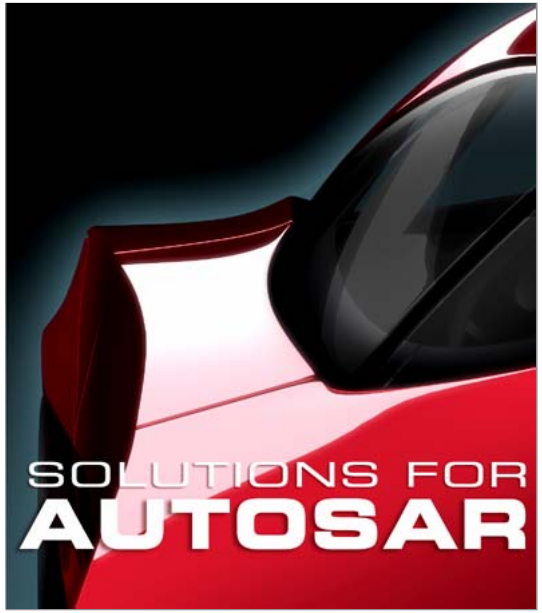


From System Design to the ECU

Vector AUTOSAR Roadshow 2008

Agenda

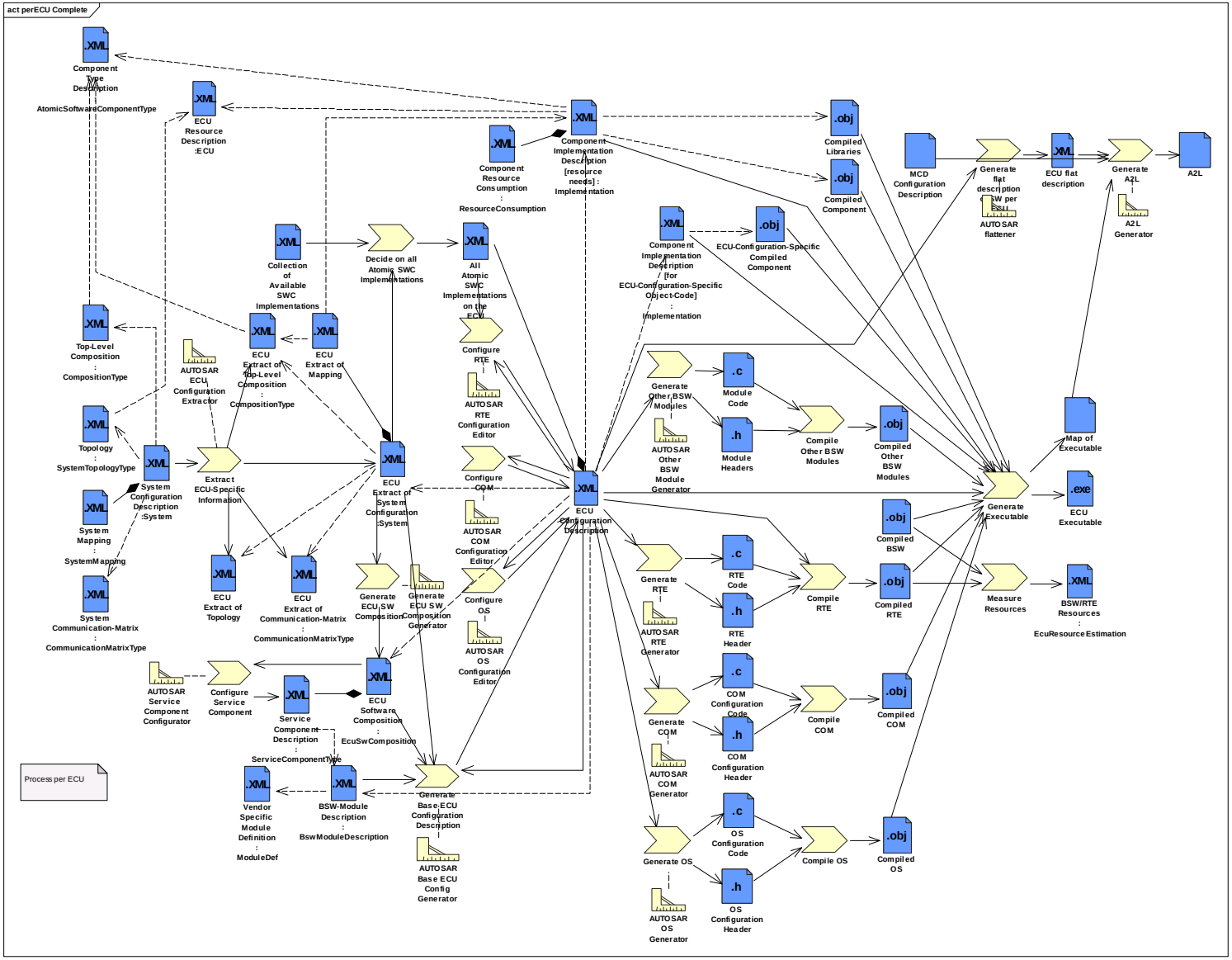
> **AUTOSAR Methodology**

Data Exchange

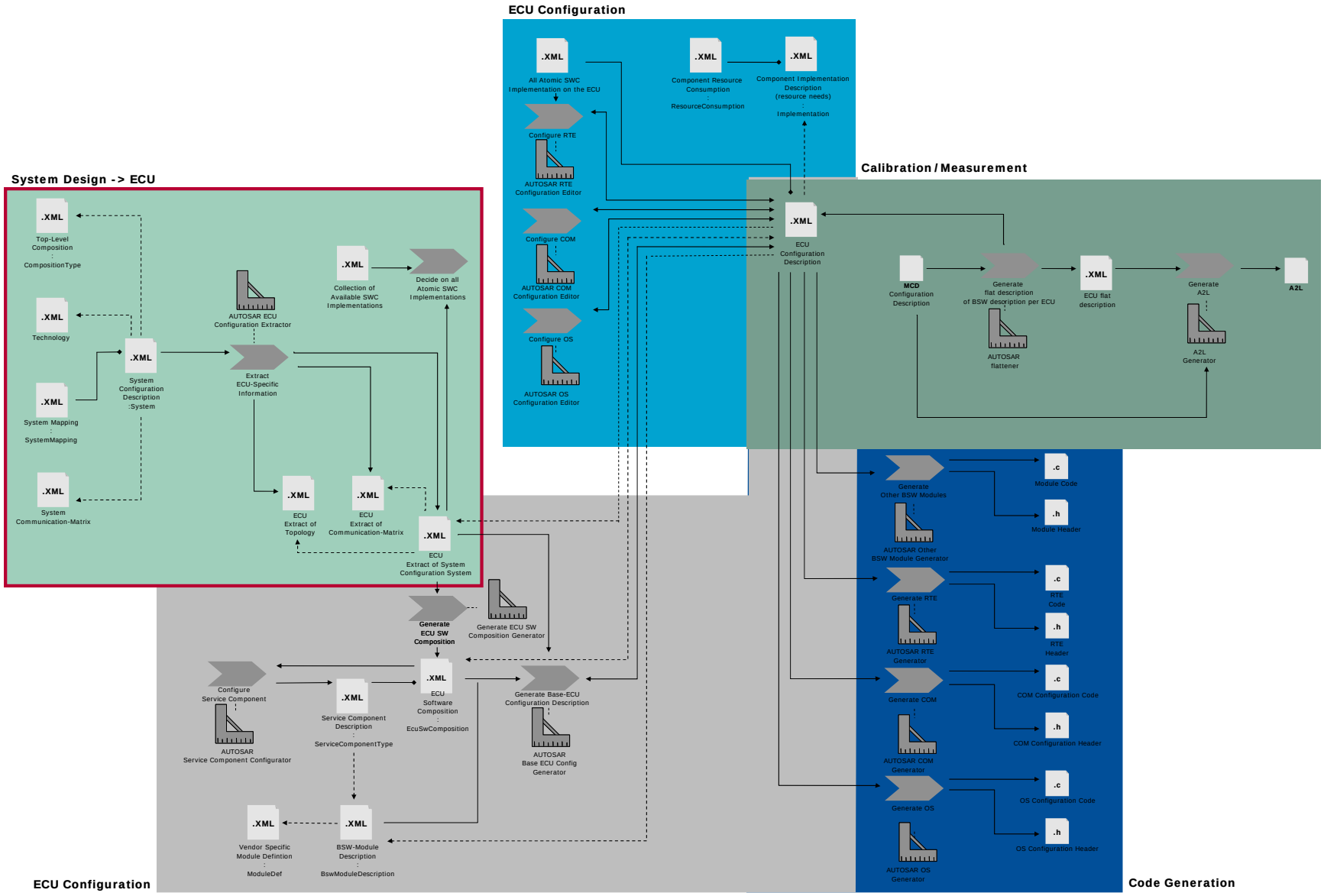
Working with the Tools

Summary

AUTOSAR Methodology

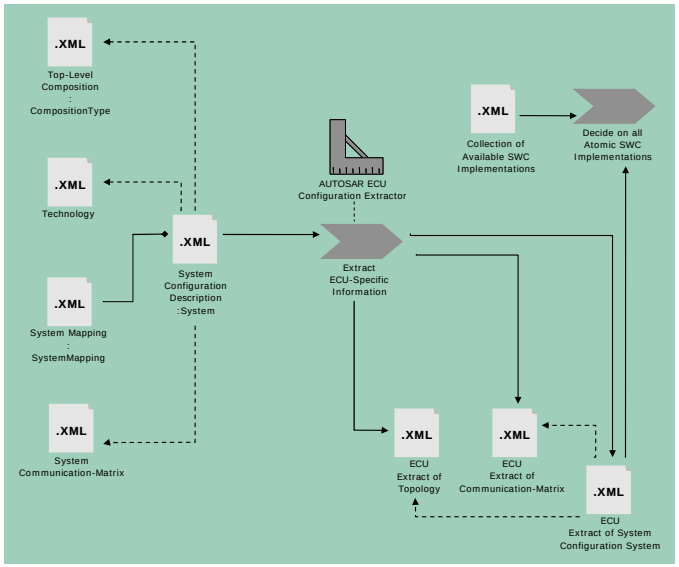


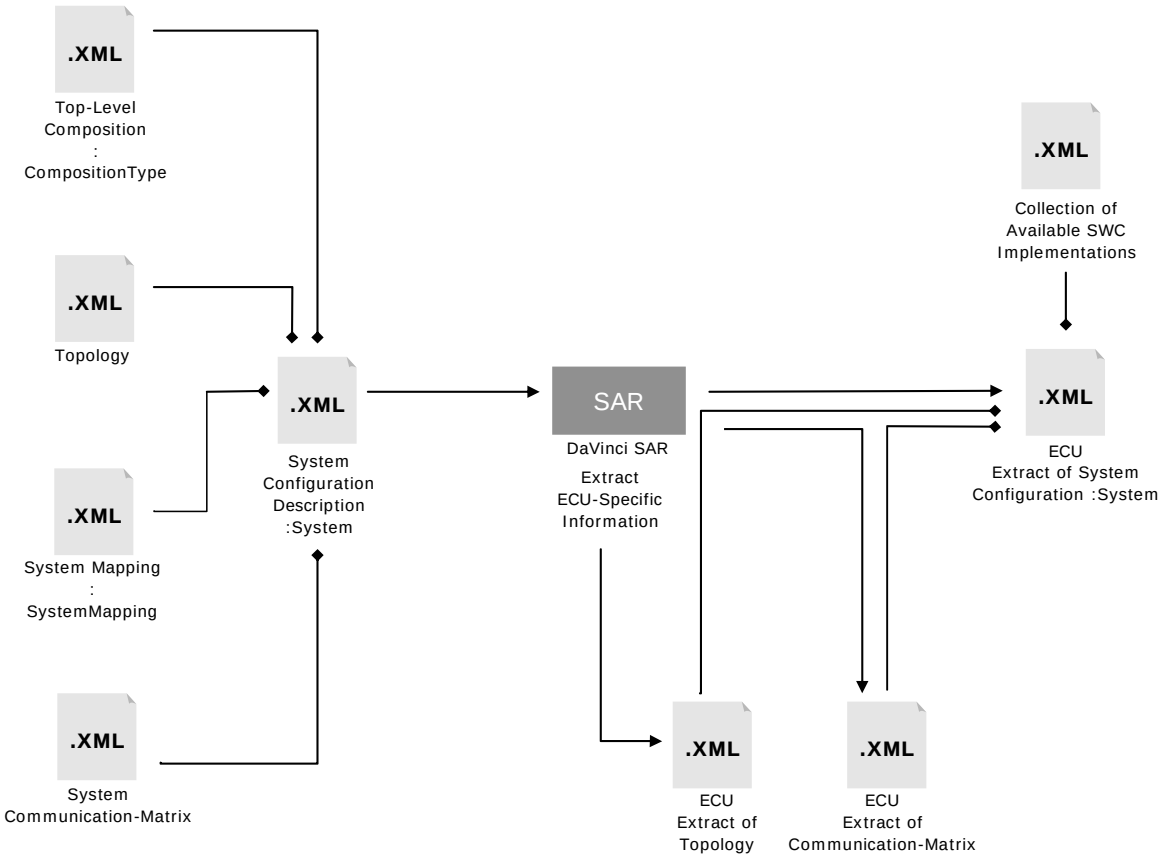
AUTOSAR Methodology



