ADAS Cloud for a Leading Japanese Auto OEM

CASE STUDY.

Tech Mahindra

Connected World.
Connected Experiences.

OVERVIEW

A leading Japanese public multinational conglomerate manufacturer wanted to develop autonomous vehicles that could be trained to operate in every country, on every road, in every weather, no matter the condition. The manufacturer was looking for a global partner for end-to-end advanced driver-assistance systems (ADAS) car development.

Tech Mahindra partnered with the auto manufacturer to help them develop autonomous vehicles. We leveraged our automotive domain knowledge especially in terms of vehicle development expertise, knowledge of software stacks set-up for self-driving vehicle training to set up and managing large-data infrastructure.

CLIENT BACKGROUND AND BUSINESS CHALLENGE

Our customer is a Japanese public multinational conglomerate manufacturer of automobiles, motorcycles, and power equipment. The development process of autonomous vehicles or ADAS systems may generate petabytes of data (1015 bytes) from sensors, videos, and environmental data. The major challenge here lies in managing and processing this big volume of raw data collected during the test vehicle run phase. The process of data injection, infrastructure requirements, managing data throughout its lifecycle, and ensuring compliance with regional data regulation is challenging

- Requirement included modification and conversion of 10 vehicles for data collection across regions in China and Europe
- Route planning for drive tests, data collection, and data cleansing to meet local compliance requirements (Japan, China, Europe, and the Americas)
- Datacenter set up in China, data management, and cloud integration. On-premise and cloud implementation and rollout for artificial intelligence (AI)/machine learning (ML)

OUR SOLUTION AND APPROACH

- End to end responsibility for roadmap consulting, field test, setting up data centers, cloud testing, AI system training, and development lifecycle support
- Reliable partner for global ADAS/self-driving development with our local partners for test fleet drive program in China, Europe, and the USA
- Sizing, implementation, and management of data center and hybrid cloud storage in addition to hardware-in-the-loop (HIL) testing, automation, and AI system training

BUSINESS & COMMUNITY IMPACT

ADAS data management is one of the complex areas, both in terms of compliance and data privacy, with government agencies and local partners involved. Tech Mahindra built the trust to be the global partner for the customer with our extensive automotive domain knowledge especially autonomous vehicle development expertise, knowledge of software stack set-up for self-driving vehicle training and setting up and managing large-data Infrastructure. As a result of our strong presence in China, understanding the local regulations, and building local partners, we stood out and:

- Focused on the core engineering program while passing the regional responsibility to Tech Mahindra
- Saved 20% on the total cost of the regional program including resources and development costs
- Saved 30% on the total cost of ownership of the infrastructure and cloud
- Adhered successfully to government regulations and local laws

Tech Mahindra

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