AUTOSAR 4 in Practice

Agenda Vector Academy

**Duration:** 3 days  
**Target group:** ECU Developers of automobile suppliers and OEMs  
**Prerequisite:** Participation in the AUTOSAR seminar or good AUTOSAR knowledge  
**Goal:** 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
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)