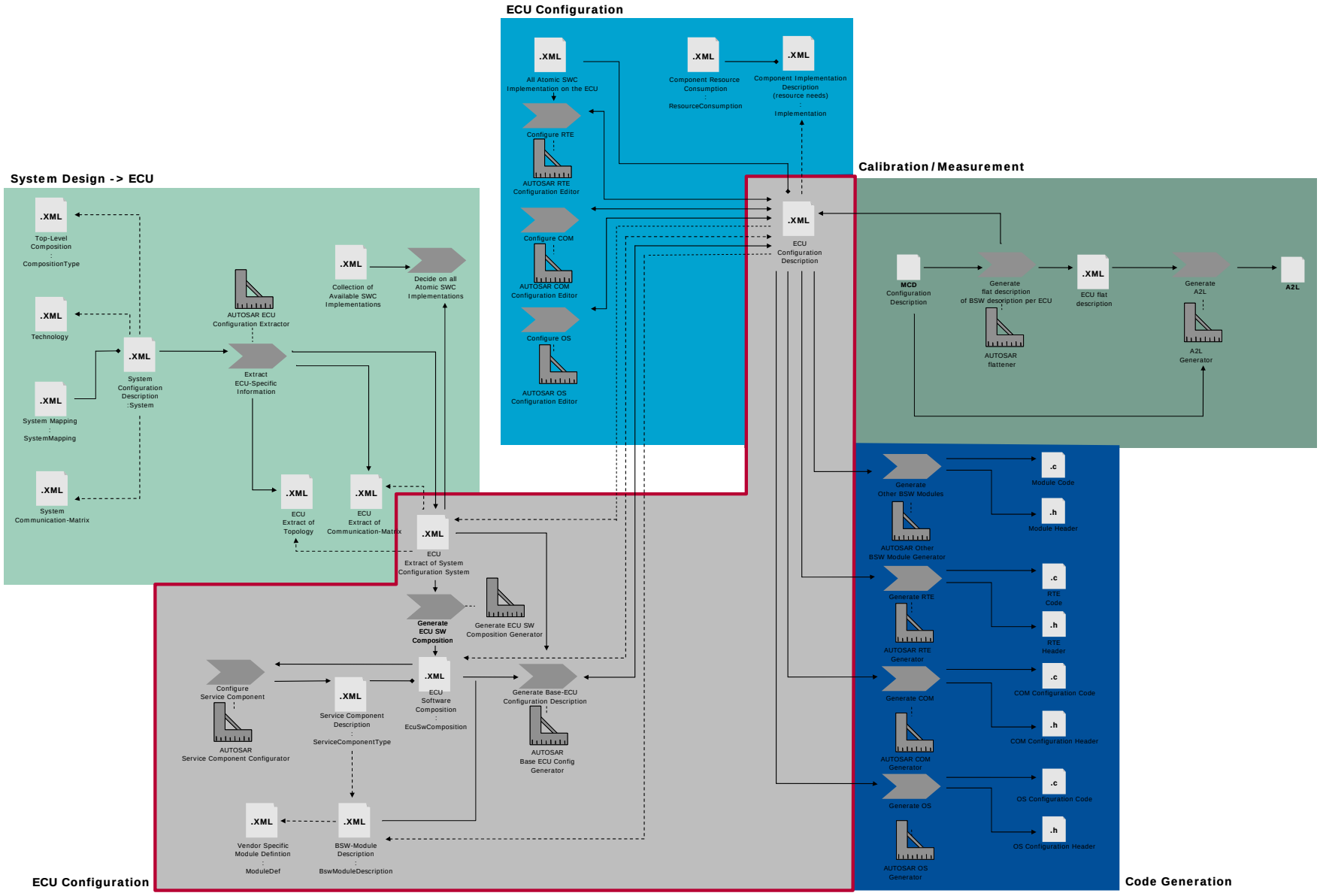
AUTOSAR Methodology

System -> Extract of System



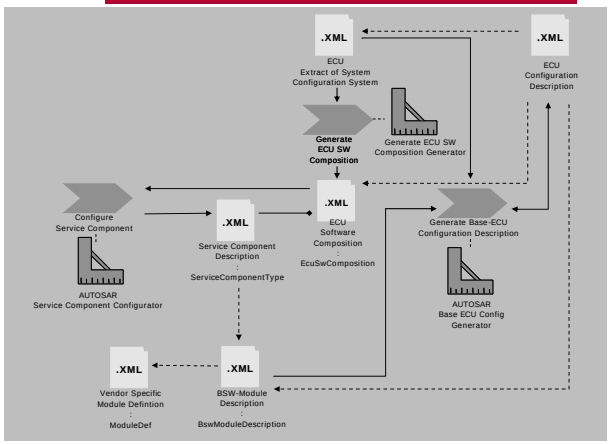


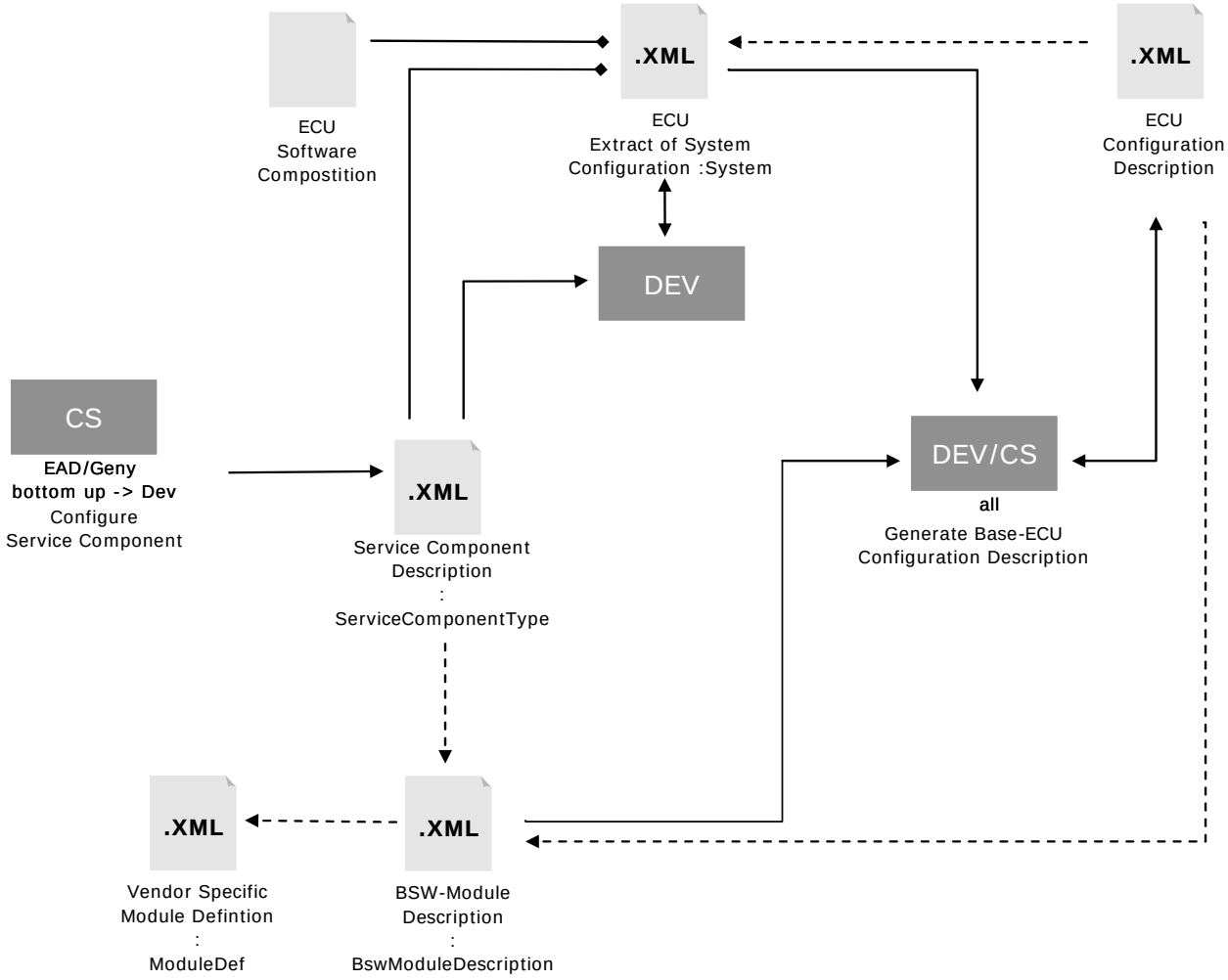
AUTOSAR Methodology



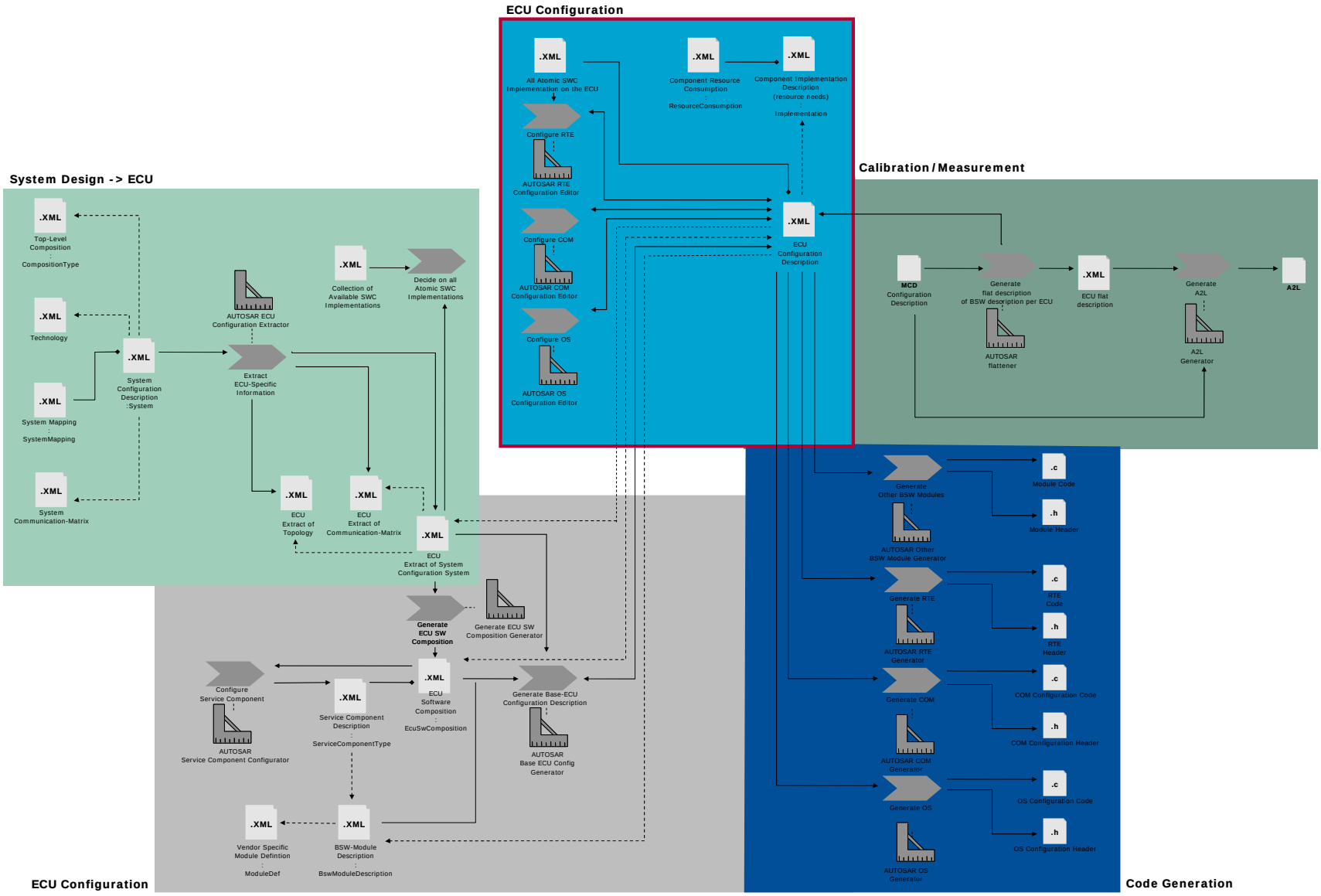
AUTOSAR Methodology

ECU Configuration



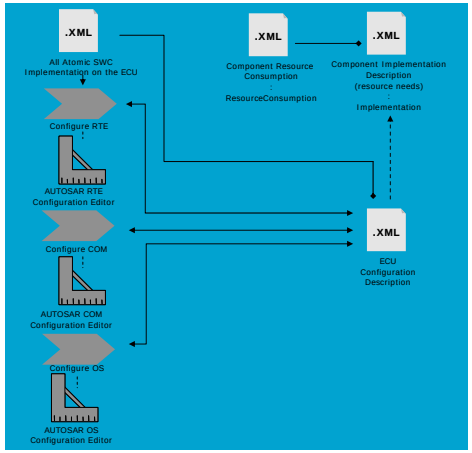


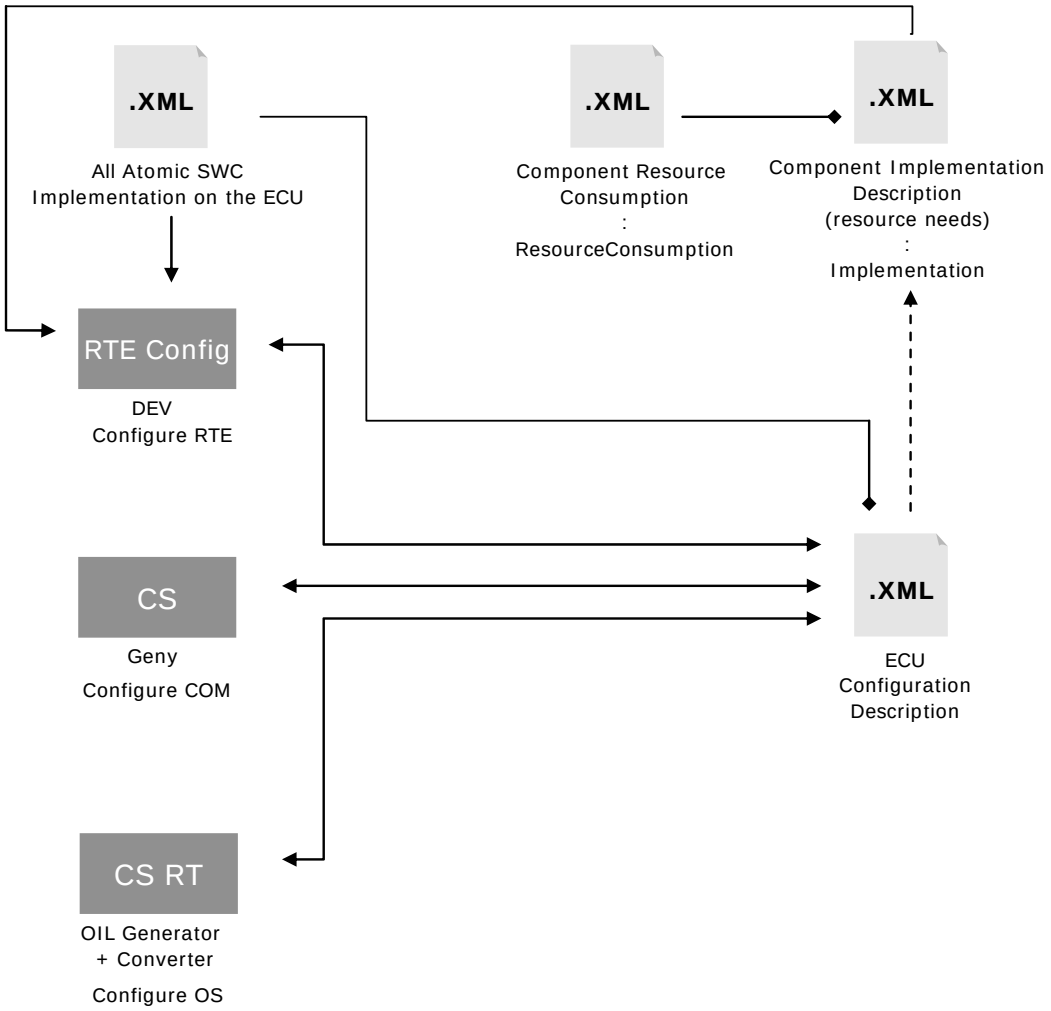
