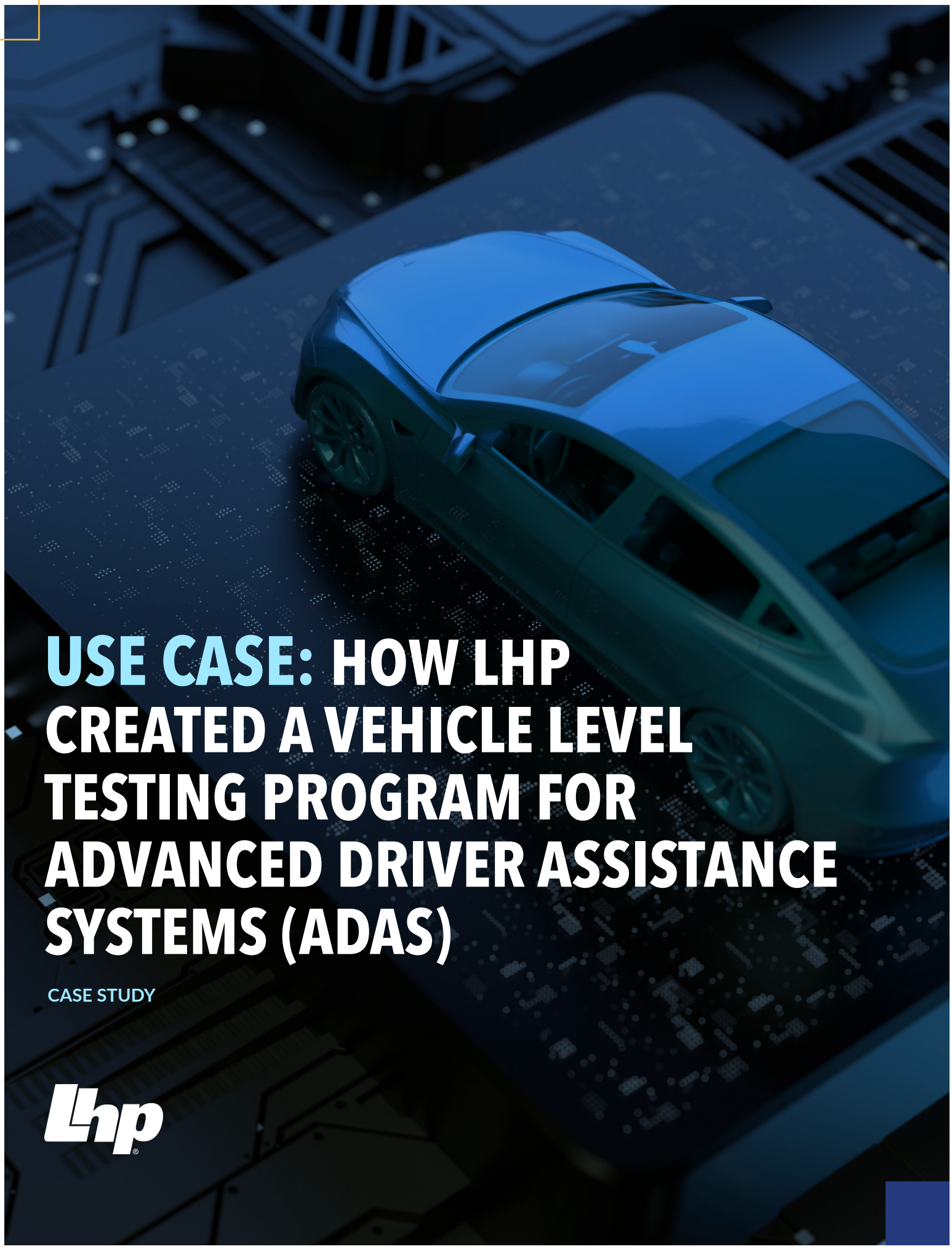

USE CASE: HOW LHP CREATED A VEHICLE LEVEL TESTING PROGRAM FOR ADVANCED DRIVER ASSISTANCE SYSTEMS (ADAS)

CASE STUDY

THE SERVICES DELIVERED

The customer had a vehicle testing program that was both understaffed and struggling with low efficiency. LHP first established a small team of experts who evaluated the existing engagement and provided a list of recommendations to increase efficiency. This plan included the development of a training and onboarding plan, establishing the right level of support through a defined project management plan, and identifying the ideal technical skill set to perform testing activities.

From there, LHP consulted the training division, LHPU, which already had a program in development entitled Introduction to Autonomous Mobility. While building the coursework, the skill sets required to perform VLT tasks were considered. The coursework included an overview of the sensors that are tied to the development of an autonomous vehicle, such as LIDAR, RADAR, cameras, and systems such as Lane Keeping Assist System (LKAS) and Adaptive Cruise Control (ACC). The students in this coursework received the theoretical knowledge of these systems and gained valuable practical experience using a small-scale electric vehicle.

LHP proposed a structured approach to create a program that combined the training system with the requirements of the vehicle testing program. To prove the concept, LHP onboarded a small team of vehicle test engineers to implement an updated ADAS testing process which was then developed from the recommendations.

ABOUT THE PROJECT

Industry

- Automotive

Company

- Automotive OEM's Research & Development Division

Tools/Technologies/Skills

- ADAS Application Knowledge

Goals of the Project

- Create a Vehicle Testing Program

Application Area

- Advanced Driver Assistance Systems (ADAS)

The activities included in the initial approach were:

- Project Management, Training/Onboarding
- Test Vehicle Logistics and Maintenance
- Test Procedure Reviews
- Testing Activities, Data Analysis, and Reporting
- Tuning System Parameters
- Process Improvement

CHALLENGES

The customer had identified issues with testing efficiency, employee onboarding and turnover, and process improvement.

RESULTS, ROI, & FUTURE PLANS

Several steps were implemented or planned, that positively impacted the customer's business and have helped them achieve their goals:

- The LHP team was empowered to provide recommendations after reviewing the testing documentation and worked with the customer team to enhance testing procedures.

- LHP took over the sourcing, training, and onboarding of the vehicle test engineering team. There are now plans to quadruple the size of the team during the next phase. This step addresses the asset and resource utilization issues that exist within a program of this magnitude.

- LHP is training & providing an engineering team that has their Functional Safety Certified Automotive Engineer (FSCAE) certification.

- LHP provided project management activities and offloaded much of the burden from customer personnel.

- LHP developed a set of standard operating procedures which provided an increase in efficiency across different systems. This improved the workflow between different engineering teams.

By providing measurable data and managing the scale of the need, the customer was able to prove systematic improvement to their leadership.

Documentation requirements have been performed and are leading to audit readiness for ISO 26262 compliance.

CUSTOMER QUOTE

The team at LHP was critical to getting this program off the ground. They have a unique ability to hire, train and onboard for specific objectives, and our testing program is making a lot of progress. We are looking forward to the next phase.

— Program Manager, Automotive OEM