USE CASE: LHP SUCCESSFULLY DEPLOYS TEAM OF FUNCTIONAL SAFETY ENGINEERS TO HELP OEM DELIVER NEW PRODUCT ON-TIME & ISO 26262 COMPLIANT

CASE STUDY



CHALLENGES

The Tier-1 supplier was selected by their OEM customer to implement software based on requirements which meet Part-6 software requirements per ISO 26262. The existing software was functional, however it lacked traceability. LHP was hired to assess the existing architecture, propose improvements, and implement the software to meet the functional safety standards.

THE SERVICES DELIVERED

LHP implemented a tiered approach while deploying our Functional Safety team to ensure that the supplier can meet their OEM customer deliverables and benefit from LHP's Technical Leadership team to implement processes and architecture that are in compliance with functional safety. The LHP Technical Leadership team focused on assessing the existing architecture, evaluating both the modeling and coding standards. The LHP Technical Implementation team produced the software safety requirements, developed bidirectional traceability of requirements, wrote architecture requirements per LHP Technical Leadership's direction, and created test cases for software safety requirements, integration, interface tests and sub systems. LHP also performed Software Safety analysis and identified gaps in functionality regarding ISO 26262.

HOW SERVICES HELPED

The project was delivered on time and within the estimated budget. LHP produced 267 software safety requirements, analyzed 288 failure modes, and created 545 test cases. As part of the project delivery, LHP created a Functional Safety checklist to establish compliance and minimize the risk of missing a task or document when the supplier executes future work products.

RESULTS, ROI, & FUTURE PLANS

The Tier-1 supplier now has a product that is in compliance with functional safety standards for the very first time and the infrastructure in place to continue the functional safety path. Their Software Development team has gained experience in functional safety, and there is a requirement-driven process in place. ISO 26262 Safety Culture has been adopted into daily operations. LHP is a preferred vendor for functional safety and remains engaged for future software releases.

ABOUT THE PROJECT

Industy

Automotive

Company Name

Tier-1 Supplier

Tools/ Technologies/ Skills

- ISO 26262:2011
- INCOSE
- Matlab Simulink
- C Programming
- Requirements best practices
- IBM DOORS
- AUTOSAR
- SW Architecture

Goals of the Project

 Deliver work products to ensure the supplier meets
Part-6 software requirements for the functional safety standard, ISO 26262

Application Area

Powertrain Application