AUTOSAR Methodology



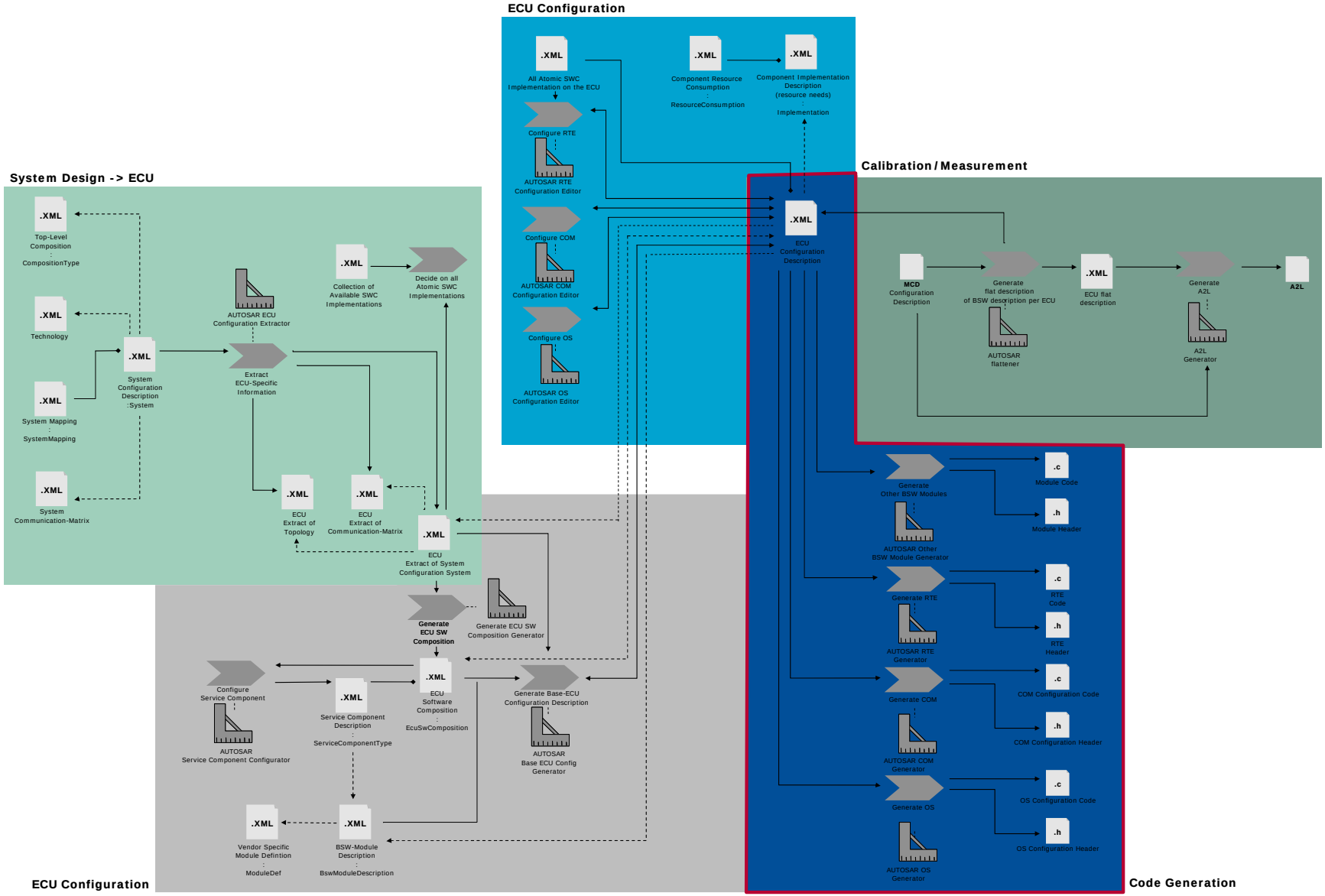
AUTOSAR Methodology

ECU Configuration



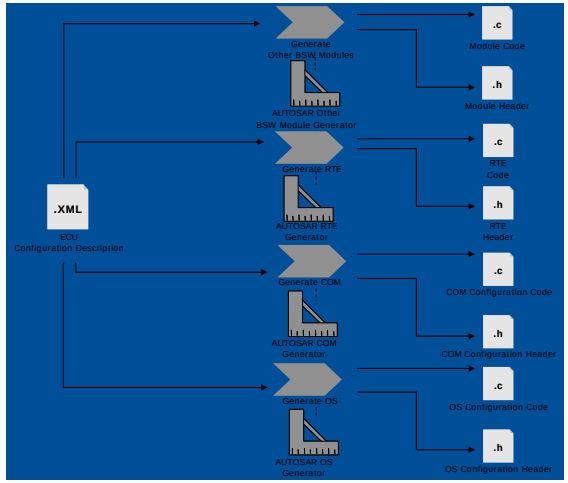


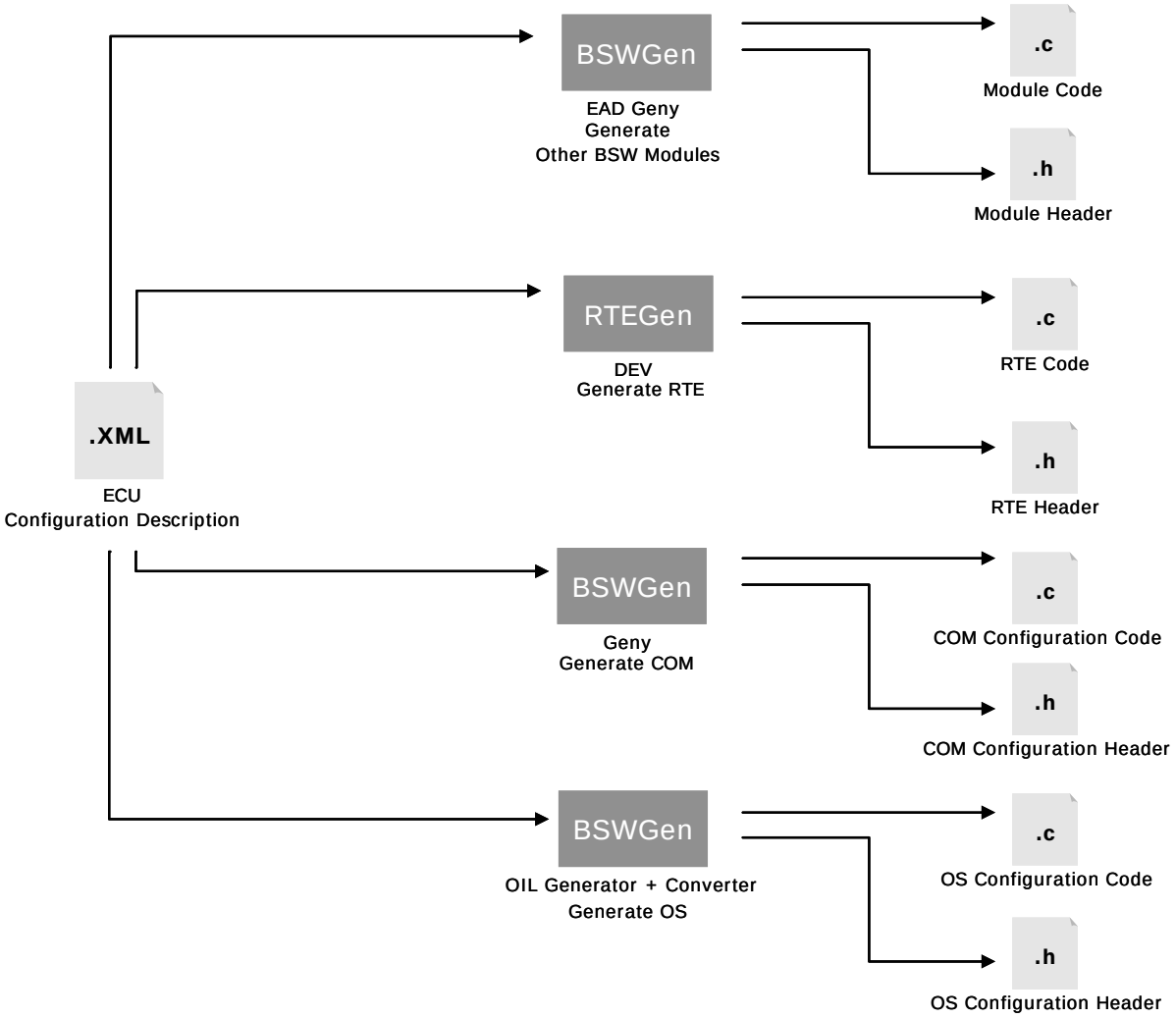
AUTOSAR Methodology



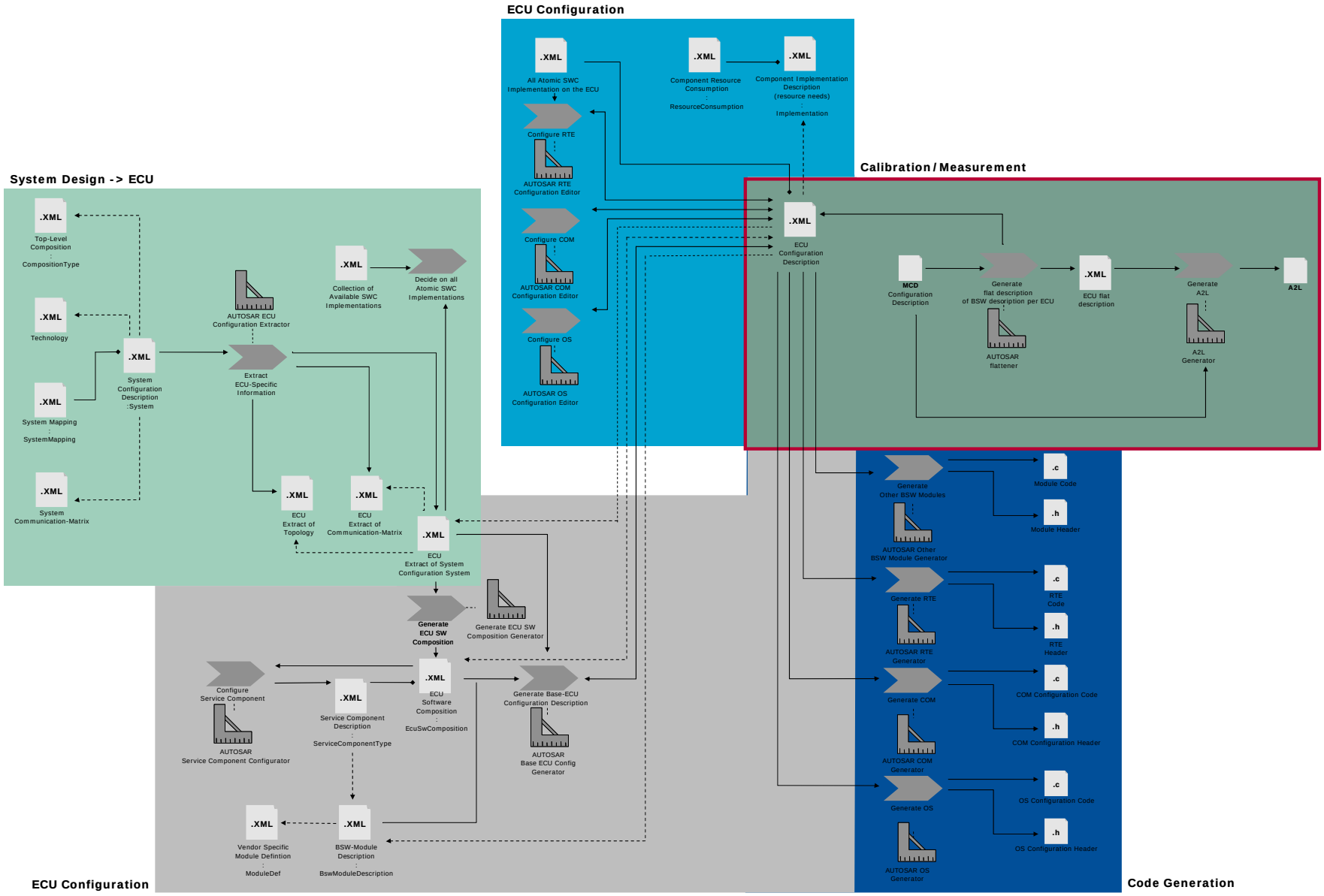
AUTOSAR Methodology

Code Generation



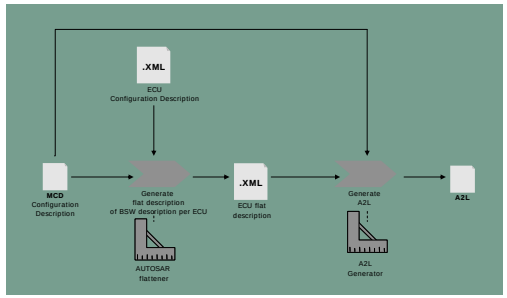


AUTOSAR Methodology



AUTOSAR Methodology

Calibration/Measurement



