WEFACT – Workflow Engine for Analysis, Certification and Test

- **WEFACT**
  - Guides designers through the verification and validation (V&V) process
  - Supports incremental (modular, component based) certification process
  - Provides a framework, with integration of existing external tools and safety standards

- **V&V PROCESS**

  - Artefact Under Test
  - Safety Standards
  - Other Sources (e.g. domain)
  - Capturing Requirements
  - Defining V&V Activities
  - V&V Methods / Tools
  - Processing V&V Activities
  - Tool Support
  - Data Repositories
  - DOORS Modules
  - Invoking External Tools
  - Tool Incarnation
  - No: Failed
  - Yes: Completed
  - Evidence
  - V-Plan

- **WEFACT COMPONENTS**

  - **Safety Standards**
  - **Automotive**
    - ISO 26262
  - **Aerospace**
    - DO 178B/C, DO 254, DO 160, MIL-STD-461E
  - **Railway**
    - EN 50126, EN 50128, EN 50129
  - **Others**
    - ISO/IEC 61508, IEC 61511
    - IEC 61131, IEC 62061, IEC 60601
  - **Validation Plans (V-Plans)**
    - Control the respective V&V activities in a progressive integrated manner (traceability, completeness)
    - Assign V&V methods and tools to V&V activities

- **Different Tool Integration Levels (Client-Server Based)**
  - No external tool (e.g. checklists)
  - Tool implemented in DOORS
  - Automatically executed external tool (e.g. automated test run)
    - Start of tool by MQ Server or OSLC Automation Provider
    - No user interaction required
  - Manually executed external tool (e.g. WCET analysis)
    - Start of tool in dialog (“pressing a button”)
    - Configuration data saved in DOORS
    - Data read from and stored to various repositories (e.g. OSLC Asset Manager)
  - External test bench (e.g. EMI Hardware Test Bench)
    - Tool runs on separate hardware

Contact:

- Egbert Althammer
  egbert.althammer@ait.ac.at
- Thomas Gruber
  thomas.gruber@ait.ac.at
- Jacqueline Fischer
  Jacqueline.fischer.fl@ait.ac.at