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18. abstract

The aim of the project was to develop a virtual testing platform that enables vehicle manufacturers and their suppliers to test their products virtually and optimise testing and production processes. To this end, a global cloud platform was developed on which manufacturers of test benches and test bench components can make digital twins of their products available. In addition to testing on a real test bench or test field, this enables vehicle manufacturers and suppliers to test digital twins of their products on a customisable virtual test field. This enables the optimisation and more efficient design of the testing process, new testing options, including for compensating for structural deficits in real testing structures, and the derivation of new digital business models, such as prognostic and health management, predictive quality and digital voice assistance for testing processes, which were also implemented in the project. The project thus contributes to the profitable utilisation of collected data, the dissemination and scaling of digital and AI-driven applications, and the optimisation of production in the automotive and supplier industry.

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Virtual testing platform, digital twin, prognostics and health management, predictive quality, digital services, virtual testing in automotive engineering, IIoT connector, digital voice assistant

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