.XML

ECU
Configuration Description

ECU
Extract of System
Configuration :System

RTE Gen

Generate
A2L description

A2L

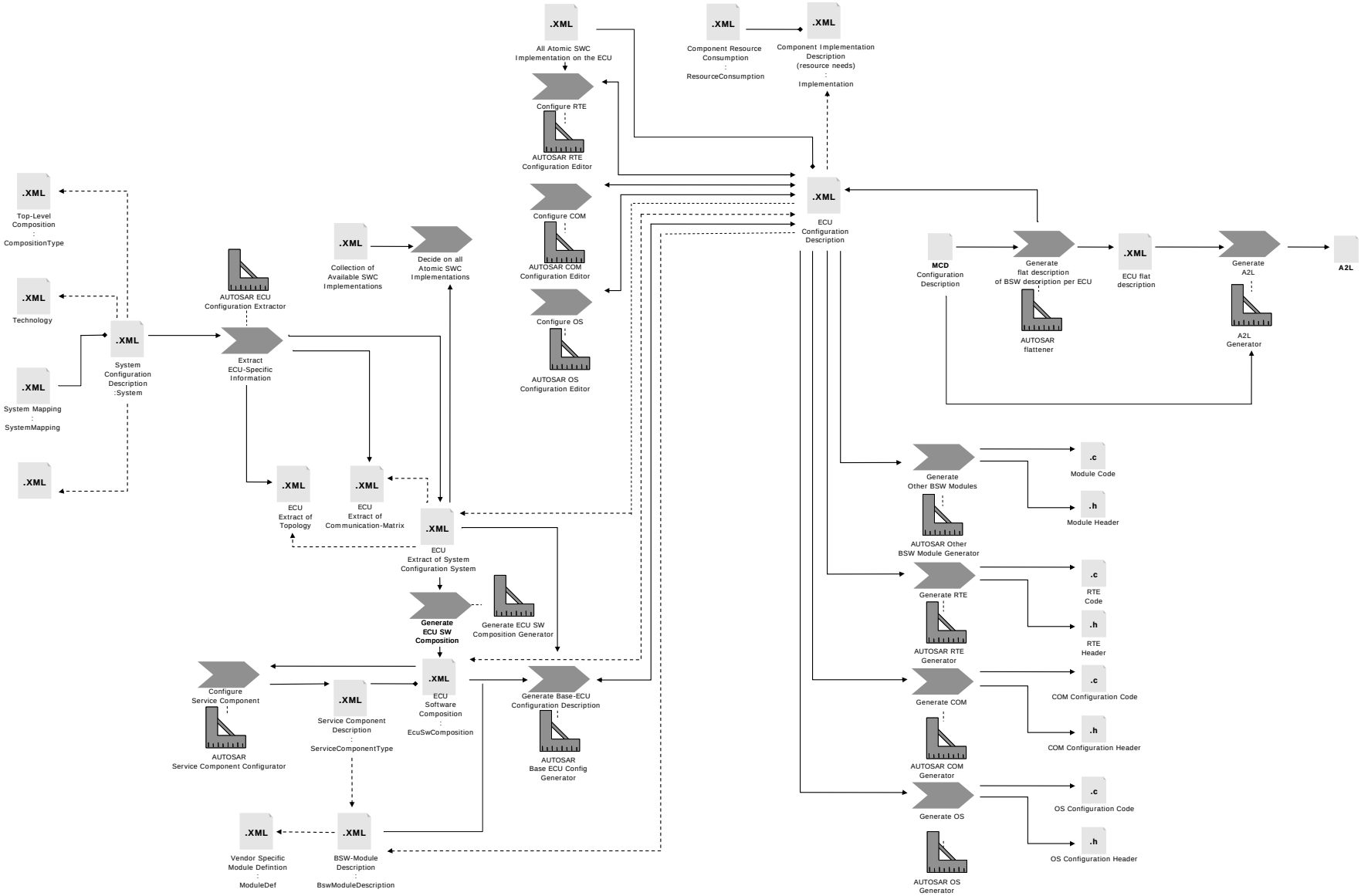
update

A2L
Toolbox

A2L
including
address
information

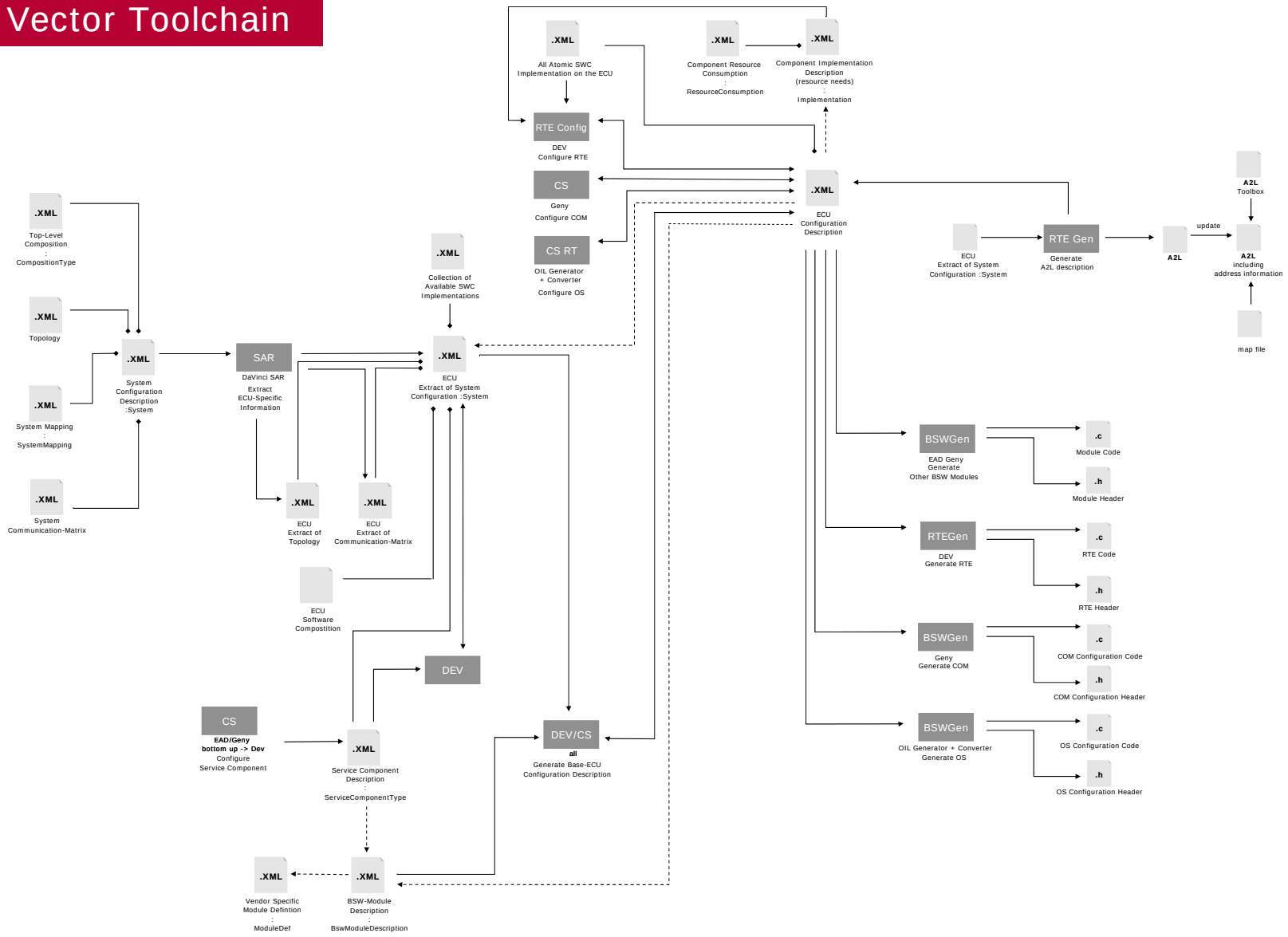
map file

AUTOSAR Methodology



AUTOSAR Methodology

Vector Toolchain



Agenda

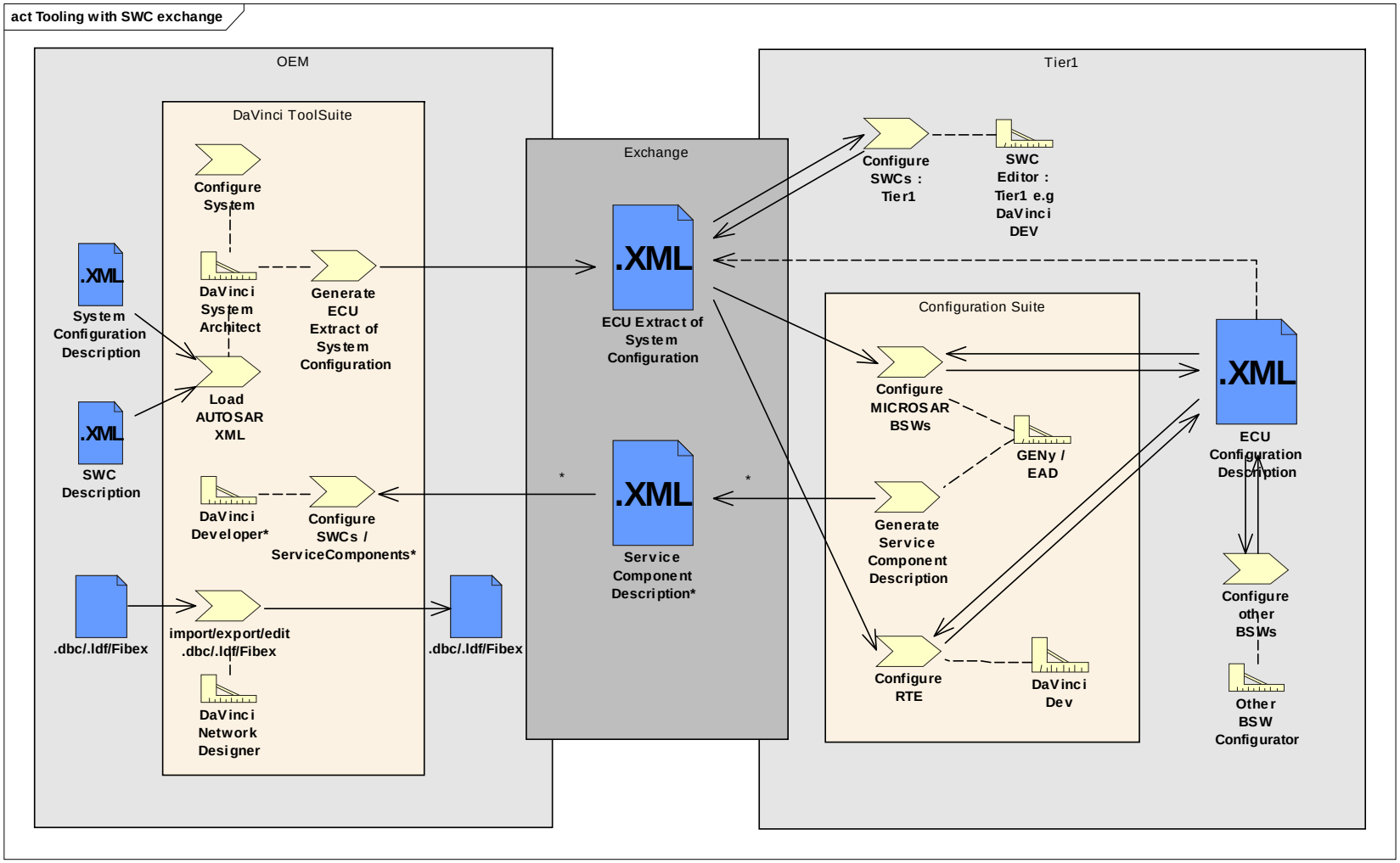
