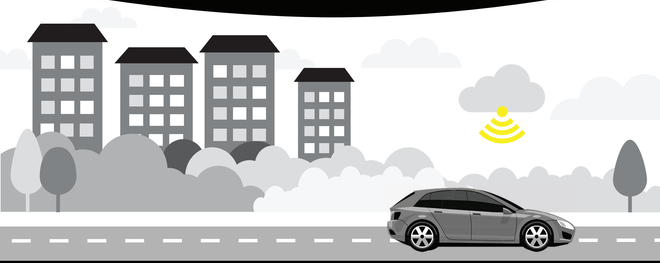
DXC.technology

DXC Robotic Drive

Finish first!

Accelerate autonomous driving development and speed past the competition



DXC Robotic Drive encompasses the platform, toolkit and expertise that vehicle manufacturers need to rapidly evolve the autonomous driving (AD) development process — from data collection, storage and analysis to deployment.

- Achieve higher levels of autonomy faster
- Reduce research and development costs
- Build the better driver
- Receive support for all AD workloads and data formats
- Reach disengagement rates less than 0.001%

Use the best AD tools, data and compute platforms for managing ingest, storage, analysis on automotive formats as well as compute for training, evolution and functional testing for building your autonomous vehicle.

AD evolution stages & challenges	DXC Robotic Drive
Collect, ingest and store data • Maximize data offload speed of 6 GB/s to 8 GB/s from R&D AD vehicle • Enforce enterprise security • Implement ingest and storage workloads • Store hundreds of petabytes of data	• Get productionized and secure data ingest with reduced time to drive • Utilize performant and scalable geo-distributed data organization pattern to manage automotive data at petabyte scale at multiple locations
Manage, analyze AD sensor data • Implement analytics and understanding workloads • Store, analyze and wrangle on a petabyte scale • Search, compute, read and write at sensor level in a highly distributed way • Multitenancy for development cooperation	Proven storage, analysis and refinement of automotive data in the hundreds of petabytes, with data life cycle and metadata management • Bring AD algorithms to automotive data without the need for data conversion and storage duplication for ROSbag, ADTF and MDF4 • Reduce time to analyze with patent-pending analyzer tool for up to 100x performance gain
Perception/location • Implement compute and training workloads • Identify and understand objects in the data • Speed up AI development life cycle and increase productivity	Proven state-of-the-art AD compute platform with AI management and notebook-based environment for R&D engineers • Leverage deep neural-network training cluster, versioning and auditing; management of trained models with GPU scale-out • Achieve orchestration of different AI models
Fusion/motion control • Data fusion on sensor level • Develop drive strategy based on situation understanding • Link back to development tool chain for vehicle integration	State-of-the-art AD compute platform to evolve machine learning models by joining and resampling sensor data sets • Increase quality and efficiency of sensor data understanding, e.g., object recognition • Achieve up to 100x performance gain in data fusion for driving decisions
Simulate • Reduce test drive iterations • Achieve significant cost savings • Accelerate time to market and production	Minimize rework in data wrangling and retraining with managed storage of SiL results data sets • Achieve faster time to autonomy evolution • Get scientific support and extended AD workbench in cooperation with leading educational institutions in SiL
Functional test/recompute • Implement and accelerate functional testing recompute process • Integrate functional testing into AD vehicle • Recompute algorithms at scale	Manage and automate deployment of functional testing pipes for data input, pre-processing, processing and post-processing to SiL, HiL and HoL • Reduce investment requirements in test vehicles; shorten loop time • Increase overall AD process quality and decrease fault/incident rates
Test/road approval • Reduce disengagement rate • Achieve street approval	Provide road approval domain model and testing framework for running and archiving audit-proof test results • Grant authorities access to relevant test results • Reduce disengagement rate to less than 0.001 per 1,000 km

DXC Robotic Drive provides the platform, toolkit and expertise to accelerate AD development, simplifying AD data and workload management over ever-increasing amounts of sensor data on a petabyte scale. DXC Robotic Drive helps you:

- **Reach the market faster, accelerate your AD vehicle R&D process and achieve road approval**
- **Access, analyze and compute automotive data in an unparalleled, distributed way using state-of-the-art tools**
- **Accelerate AD development life cycles with performant, deterministic and scalable AI, machine learning and data management**

Learn more at **dxc.technology/roboticdrive**