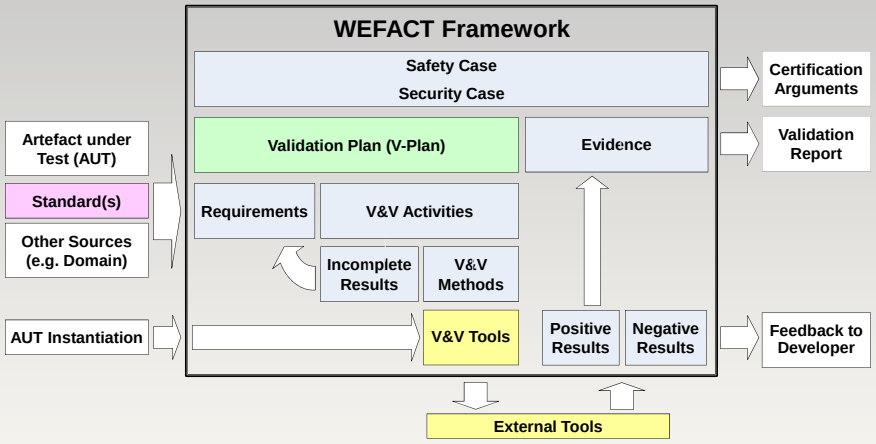
WEFACT
Workflow Engine for Analysis, Certification and Test

AUSTRIAN INSTITUTE OF TECHNOLOGY

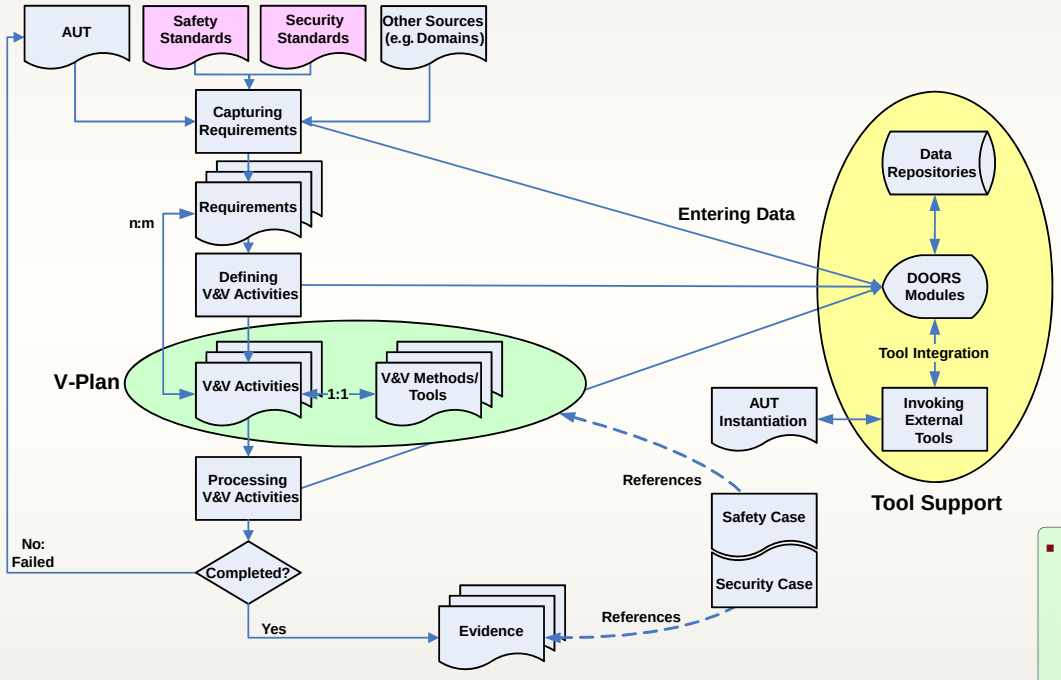
OBJECTIVES

- 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, safety and security standards

WEFACT COMPONENTS



V&V PROCESS



- 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
- Security Standards
  - IEC 62443, ISO/IEC 15408

- 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

RESEARCH PROJECTS

MBAT	SafeCer
Combination of analysis and test tools	Compositional certification support
CRYSTAL	**EMC²**
Integration of design, development and verification tools	Integration of security verification

Contact
Egbert Althammer
egbert.althammer@ait.ac.at

- Different Tool Integration Levels (Client-Server Based)
  - Defines automation level for processing V&V activities
  - WEFACT provides adequate guidance
- Internal Tool (e.g. Checklist)
  - Tool inside WEFACT
- Manually Executed External Tool (e.g. WCET Analysis)
  - Tool started by a person
- Automatically Executed External Tool (e.g. Automated Test Run)
  - Tool started by a message queue (MQ) handling service
- OSLC Automation Provider (e.g. MoMuT)
  - Tool is wrapped by an OSLC automation provider
- External Test Bench (e.g. EMI Hardware Test Bench)
  - Tool runs on separate hardware