AUTOSAR Methodology

> **Data Exchange**

Working with the Tools

Summary

Data Exchange



Agenda

AUTOSAR Methodology

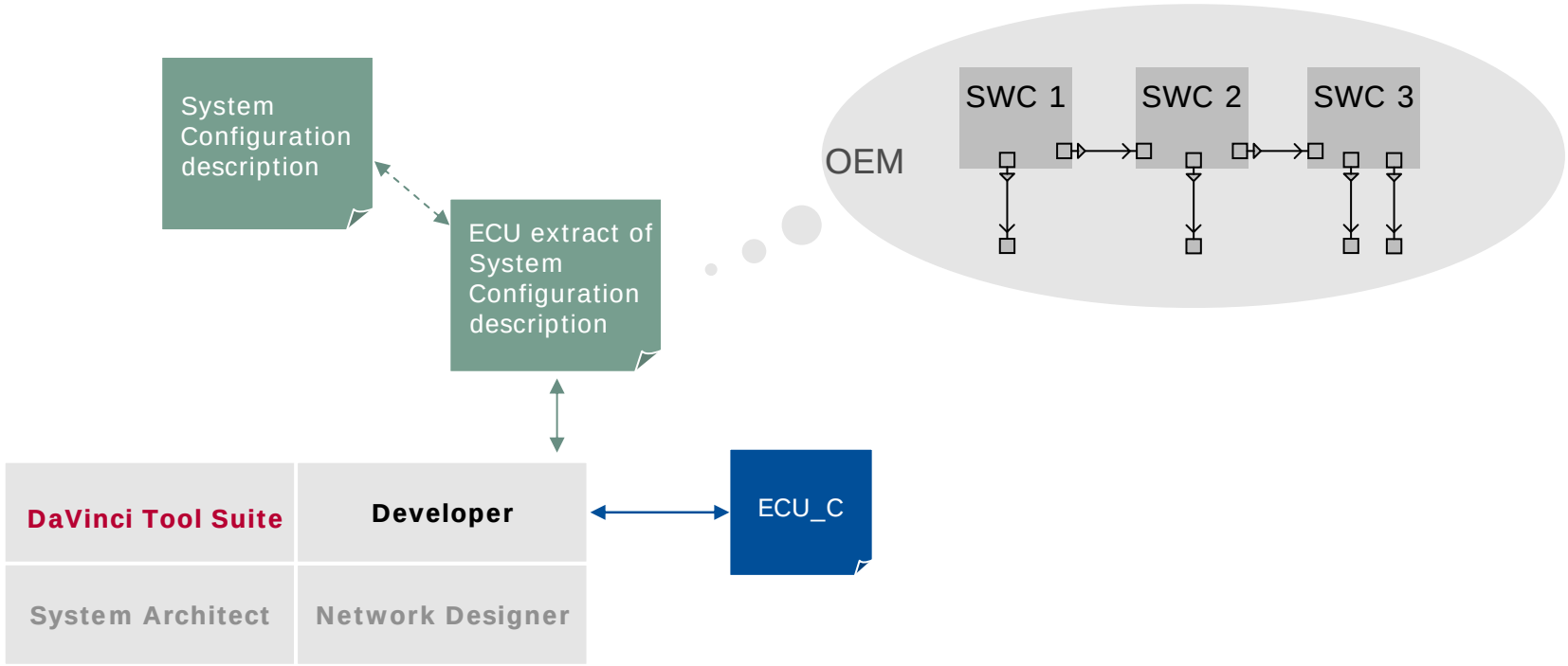
Data Exchange

> **Working with the Tools**

Summary

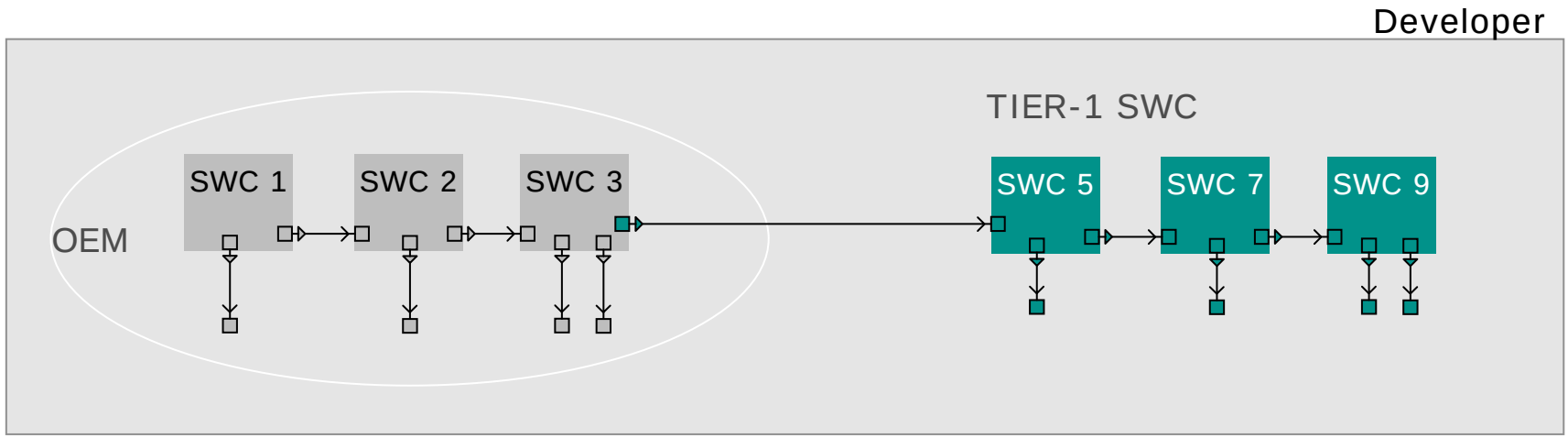
Software Components

- Read extract of system description
  - Software Components as part of the system description (OEM)
