

# AUTOSAR 4 in Practice

## Agenda VectorAcademy

<b>Duration :</b>	3 days
<b>Target group :</b>	ECU Developers of automobile suppliers and OEMs
<b>Prerequisite :</b>	Participation in the AUTOSAR seminar or good AUTOSAR knowledge
<b>Goal:</b>	Handling of Vector AUTOSAR solution

### 1 | Overview and Introduction

- > Relation between AUTOSAR, the Vector Implementation MICROSAR and the DaVinci Tools (Developer, Configurator)
- > Mapping between AUTOSAR methodology and the Vector tool chain

### 2 | Operating System

- > Basic understanding of the mediums and mechanisms of the AUTOSAR operating system
- > Tasks, alarms, events, etc
- > AUTOSAR OS Scalability Classes

### 3 | Software Components (with Exercises)

- > Handling of DaVinci Developer and RTE
- > Design of software components, ports, connections, task mapping and generation of the RTE

### 4 | Input and Output (with Exercises)

- > Data exchange with I/O modules
- > Configuration of the basic software for the I/O with the DaVinci Tools (Developer, Configurator)

### 5 | Communication (with Exercises)

- > Data exchange over CAN
- > Configuration of the basic software for the communication with the DaVinci Tools (Developer, Configurator)

### 6 | State Management and System Services (with Exercises)

- > Sleep and wake up of ECUs and bus
- > Roles of the modules ComM, EcuM and BswM
- > Configuration of the Mode Manager Modules in the basic software

### 7 | Bus Systems (material for reference)

- > Understanding the conceptual differences of the bus systems and the importance of the configuration of the basic software
- > CAN, LIN, FlexRay, Ethernet

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### 8 | Nonvolatile Memory Access (with Exercises)

- > Access to nonvolatile memory
- > Configuration of the basic software for nonvolatile memory access

### 9 | Diagnostics (with Exercises)

- > Diagnostics with AUTOSAR
- > Configuration of the diagnostics basic software with the DaVinci Tools (Developer, Configurator)