

# CASE STUDY



## REDUCE LOST TIME IN PILOT VEHICLE ASSEMBLY OPERATIONS

A multi-national vehicle manufacturer with over 20 assembly plants needed to reduce the time required to build prototype vehicles. All vehicle models and option combinations required for validation testing are incorporated into the minimum number of prototype vehicles. Delays in the delivery of a prototype vehicle cascade into delayed or truncated testing, possible launch delays and missed opportunities to uncover failure modes that will ultimately be found by the customer.

### THE PROBLEM

At the start of the project, Pilot Operations averaged over 1,000 hours per month of “lost time.” The analysis of the lost time evidence enabled the problem to be divided into two projects; lost time caused by Platform Engineering (86%) and lost time caused by Pilot Operations (14%). The manifestation of Platform Engineering failures was the length of time required release a vehicle from electrical test. At the start of the project, the average was 17 days.

### THE SOLUTION

The manufacturer and Shainin established a project team and set out to identify which specific step in the process was driving the difference between the successful in-house testing and the unsuccessful field testing. By using a technique called Operations Search and creating special test batches at each site, large portions of the test process were eliminated. In a short period of time, with minimal samples and tests, the team was able to isolate the specific step and procedure driving the differences in sensitivity.

### BENEFITS

1. Field trials now matched the stellar performance of in-house testing.
2. Hard savings of over \$800,000 per year were realized.
3. The ability of Pilot Operations to deliver more vehicles, as well as earlier problem identification and resolution.
4. Smoother product launches and reduced warranty cost.

