AADL tools-chain cook book

AADL WG Toulouse, January 2018
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Problem statement

❑ **Numerous AADL tools**
❑ **Tools-chain: multiples AADL analysis, i.e. multiple tools**
❑ **Tool interoperability shown in several projects**

❑ **However, stay difficult to master AADL tool chains for users, limits their use by practitioners:**

- Each tool requires skills to understand how it may be used ; multiple analysis => multiple skills
- Tools may have some restrictions, i.e. all the tools do not cover all the concepts/aspects of the AADL standard.
- Tools may have different readiness levels (TRL).
- No shared library of reusable AADL components prevents from creating a synergy between the various teams, tools and projects.
- …

Expected outcomes

❑ **AADL tools-chain cook book :**

- Set of materials showing how to use AADL tool-chains for typical needs : case studies/models and typical use cases of tools-chains (documentation, tutorials)
- Materials available in a public repository/website, aadl.info?, openaadl? Others?
- Guide-lines to help users to start multiple analysis of AADL models (safety, scheduling, security, …).

❑ **From an AADL tool perspective may:**

- Help users to understand the input/output of each analysis tool.
- Show how AADL tools can be used altogether.
- Provide indicators to identify which kinds of processing can be performed on AADL models.
- Identify and formalize the scope and the limits of each tool.
- Improve robustness/ergonomics/use of tools

Project organization
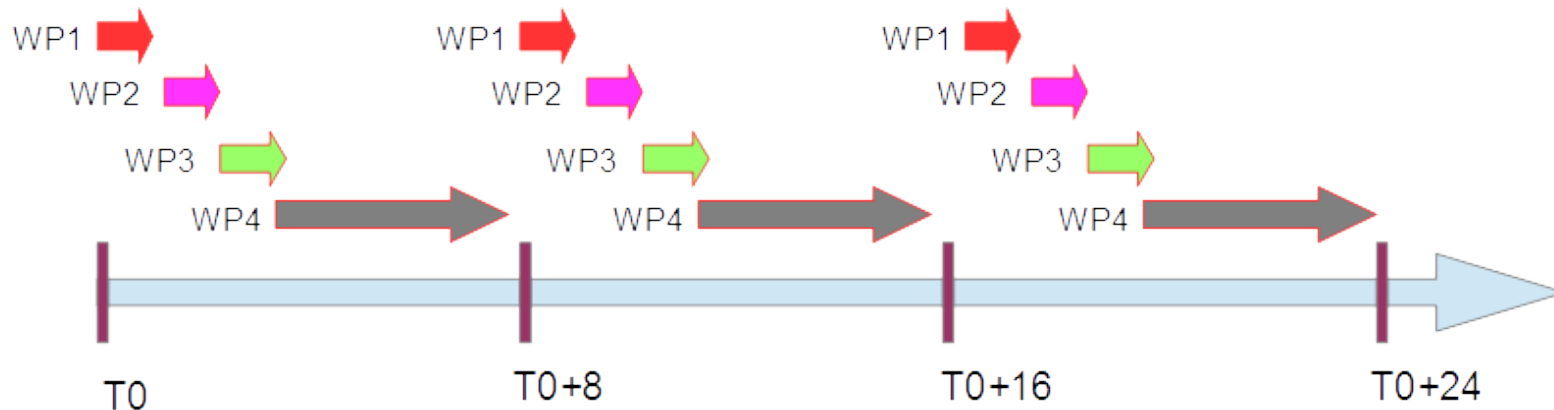
- ❑ **Kick off in 2018. Funding request for 2019/2020 (engineer)**
- ❑ **Several iterations:**
  - ❑ WP1: define scope of the interation => tool-chains & case studies experimented during the iteration.
  - ❑ WP2: design/modelling of cases-studies/reusable components library selected in WP1
  - ❑ WP3: execution platform specification
  - ❑ WP4: experiments and documentation with the case-studies & tool-chains
- ❑ **AS2C as a steering committee**

Project organization

❑ **AS2C acts as a steering committee:**

  ❑ Propose the tools-chains to investigate

  ❑ Propose the case studies/examples

  ❑ Propose the « runtimes » to be assumed

❑ **Anyone from AS2C is welcome**

❑ Project proposal available on request (deliverables for each WP)