EAST-ADL Introduction

Methodology

What is a methodology?

Merriam-Webster:

1. A body of methods, rules and postulates employed by a discipline. A particular procedure or set of procedures.

2. (The analysis of the principles or procedures of inquiry in a particular field.)

Objectives

- Give advice on how to efficiently use EAST-ADL

- Provide guidelines for system modelling and analysis using EAST-ADL

- Focus on integration and documentation

- Allow for adaptation of EAST-ADL usage to different contexts (processes, organizational, technical)

Methodology Modelling

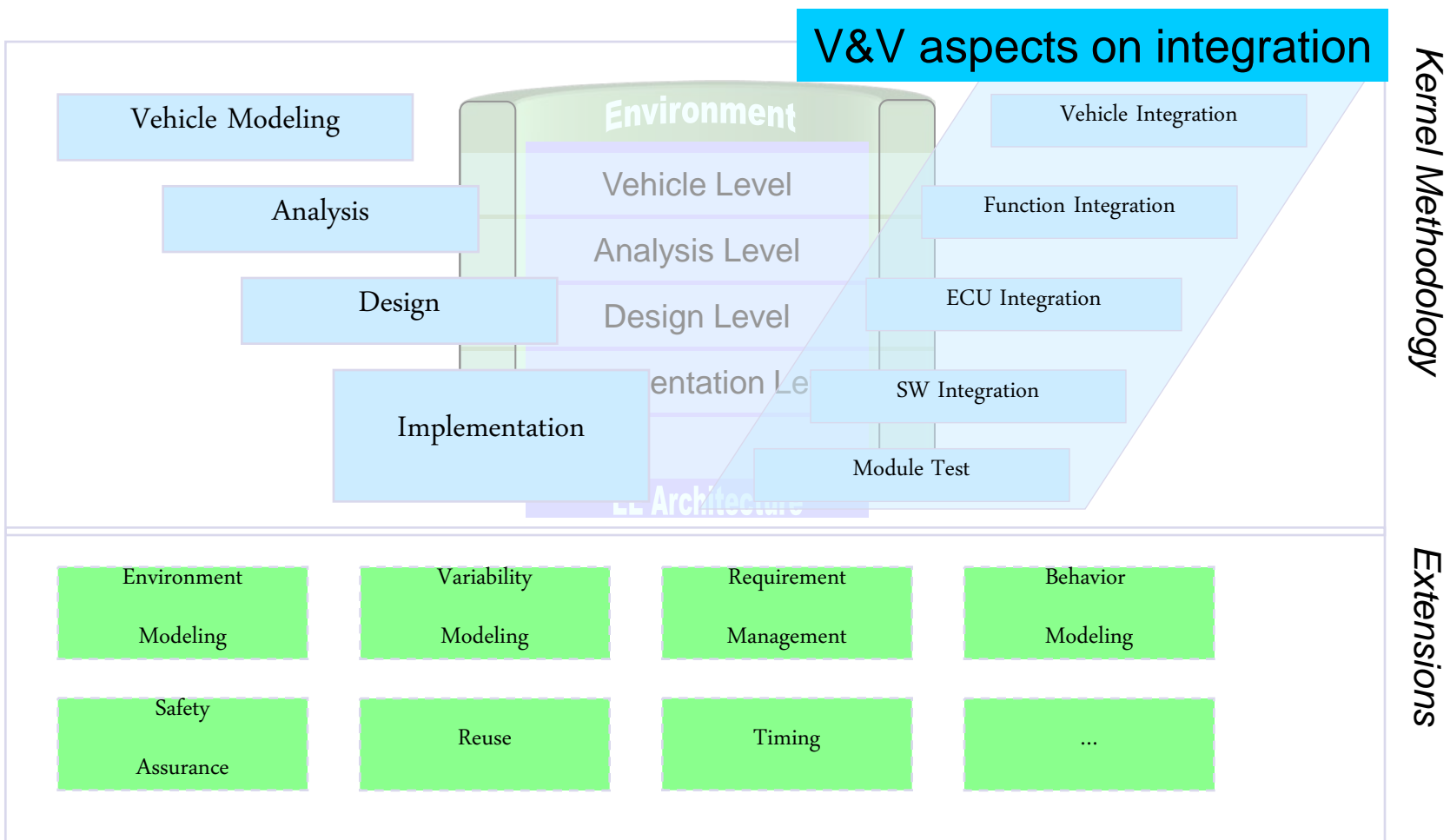A model-based approach was chosen to represent the methodology