    - Ports to other delivered SWCs are mapped
    - Ports to system signals are mapped



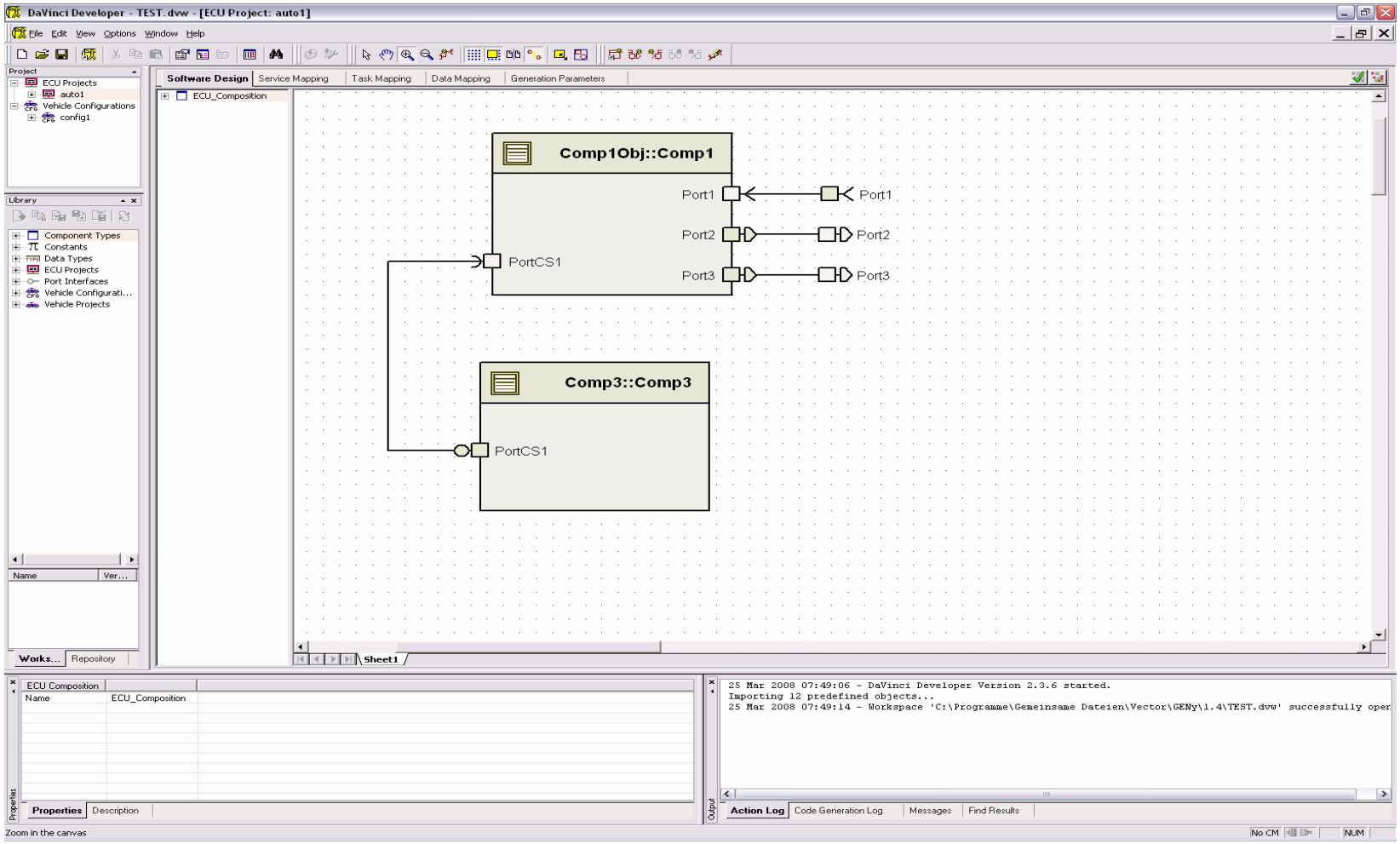
Software Components

- Tier-1 SWC (Using modeling Tools)
  - Connecting ports with ports of other SWC
  - Connecting ports with system signals (bus signals)
  - Define runnables, exclusive areas,...
- Integration
  - Mapping runnables, critical sections



