

Corridor for New Mobility Aachen – Düsseldorf (ACCorD)

Urban, rural, highway - equipping individual test fields with infrastructure sensors for interaction with test vehicles for safe automated and connected driving.

Motivation

Automated and connected driving offers great potential for increasing road safety and efficiency as well as social participation. However, the development of automated and connected vehicles poses immense challenges for all stakeholders.

As a technologically complex system consisting of traffic, communication and IT infrastructure as well as automated and connected vehicles, fault-free functioning must always be ensured in real traffic in interaction with other road users.

Project Goal

With the Corridor for New Mobility Aachen - Düsseldorf, an integrated development environment is being created, incorporating existing test facilities such as the KoMoD test field in Düsseldorf or the closed CERMcity test site in Aldenhoven, to systematically test and secure automated vehicles in interaction with networked infrastructure.

This is achieved by means of a time and cost-efficient tool chain and methodology, in which simulation, closed test sites and public transport test fields are linked in the best possible way. In order to be able to depict a variety of traffic scenarios, the corridor contains a highway section, an urban and a rural area.

Key Facts

Name: Corridor for New Mobility Aachen – Düsseldorf

Acronym: ACCorD (FKZ 01MM19001A-G)

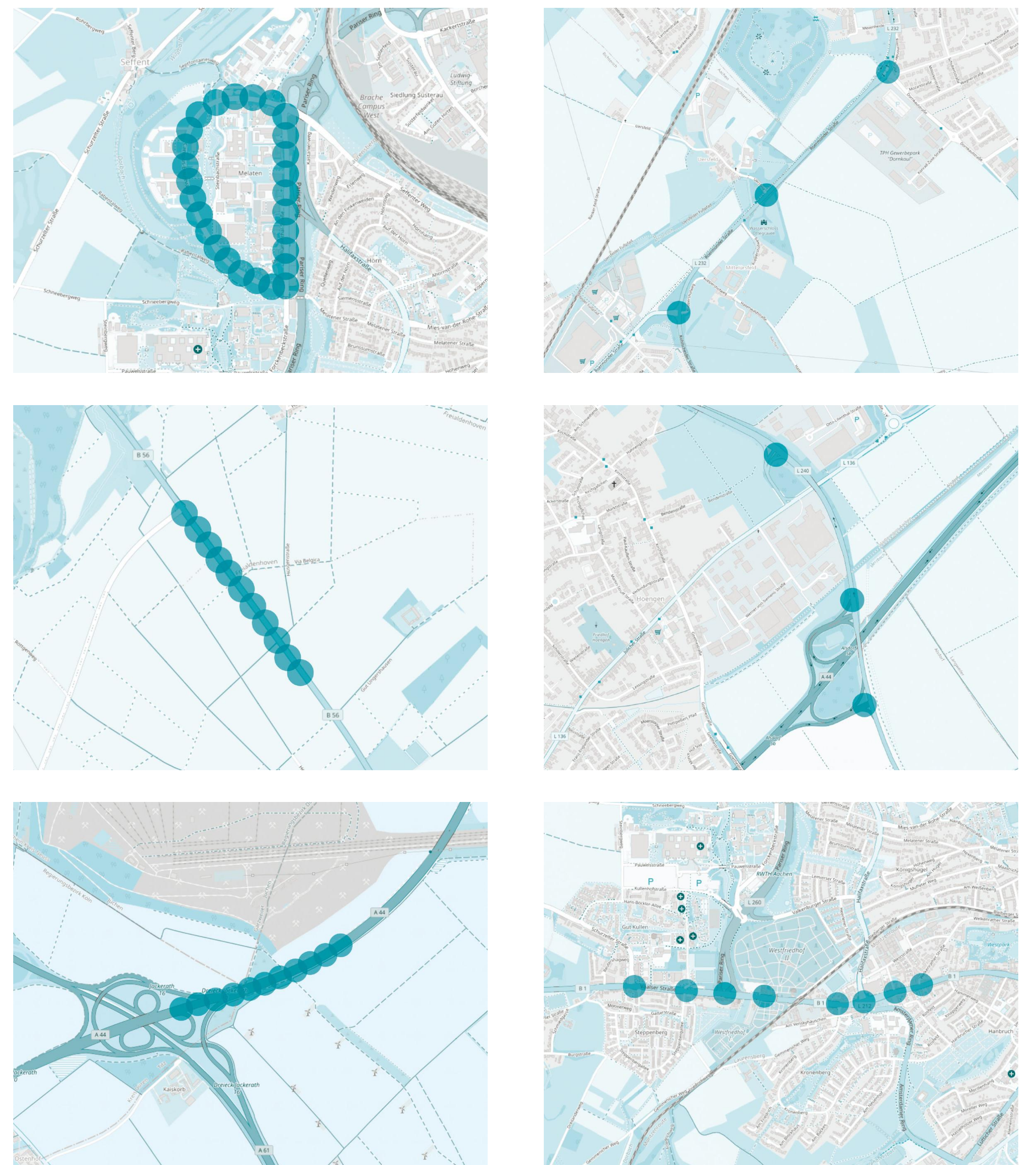
Project duration: 01.01.2020 – 31.12.2021

Project volume: 11.11 million € (9.57 million € BMVI funding share)

Funding source: Federal Ministry of Transport and Digital Infrastructure (BMVI)

Project promoter: German Aerospace Center (DLR)

Project coordinator: Institute for Automotive Engineering (ika) – RWTH Aachen University



Implementation

- Establishment of a test environment which, with the help of a reference sensor system, records road users and the environment on the three test field sections (urban, rural, highway) with high precision.
- Networking with the traffic infrastructure by means of virtual network control and networked light signal systems.
- Establishment of a central database in which all data collected is processed and stored and can be used for further research and development activities and for simulations.
- Design and implementation of a digital twin of the test field as a virtual image of the three test field sections for the execution of tests in simulation.
- Use of the test environment for the validation of automated and connected test vehicles, which are used in the corridor for the further development of automated driving functions.

In cooperation with: