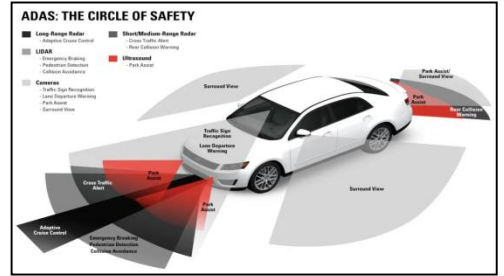


# ADAS features validation strategy

Defining validation roadmap of ADAS / AV features for a mobility service provider



## Quick overview

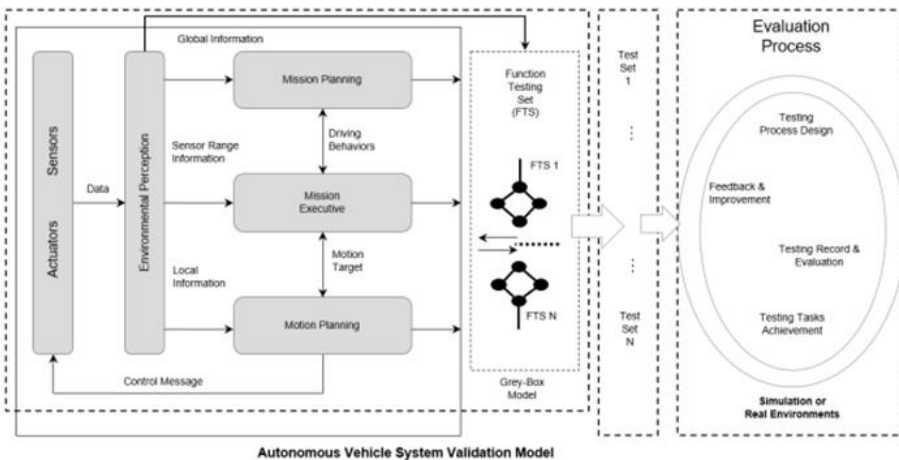
To define its testing and validation offerings strategy for the automated vehicle segment, the client wanted to understand the current and emerging landscape of solutions across tool-chain for ADAS/AV system validation & testing. Further, the client also wanted to align & develop the internal capabilities required to explore the market.

## Client success details

The engagement helped the client define a strategic roadmap for offering testing and validation services for ADAS/ AVs. Following overarching business questions were answered through the engagement –

As the ADAS technologies improve and start to penetrate market, the need to validate & test new ADAS features and hardware also increases simultaneously

- What are different tools & techniques for validation of ADAS features?
- How do they compare with each other on features, capabilities, popularity?
- What has been OEM strategy with regards to ADAS validation tools &
- What is the current and expected value chain for these activities?



FutureBridge conducted extensive primary and secondary research across OEMs, suppliers, simulation solution providers, validation & testing service providers. The output included

- State of the art of current applications
- Solution Architecture
- Driving & Limiting Factors
- Market adoption trends and competitor trends
- Value chain structure for available solutions

<p>Virtual scenes or 3D animations of environment constituents (landscape, building, traffic, pedestrian, weather conditions, light, etc.) are procedurally built / generated / imported to set scenarios</p> <p>es metamoto 3D WORLD coginita</p>	<p>Environment Simulation</p>	<p>Scenario Simulation</p>	<p>Dynamic scenarios (preferably edge case) are the core part of any ADAS/AV system validation which combines different aspects from environment or traffic simulation</p> <p>dSPACE 51 VR NVIDIA metamoto</p>
<p>Reach and perception of any sensor is simulation after rendering physics of sensor type. Further, virtual targets can also be simulated for calibration or validation of sensor hardware.</p> <p>CYTEDA NVIDIA OTSL MathWorks</p>	<p>Sensor Simulation</p>	<p>Traffic Simulation</p>	<p>Interaction and reaction of a vehicle with the surrounding pedestrians or other vehicles plays a crucial role in validations highly autonomous vehicle systems</p> <p>DLR PTV GROUP eadron aimsun</p>
<p>Integration of ADAS / AV system validation with vehicle dynamics gives complete value offering for engineers</p> <p>AVL dSPACE NVIDIA MathWorks</p>	<p>Vehicle Dynamics Simulation</p>	<p>Driver Simulation</p>	<p>Driver-in-the-simulation to understand driver reactions, actions, etc. during maneuvers</p> <p>rFpro cruden AWSIMULATION VERAGE</p>

FutureBridge further analyzed the primary and secondary research findings to find attractive solutions that the client can offer for validation and testing of ADAS/ Avs.

The engagement has helped the client define their future roadmap for testing and validation solutions for Automated vehicles in Germany and China. The client's roadmap includes capability ramp up through internal training as well as through partnerships.

## About FutureBridge

FutureBridge tracks and advises on the future of industries from a 1-to-25 year perspective.

We keep you ahead on the technology curve, propel your growth, identify new opportunities, markets and business models, answer your unknowns, and facilitate best-fit solutions and partnerships using our platforms, programs, and access to global ecosystems and players.