safety-II
- Knowledge-driven SW tools, studies / development of safety methods

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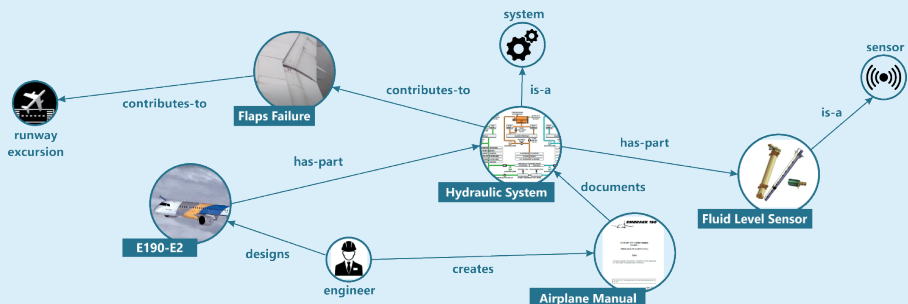
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# Conceptual Models

Our solutions are based on our own conceptualization and proper semantics.

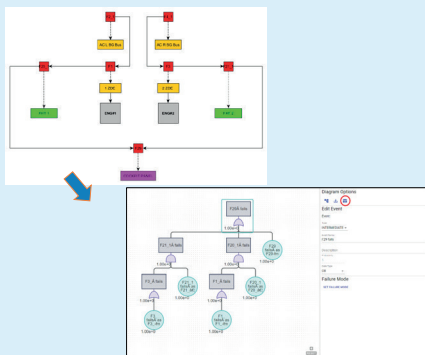
- Conceptualization of safety methods
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# Reliability and Safety Tools

## FTA/FMEA tool

- e.g. Automatic generation of FTA/FMEA analyses from product schemas



## STAMP-based Investigation Tool

- Semi-automated of accidents and incidents, by means investigation of process documentation (BPMN diagrams) and STAMP accident causality model.

