

# BATTERY MANAGEMENT SYSTEM VALIDATION

## Overview

**Model-Based testing of feature models using TPT tool for Battery Management System Tier-1**

**TOOLS & ENVIRONMENT**

- Mathworks Simulink
- PikeTec TPT
- dSPACE TargetLink
- DOORS

## Scope

- Deriving test specification from the given requirements
- Test case Modelling and generation using TPT
- Adding additional test cases for 100% coverage
- MIL simulation and validation of output for floating-point SL models
- SIL simulation of auto-generated code from Target Link Models
- Back to Back Verification MIL Vs. SIL
- 100% Requirement Traceability with test cases

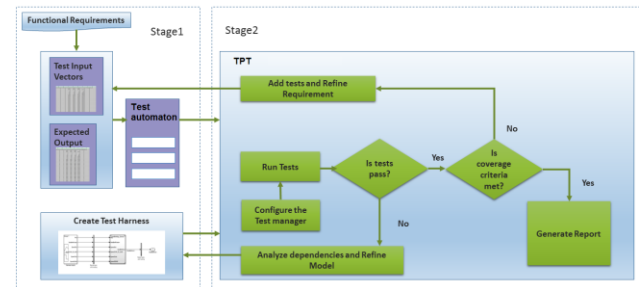
## Highlights

- ISO26262 Proficiency
- BMS concepts and functional Know-How
- Matlab-Simulink expertise
- Target Link-based AUTOSAR SW Development Background
- FMEA participation and reviews
- Automotive Safety Integrity Level Know-How
- SW configuration and Management Tool

## Features Handled

- Battery Charge Management
- Battery Balancing
- Battery Cell Temperature Monitoring
- High Voltage Contactor Monitoring
- Contactor Interlock Monitoring
- Multi-Pack System Monitoring
- Battery Lock Management and Monitoring
- Diagnostics and Error Handling

## Project Execution



**MARKET**  
Europe/ APAC

**BUSINESS BENEFIT**  
Multiple OEM Program Ownership

**DELIVERY MODEL**  
T&M