Working with the Tools

Software Components

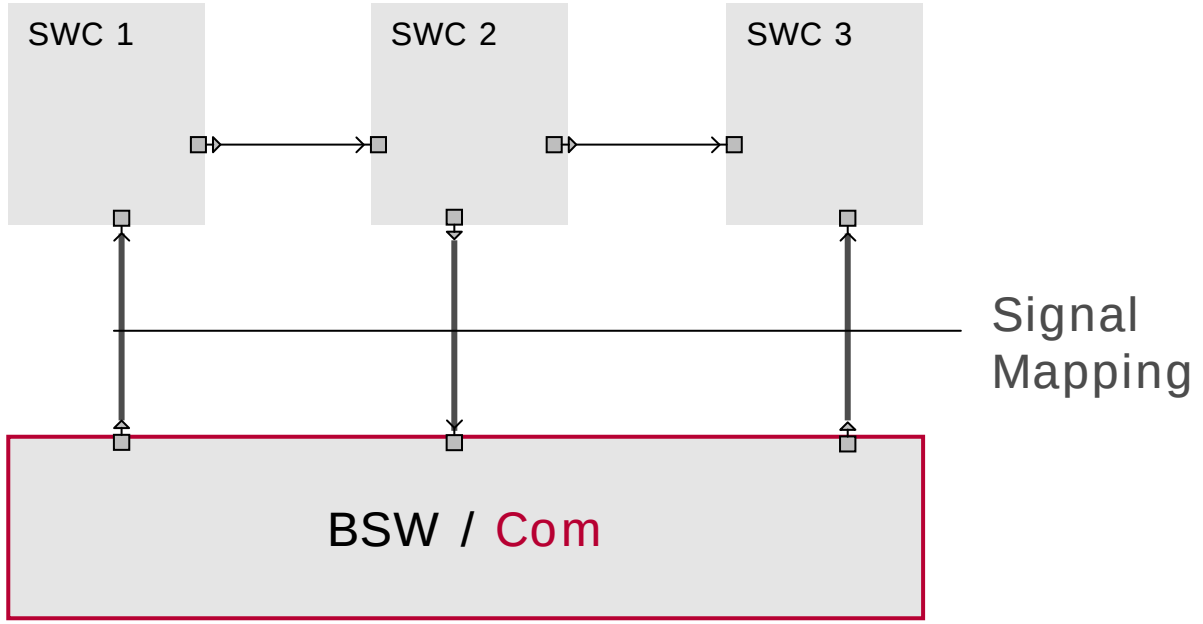


Bus Signals

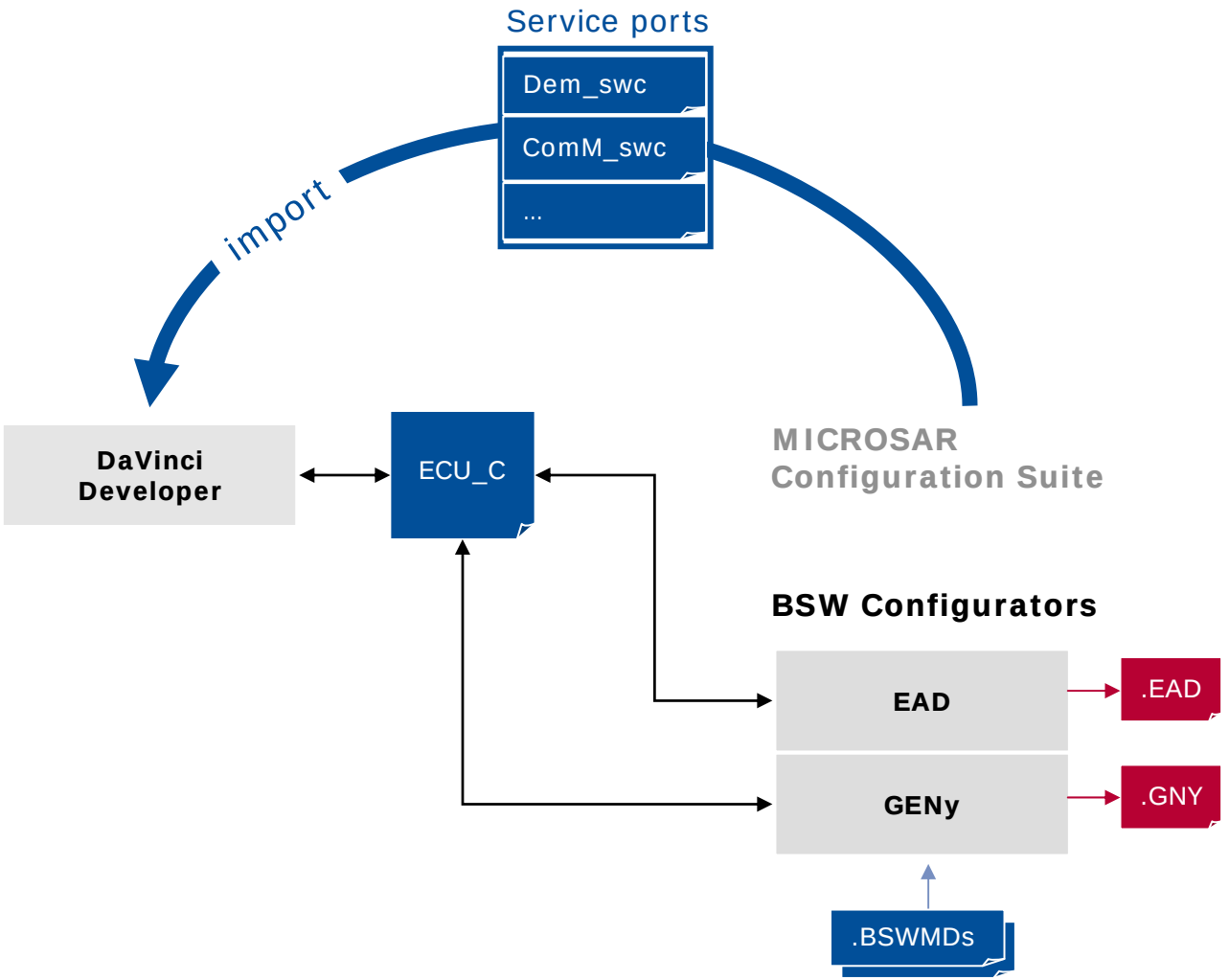
- Mapping between Ports and system signals

Software Design | Service Mapping | Task Mapping | **Data Mapping** | Generation Parameters

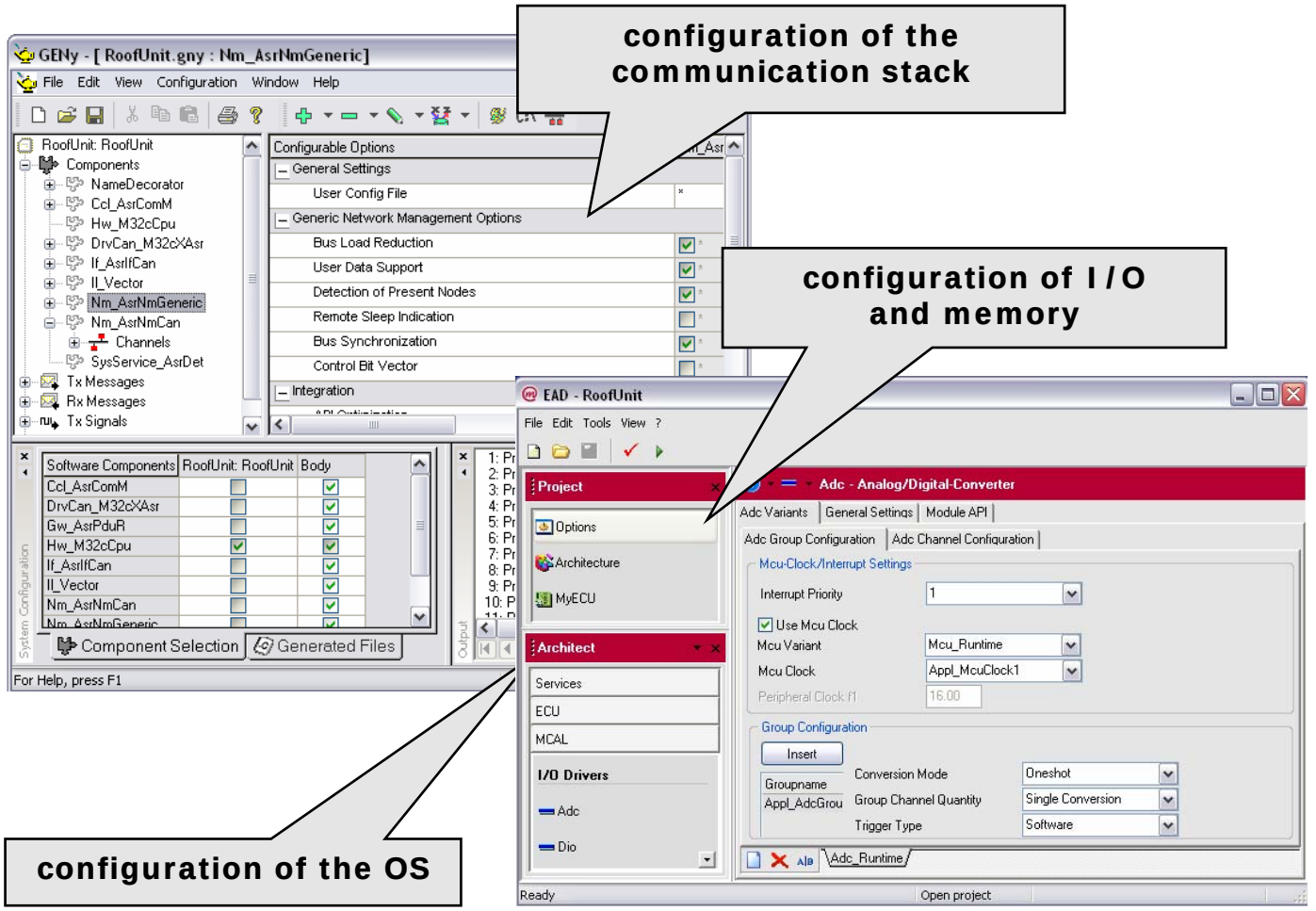
Network Signal	Message	Network	Direction	Port	Data Element
SignalPort1_E1	msgAnmRxCh0	TsiVAP	Rx-Signal	Port1	Element1
SignalPort1_E2	msgAnmRxCh0	TsiVAP	Rx-Signal	Port1	Element2
SignalPort2	msgAnmTxCh0	TsiVAP	Tx-Signal	Port2	Element
SignalPort3	msgAnmTxCh0	TsiVAP	Tx-Signal	Port3	Element