Notation:
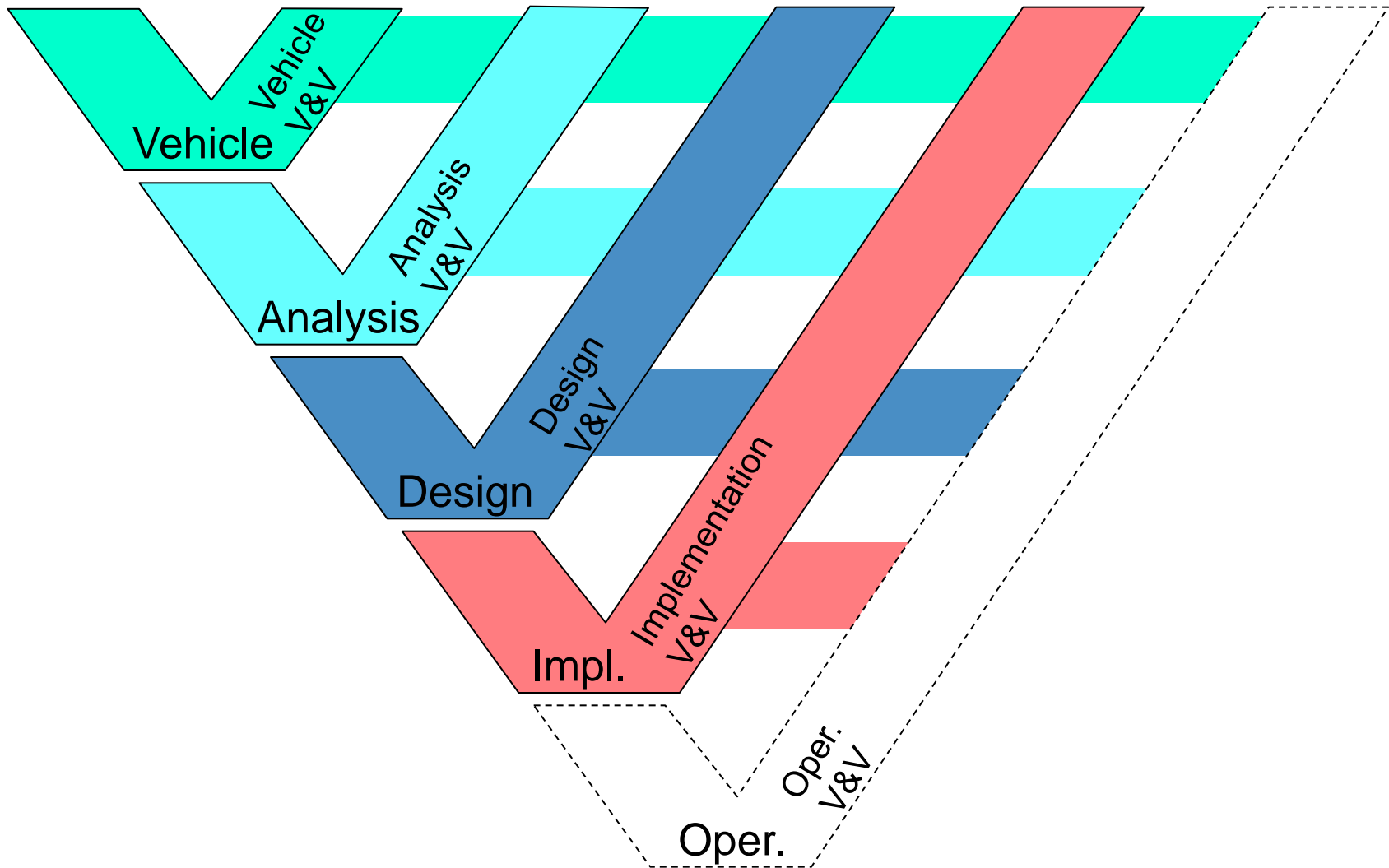
- BPMN
  (Business Process Methodology Notation)
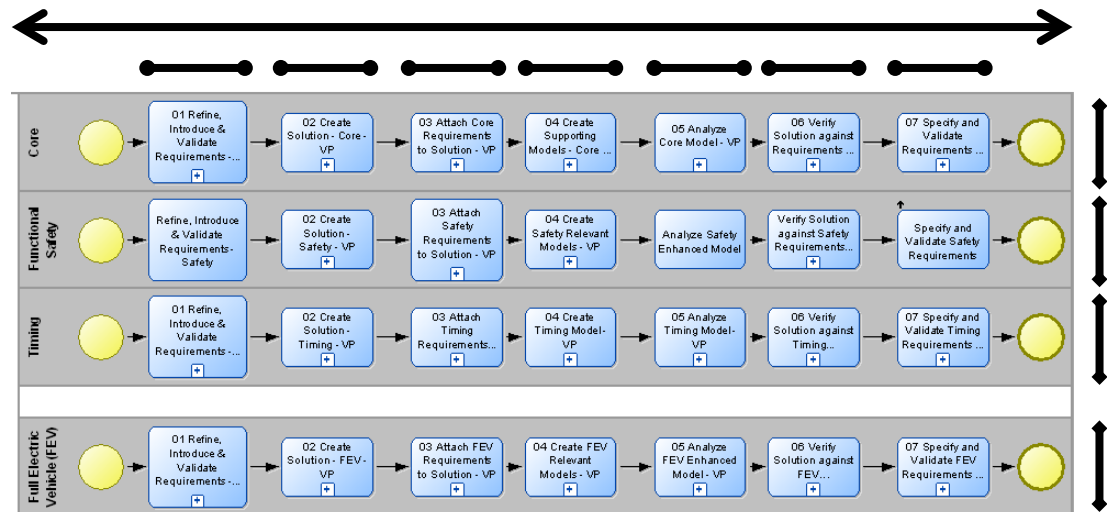
Tool:

- ADONIS

V-model as reference

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V-model as reference

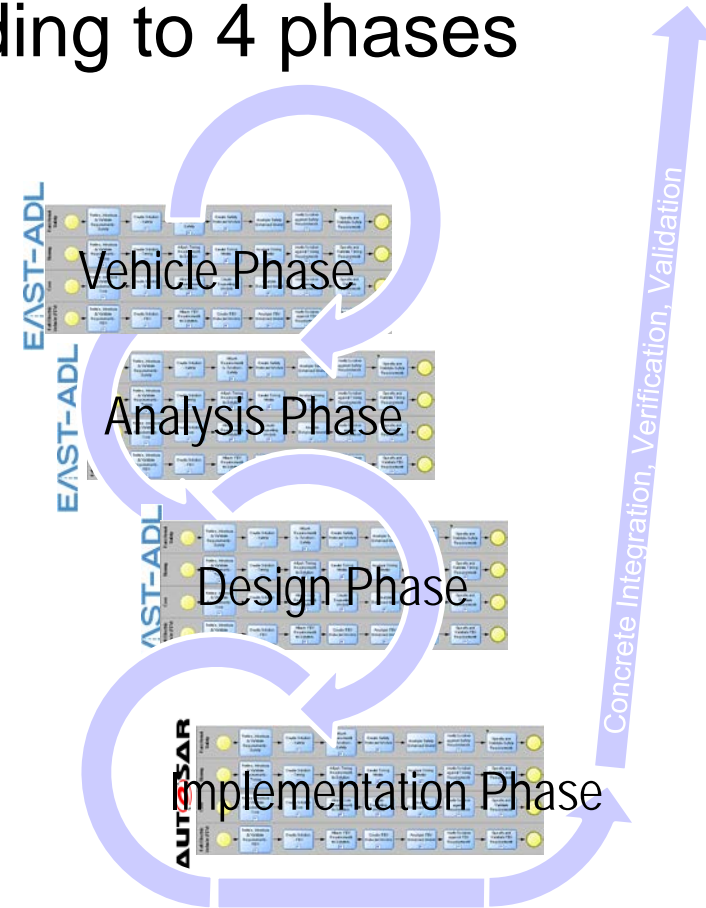EAST-ADL Introduction: Methodology

EAST-ADL Methodology

- Based on phases ↔

- Each Phase has several swimlanes ↦

- Each phase is organized in steps ↦
  according to the Generic Method Pattern:

  1. Introduce and Refine Requirements
  2. Create Initial Solution
  3. Attach Requirements to Solution
  4. Refine Solution
  5. Analyze Solution
  6. Verify Solution
  7. Specify and Validate Requirements

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EAST-ADL Methodology

- Methodology organized according to 4 phases
- Each phase goes through the Generic Pattern steps
- Aspects have individual Swimlanes (Safety, timing, variability, …)

