

What is Car Repair 4.0?



Car Repair 4.0 – Development of a manufacturer-independent and interoperable diagnostic Data Space for Motor Vehicles



Goal: Targeted and AI-assisted fault diagnosis for vehicles, along with the establishment of a data space for securely exchanging specific data and AI models for the automotive repair industry.



Innovation: By using data captured in the engine compartment via newly developed oscilloscopes, more differentiated and improved diagnoses can be achieved. This helps avoid unnecessary repairs and conserves resources in the context of sustainable maintenance.



Based on Gaia-X, Car Repair 4.0 connects workshops, diagnostic system providers, and AI providers in a shared data ecosystem. This digitisation makes it feasible for smaller independent auto repair shops to strengthen their competitiveness.

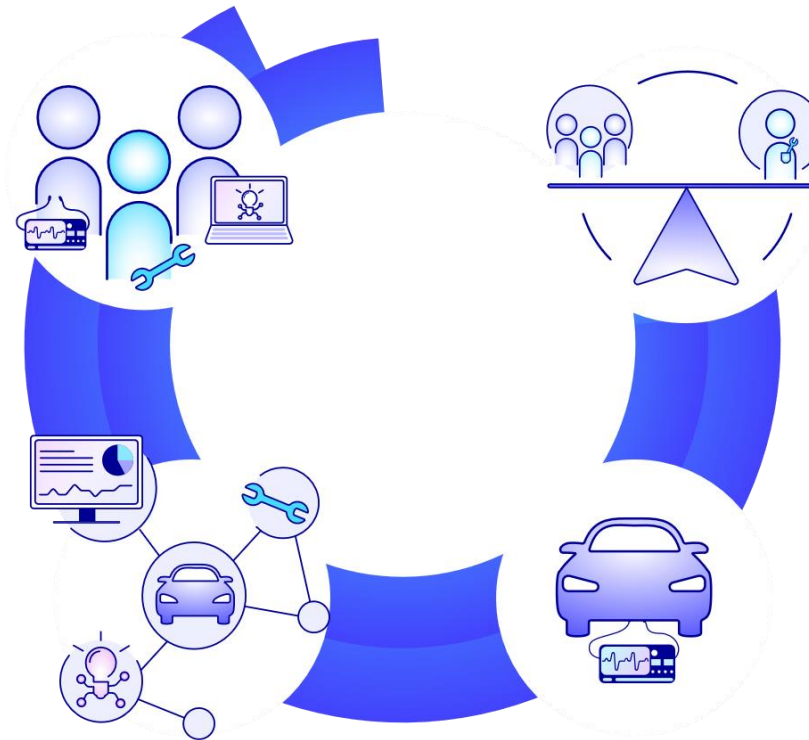


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Use Case: Systematic Diagnosis in Automotive Vehicles

Targets workshops, measuring system providers, and AI providers.

Specific vehicle data and AI solutions are provided in a data space to enable sharing and collaborative use.



It presents promising and new possibilities for data-driven diagnostic procedures in automotive vehicles.

Through the use of the data space, car repair shops can utilise intelligent error diagnosis systems for targeted repair and maintenance, while AI providers can optimise their models.



Further Use Cases

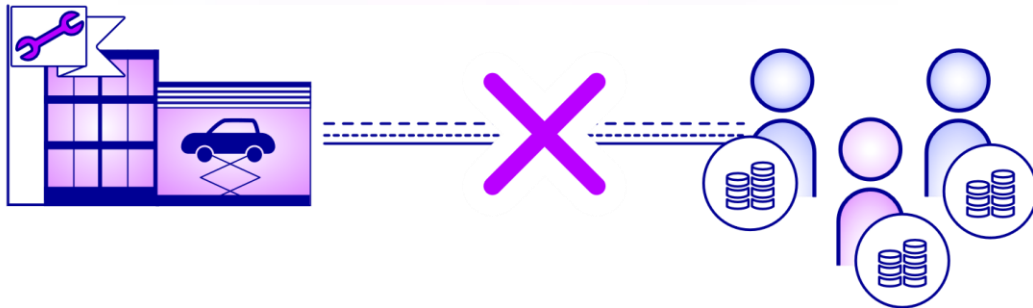
Using a newly developed measurement method, errors are captured using oscilloscopes in the engine compartment of a vehicle, and these data are

interpreted in a differentiated manner through an AI-assisted process.

Gaia-X makes Car Repair 4.0 possible

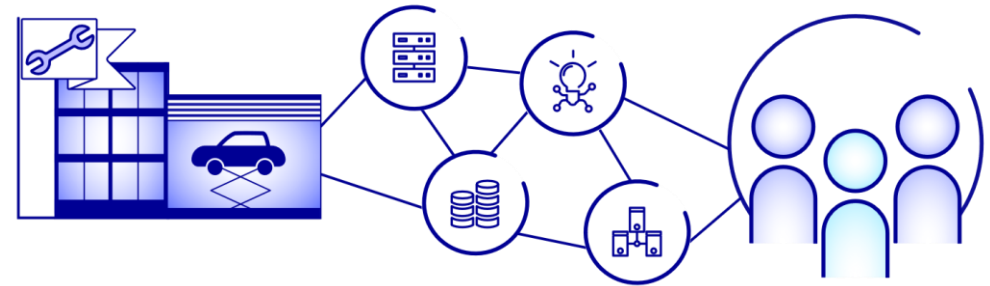
Situation without Gaia-X

- Vehicles are becoming more complex and generate technical data that need to be analysed and interpreted. Conventional diagnostic approaches can no longer keep up with the changing requirements.
- Independent garages often lack access to large datasets and optimised diagnostic procedures used in the automotive industry.



Solution with Gaia-X

- Car Repair 4.0 is building a data space aligned with the Gaia-X-standard for trusted exchange of vehicle data and AI services for targeted diagnostics.
- In the data space, workshops, measuring system providers, and AI providers are interconnected into an innovation and value creation network.
- Federated services enable participants to engage in fair competition with new digital business models.



Car Repair 4.0 – creates access to a large set of vehicle data and AI models for targeted automotive error diagnosis.