Working with the Tools



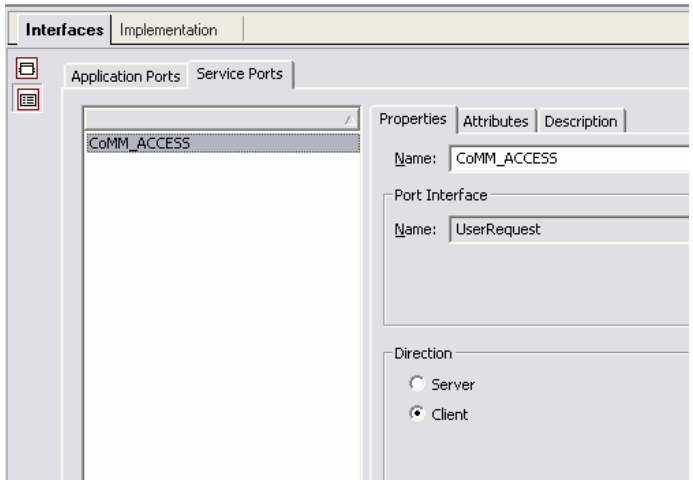
MICROSAR Configuration Suite



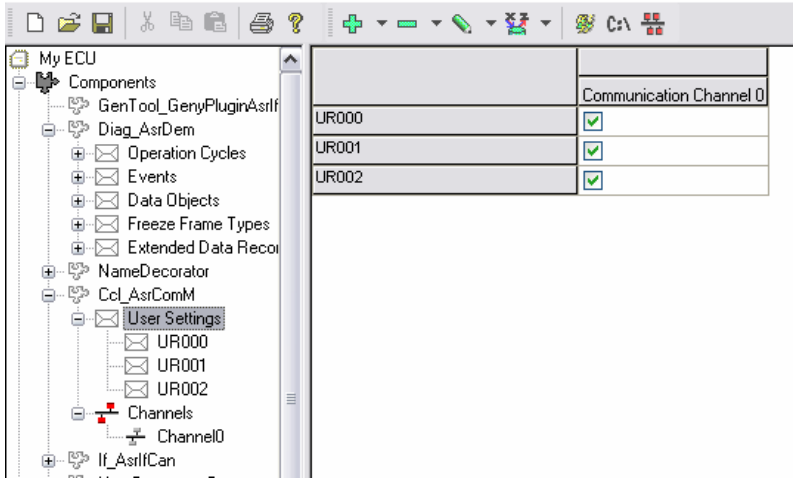
Working with the Tools

Service Ports

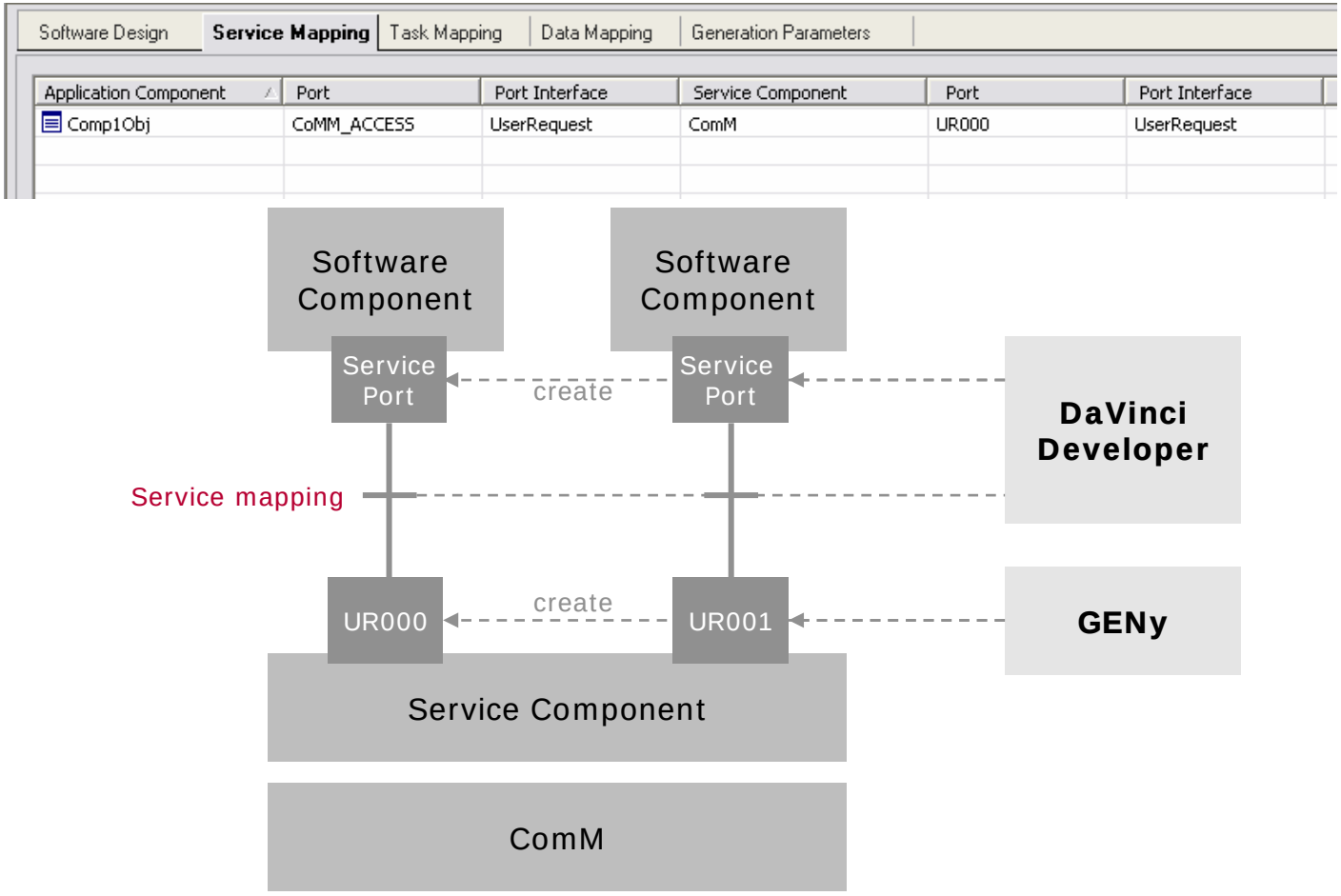
- Definition of the Service needs
  - Defining the Service Port
  - Select an Interface



- Definition of the Service Ports in the BSW
  - Definition of the Services based on the needs
  - Generating SWC Template

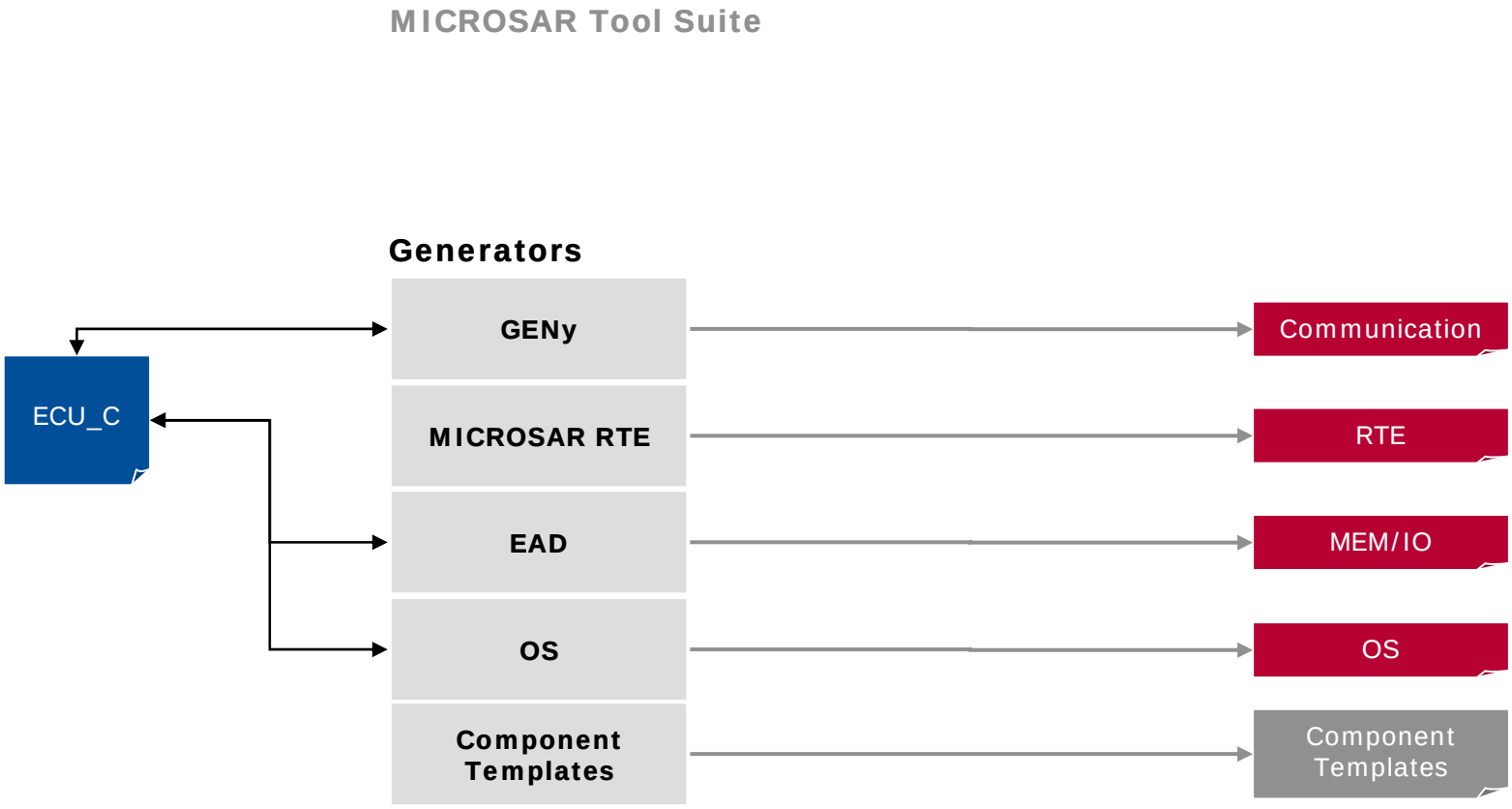


Mapping the Service Ports



Working with the Tools

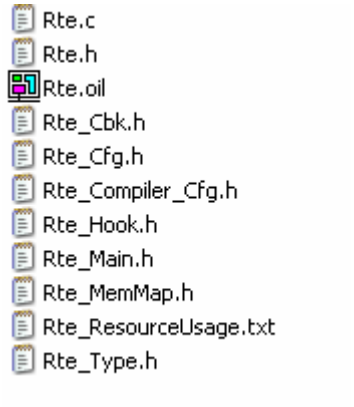
Service Ports

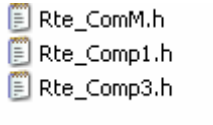


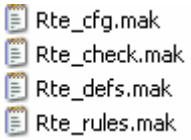
Working with the Tools

Generating Code

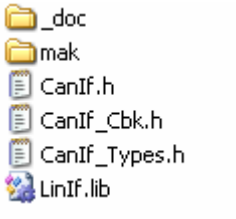
- RTE

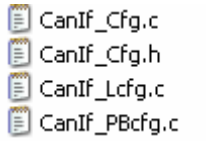


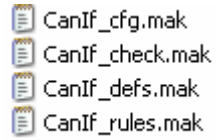




- BSW







Agenda

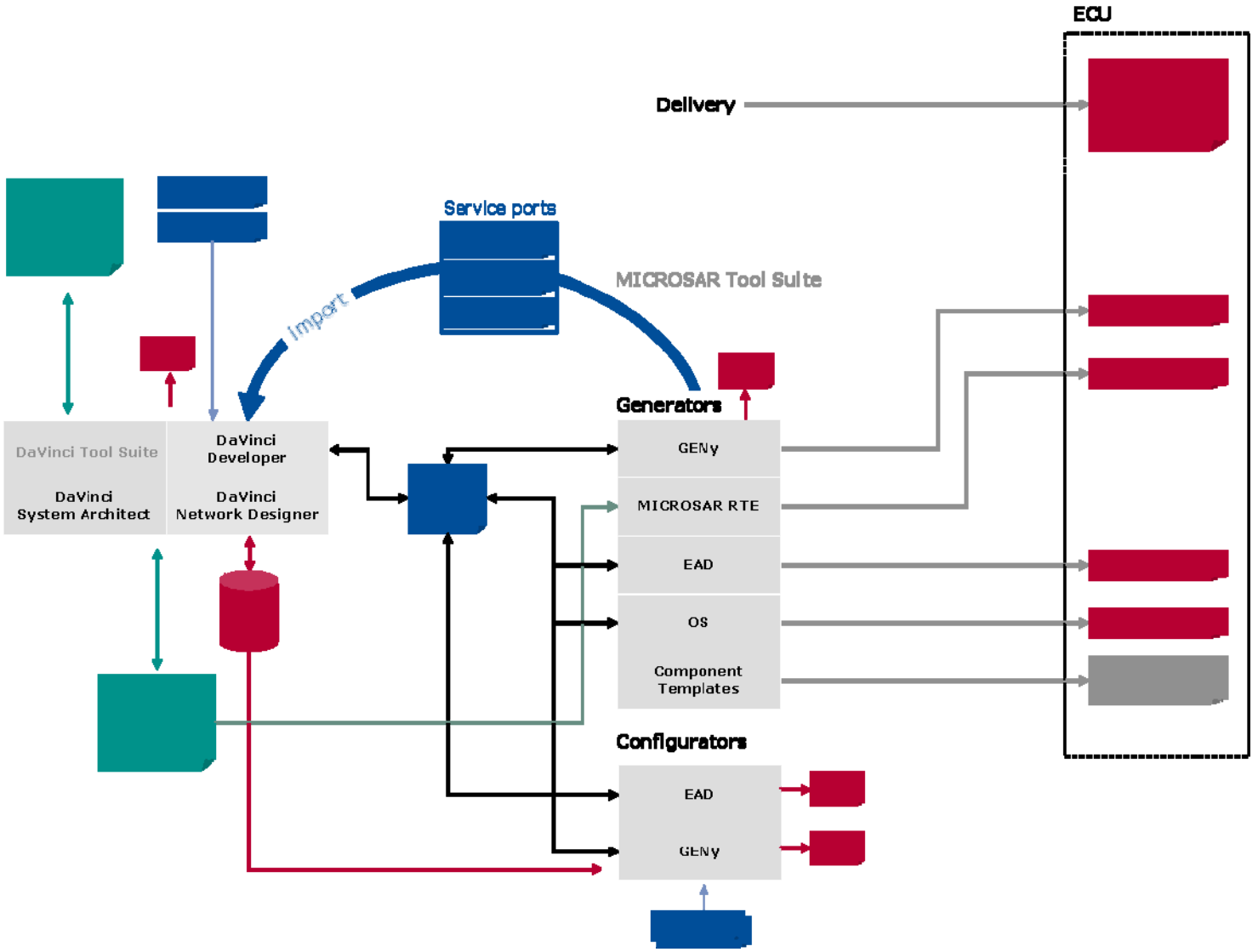
AUTOSAR Methodology

Data Exchange

Working with the Tools

> Summary

Summary



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www.vector-informatik.com

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