TATA ELXSI

eMOBILITY HILS FRAMEWORK

Agile | Scalable | Re-Usable

OPPORTUNITIES ADDRESSED

Lab-based framework for the validation of Electric Vehicle system such by plugging in the Device Under Test to fully functional Hardware in Loop Simulation

40-50% Cost reduction by re-using HILS

Readily available components:

- Vehicle Supervisory Control
- On-board Charge Module
- DC-DC Converter
- Battery Pack
- BMS
- Inverter
- Motor Control Unit
- Motor
- AD/ ADAS Domain Controller
- Charges only as per usage
- In-house developed test automation framework with pre-written test cases

Access to expert advice and testing services for planning and execution completeness of test scenarios

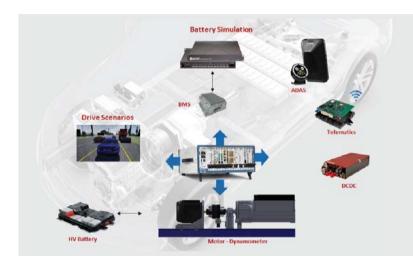
- Functional Tests
- Diagnostics Tests
- Drive Scenarios
- Standards Verification
- Performance Analysis
- Drive Cycles
- · Range Verification
- Electrical Compatibility
- Network Tests
- Load Tests

Scalable to component, systeml, and vehicle level validation



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In-house lab-based framework for validation of EV systems such as Battery Management, Inverters, DC-DC Converters, etc.



Service Offerings

Functional Tests

Diagnostics Tests

Drive Scenarios

Standards Verification

Performance Analysis

Drive Cycles

Range Verification

Electrical Compatibility

Network Tests

Load Tests

Validation As A Service

Significant investments enabling ready-to-use facility, tools, and resources

Complete Interconnected Vehicle Level HILS

Scalable validation test bench to support AD/ ADAS, Infotainment & Telematics ECUs The HILS setup capable to perform Signal level and Power level validation

Simulated Environments, Drive Scenarios, and Vehicle Dynamics Access to Tata Elxsi's Test Scenario database and 100% Automated Test execution