

# DXC's Luxoft Edge Acceleration Framework

DXC's Luxoft Edge Acceleration Framework (LEAF) is an application development and management solution for software-defined vehicles (SDVs) and automotive edge. It provides out-of-the-box architectural patterns and can be used together with other powerful AWS IoT tools. It's reliable and scalable.

DXC's LEAF uses AWS cloud, Edge SaaS and PaaS services to bring the power of IoT to automotive, including applications that are developed on AWS. DXC's LEAF solution adheres to SOAFEE (Scalable Open Architecture for Embedded Edge) best practices, integrating its principles for open architecture and standardized software development for embedded edge computing.

## The challenge

Efficient data monetization is both an opportunity and a challenge for the automotive industry. Stakeholders across the automotive sector — including OEMs, Tier 1 suppliers and fleet owners — face significant hurdles in developing and distributing connected software on time. Hardware-dependent testing remains time-consuming and limits agility, while over-the-air (OTA) solutions often come with high complexity and costs.

Additionally, the specialized nature of in-vehicle software technologies makes it difficult to recruit skilled talents, further complicating efforts to innovate and stay competitive in this evolving market.

## Our solution

DXC's LEAF serves as a solution to streamline cloud-based development, testing, continuous integration, and deployment of software to the automotive edge, while eliminating the complexities associated with various hardware.

DXC's LEAF offers:

- Development of edge software, using flexible cloud DevOps services
- Hardware independent time- and cost-efficient cloud-based software testing
- Selective deployment as containers to selected sets of devices using OTA capabilities
- Visibility of software inventory on edge-devices for effective management

## Why work with us?

- **Improved productivity and lower costs.** LEAF allows rapid turn around due to robust accelerators which provide base functionality
- **Flexible software development, testing and distribution.** Using AWS's features like ARM architecture CPU's testing with the near 'Environmental' parity makes the development process faster by providing rapid feedback. LEAF's out-of box OTA functionality makes sure that the software is rolled out to the fleet as soon as possible
- **Efficient development, testing and maintenance.** Container technologies use widely available expertise and optimize software development as well as maintenance cost
- **Optimized hosting.** Cloud technologies reduce infrastructure expenses through flexible scaling of cloud resource
- **Faster go-to-market.** With pre-defined patterns and flexible IoT cloud solutions, products are market-ready faster than ever before

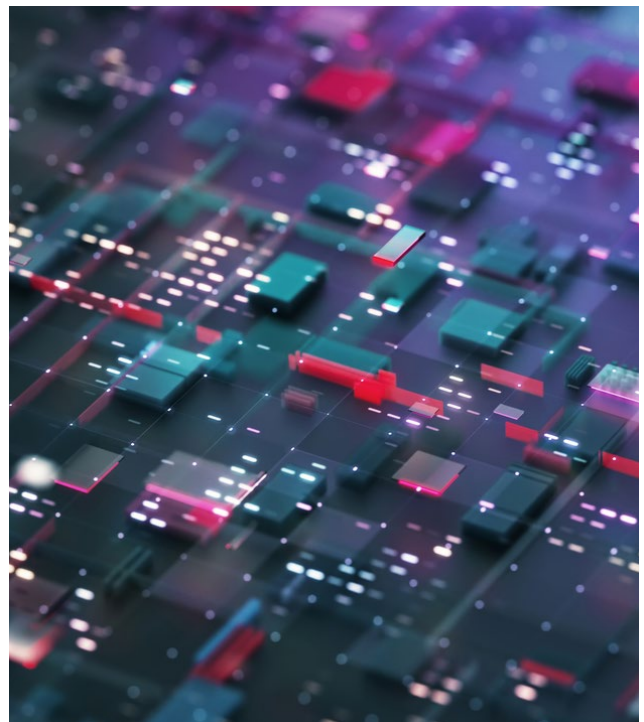
### Benefits of DXC Luxoft:

- Scalable and reliable foundations for connected services and applications
- Advisory services and backend systems expertise that provides deep insights into connected vehicle use cases
- Vendor- and platform-neutral engagements around connected vehicle architectures

- Seamless integration of on-premises, private cloud, and cloud vendors to optimize cloud-native application platforms
- Delivery of independent consulting and development for connected vehicle functions

## What makes us different?

- We have extensive engineering expertise in developing in-vehicle software
- We integrate deep digital and cloud expertise with automotive know-how, leveraging best practices on proven solutions
- We are recognized partners with Microsoft and AWS for their connected vehicle solutions





## Our clients

MOTER Technologies, Inc., a software development and data science company, uses connected car data to understand how people and vehicles operate on the road.

### The challenge

MOTER has identified edge processing as the key technology for accelerating data monetization while focusing on insurance use cases. They had to set up an infrastructure to showcase their solution across a small fleet of vehicles. Developing a low-impact embedded solution that meets the strict requirements of automotive-grade software was crucial. The goal was to build an minimal viable product (MVP), then scale it up to a real-life fleet scenario and build a demo setup that can be presented to clients.

### The solution

DXC Luxoft was chosen to build the platform and an MVP for ten devices using the NXP hardware. This solution was then scaled up to 500 vehicles. The new edge architecture has been submitted as an open-source standard to SOAFEE.

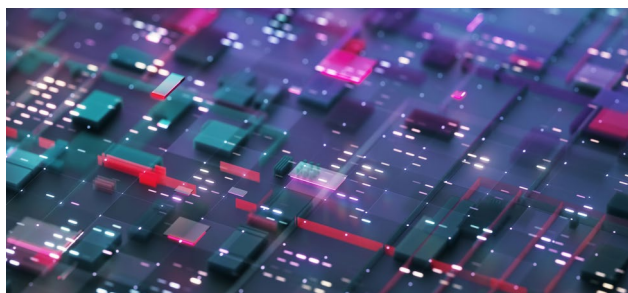
The solution uses containers to collect and process the data and to act as a local data broker. These containers are tied to the cloud and stored through an AWS IoT Greengrass component. A dongle option for ODB2 ports is available, enabling deployments in aftermarket scenarios.

### The results

The edge acceleration framework supports the deployment and management of multiple in-vehicle apps, which enables MOTER to deploy its application in a container.

The container approach also ensures a safe and secure deployment of third-party applications into the automotive ecosystem.

Automakers and mobility companies may add this architecture to their vehicle software platform to enable additional data monetization use cases.



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