Vehicle Phase

Analysis Phase

Design Phase

Implementation Phase

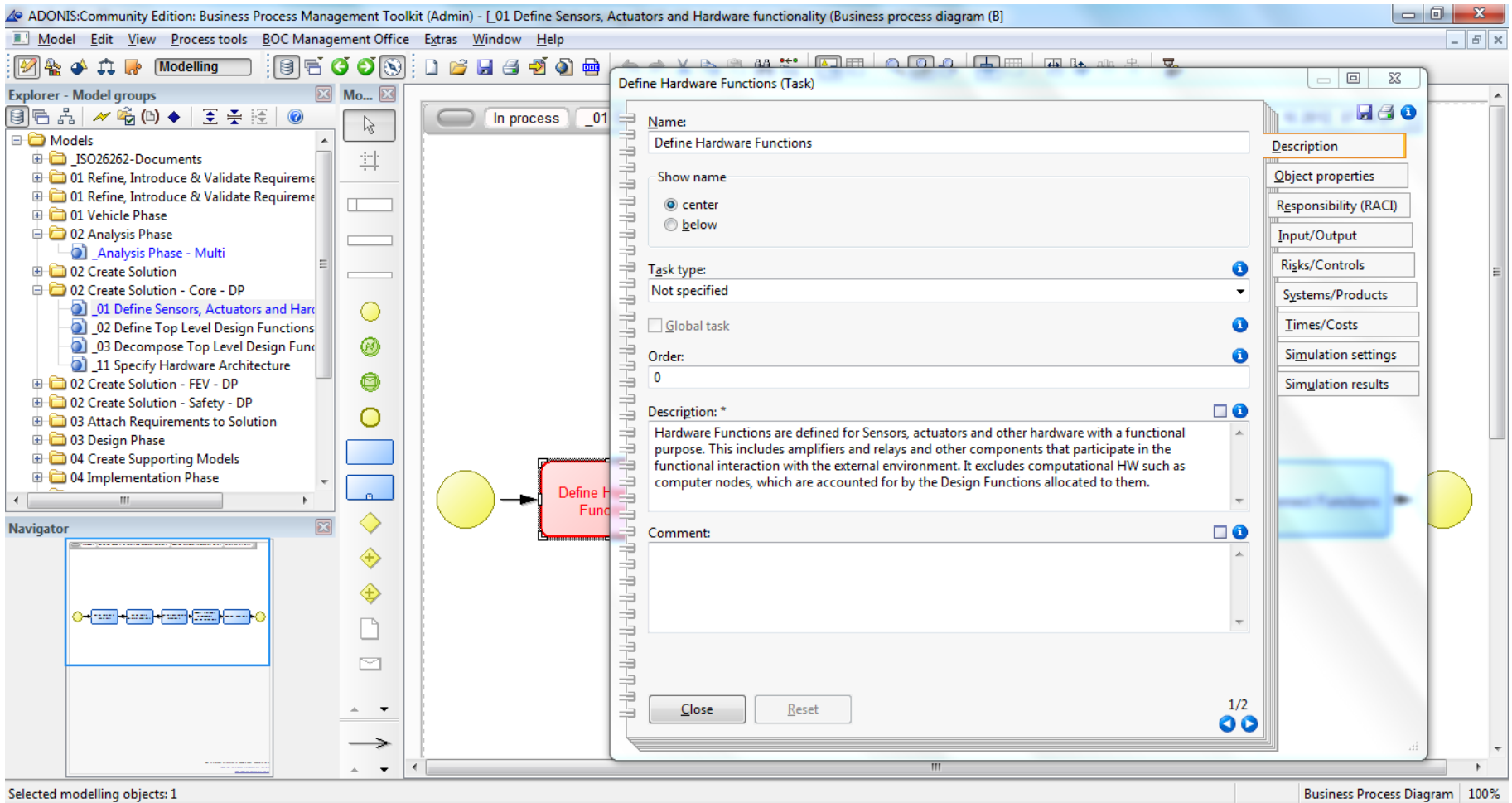Concrete Integration, Verification, Validation

Methodology Artifacts

For the end-user:
Html-export from Tool

For the methodology expert:
The methodology model in Adonis tool, allowing for adding new swimlanes

The Methodology Model in EPF tool

EAST-ADL Introduction: Methodology

Summary

- The EAST-ADL methodology provides guidelines for system modeling and analysis
- Purpose is to show how EAST-ADL can be applied in an ideal top-down sequence
  - Bottom-up, middle-out or combinations will occur in practice
- The results can be used both directly by the end-user (HTML Export) and by expert users tailoring the methodology model to company needs.

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