

**HCLTech** | Supercharging  
Progress™

# Autonomous Vehicle Services

Accelerating the development and  
deployment of autonomous vehicle programs



The autonomous vehicle (AV) revolution promises not only safer and more efficient roadways but also a complete transformation of how we live, work and play. In addition to massive production software expertise and computational prowess, OEMs and Tier 1 manufacturers require advanced technology solutions that can support the development of innovative autonomous vehicle use cases and business models.

Automotive companies require technology solutions that can continuously evolve and assist them in remaining innovative and competitive in the autonomous vehicle market.

## Driving into the autonomous future

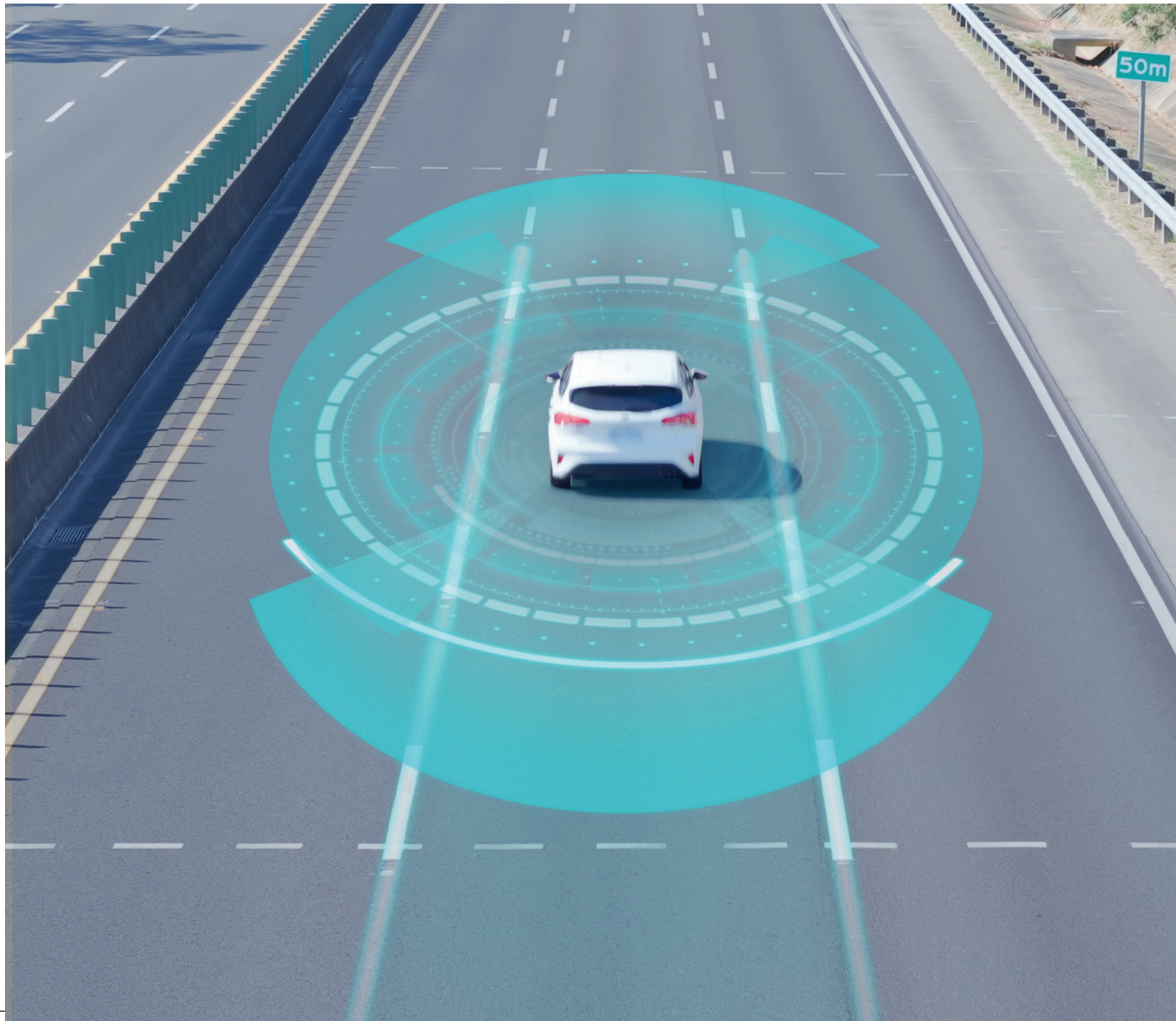
With over two decades of experience in the automotive industry, HCLTech has been powering safety technologies in over a million vehicles globally. Our technology solutions help automotive OEMs and suppliers accelerate the development and deployment of technologies for autonomous vehicles.

**20+** Years of ADAS product engineering experience

**5** Global OEMs as end customers

**6** Top Tier-1s as customers

**35+** Product lines supported



# Our service offerings

Designed to offer end-to-end services from concept to production to sustenance support for ADAS / Autonomous programs, our offerings combine HCLTech's over two decades of experience in ADAS, next-generation technologies, solution accelerators and cross-functional expertise to help automotive companies bring innovative solutions and products to the market faster.



## Algorithm Development

- Sensor perception software
- Control intelligence software
- Localization and mapping



## Virtual Simulation

- Digital Twins
- Sensor fusion
- Localization
- High-precision maps
- GPS
- Real-world data simulation at test bench and lab levels



## Testing

- Unit testing
- Integration testing
- Black-box testing
- Simulation testing SIL
- MIL HIL Testing
- Cloud vECU



## Training

- Data annotation for algorithm
- Data annotation for testing MLOps.



## Data Analytics

- Data analysis (processing, deansing, filtering)
- Data replay
- Failure detection
- Anonymization
- Anomaly detection
- Trend analysis
- Adaptive archiving

# Our investments and innovations

Driver monitoring

Front camera

Rear camera

Front stereo vision

Lane departure control



Driver authorization

Traffic sign recognition

Surround view system

Video annotation automation

Drivable path selection

Automated trailer angle detection

Pedestrian detection

Blind spot detection

Face detection

Automatic high beam controller

Blockage detection for camera

### Autonomous center of excellence



Diverse and experienced multi-disciplinary talent covering software, hardware, mechanical and testing

### Next-generation lab and testing infrastructure



- HIL lab
- Imaging lab
- EMI/EMC lab
- Industrial design lab

# Customer success stories

HCLTech has partnered with leading automotive companies around the world in implementing multiple ADAS programs to improve their time to market, quality and productivity.



Facilitated level-3 autonomous functionality with stereo vision systems for European tier-1 supplier



Development and testing of software for ADAS systems for global OEM



Modeling and testing of ADAS feature in visual simulation for US-based OEM



Verification and validation of ADAS features for global OEM



Enhancement of production and testing-ready Autonomous Vehicle Software compliant with European regulations for European OEM



Development and testing of ADAS Automation tool for global OEM

Discover how you can supercharge the future of mobility with HCLTech.  
For more information, write to: [AUTO\\_BSG@hcl.com](mailto:AUTO_BSG@hcl.com)

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