

## **New facility for anonymous traffic data collection at the Melaten Campus: Work on the ACCorD project: Corridor for new mobility Aachen - Düsseldorf is progressing**

Aachen, 09. August 2021 – Last week, the hardware installation of intelligent infrastructure sensors took place on the Melaten campus, which is part of the Aachen test environment for automated and connected driving. As part of the *Corridor for New Mobility Aachen - Düsseldorf (ACCorD)* research project funded by the German Federal Ministry of Transport and Digital Infrastructure (BMVI), 46 measuring devices were mounted on selected lanterns to set up a digital test field in real traffic. The installation was commissioned by the Institute for Automotive Engineering (ika) of RWTH Aachen University and serves to collect anonymized traffic data. This creates a data basis for developing and validating automated driving functions. Each measuring device is equipped with camera sensors and laser scanners. The raw data is evaluated immediately after recording and then deleted. The evaluation exclusively comprises the spatial recording of road users, i.e. whether they are, for example, pedestrians, two-wheelers, cars or trucks and in which direction they are moving. From the measuring stations, only the information as to whether it is a person or a vehicle as well as the temporal position of these anonymous "objects" is forwarded for subsequent analyses. Therefore, there is no access to personal data at any time. Neither images nor license plate numbers or the like are recorded or stored.

The anonymous traffic data collected in this way is used in two different areas of application. On the one hand, networked and automated test vehicles on the digital test field at the Melaten campus can receive this data in real-time via automotive WLAN or mobile communications in order to be able to act with foresight. In this way, test vehicles can already receive information about the route before they can "see" it with their own sensor technology and thus adapt their driving style. On the other hand, this data is stored in a central database in order to retrospectively analyze, for example, the behavior of road users and their interactions with each other, and to derive insights for future automated driving functions.

In the coming months, as part of the same research project, two additional digital test sites will be set up on the B 56 federal road near Aldenhoven and on the A 44 federal highway at the Jackerath interchange. This will enable the project to record traffic in rural areas and on highways for research purposes in addition to urban traffic.

### **Aim of the project**

The aim of the Corridor for New Mobility Aachen – Düsseldorf is to create an integrated development environment, involving already existing test facilities such as the KoMoD test site in Düsseldorf or the completed Aldenhoven Testing Center, in order to systematically test and validate automated vehicles in interaction with networked infrastructure.

Therefore, the project uses a time- and cost-efficient tool chain and methodology, in which simulation, completed test sites as well as test fields in public traffic are linked in the best possible way. To be able to represent diverse traffic scenarios, the corridor contains a highway section, an urban area and a rural area. First, a test environment will be set up that uses reference sensor technology to record traffic participants and the traffic environment with high precision on the three test field sections (urban, rural, highway). In addition, networking with the traffic infrastructure is taking place by means of networked traffic lights on Vaalser Straße in Aachen. A central database will also be set up in which all anonymized data will be processed and stored and can be used for further research and development activities as well as for simulations.

Another component of the project is the design and implementation of a digital twin of the test field as a virtual image of the three test field sections for conducting tests in simulation. In addition, the test environment will be used to validate automated and connected test vehicles that will be deployed in the corridor to further develop automated driving functions.

### **Key Facts**

Name: Corridor for New Mobility Aachen - Düsseldorf

Acronym: ACCorD

Funding code (FKZ): 01MM19001A-G

Project duration: 01.01.2020 - 31.12.2021

Project volume: 11.11 million € (thereof 9.57 million € public funding)

Sponsor: German Federal Ministry of Transport and Digital Infrastructure (BMVI)

Project executing agency: German Aerospace Center (DLR)

Collaborative coordinator: Institute of Automotive Engineering (ika) - RWTH Aachen University

### **Partners**

In addition to the Institute for Automotive Engineering (ika) of RWTH Aachen University as the project coordinator, the project consortium consists of partners from research, industry and regional authorities and municipalities. These include the Chair and Institute for Highway Engineering (ISAC) of RWTH Aachen University, the companies e.GO MOOVE GmbH, Ford-Werke GmbH, PTV Planung Transport Verkehr AG, Vodafone GmbH and ZF Friedrichshafen AG, as well as the North Rhine-Westphalia State Road Construction Authority and the Department for Economics, Science, Digitalization and Europe of the City of Aachen.

The consortium's broad spectrum of expertise means that all research topics such as automated driving, V2X communication, infrastructure measures, digital twin and sensor validation can be researched and tested in the best possible way.

### **About ika**

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As part of RWTH Aachen University, the Institute for Automotive Engineering (ika) researches the complete vehicle, including its systems and their interactions. From the idea to innovative component and system concepts to the vehicle prototype, the institute's employees design the vehicle of the future. The ika makes a recognized contribution to solving current challenges, both in public projects and in cooperation with automotive manufacturers and suppliers.

The basis of the intensive research work for large parts of the automotive industry as well as public funding bodies at EU, federal and state level is the extensive infrastructure of the ika, which ranges from drive, battery, chassis and tire test benches to acoustic, thermodynamic and servo-hydraulic test facilities to a complete vehicle crash facility as well as test tracks including state-of-the-art measurement technology. In addition, there is up-to-date software and hardware equipment for all necessary simulation disciplines. The ika employs more than 135 permanent staff and about 200 student assistants. In addition, about 200 student theses are permanently produced within the framework of research and development.

[www.ika.rwth-aachen.de](http://www.ika.rwth-aachen.de)

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Released for publication.

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