



Multimodal, sustainable, connected.

The German capital region. Excellence in mobility



The German capital region Berlin-Brandenburg is a strong location for Intelligent Transport Systems (ITS): there are 10,700 jobs divided among 90 businesses and 24 research institutes. The scientific area is well represented by capable institutions, such as the Technical University of Berlin, the Technical University of Applied Sciences in

Wildau, the Freie Universität Berlin (Dahlem Center for Machine Learning and Robotics), the University of Applied Sciences in Potsdam, the Brandenburg University of Technology in Cottbus-Senftenberg (BTU Cottbus) and the University of Applied Sciences in Berlin (HTW Berlin). Notable non-university research institutions are the Institute of Transportation Systems

and the Institute of Transport Research of the German Aerospace Center (DLR) and the Fraunhofer Institute FOKUS.

ITS are thus a key part of the regional development strategy channelled by the Cluster Transport, Mobility and Logistics. The cluster connects science and industry from the fields of automotive, logistics, aerospace, rail systems and intelligent transport systems in order to generate innovations to further strengthen the region's competitiveness.

Berlin-Brandenburg's network has a strong intermodal alignment, with a balance between modes of transport and industries, so it is well prepared to meet the growing demand for integrated transport systems.

Connected and autonomous driving

Governments around the world are working on how they can deliver Autonomous Vehicles (AVs) anticipated societal benefits. These include the prospect of much-improved road safety, more efficient public transport and freight services, as well as cleaner cities with more room for people and green spaces. Scientific-industrial networks in Berlin-Brandenburg are actively developing projects concerning AVs' such as "Shuttles & Co", a real test of a digitalized urban transport system in Berlin conducted by a consortium of Scope, Berliner Agentur für Elektromobilität (eMO), Deutsches Zentrum für Luft- und Raumfahrt (DLR), Fraunhofer FOKUS, FU Berlin, Hella Aglaia Mobile Vision GmbH, IAV GmbH, TU Berlin, VMZ Berlin Betreiber-Gesellschaft mbH under the lead of the Senate Department for the Environment, Transport



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and Climate Protection Land Berlin. By means of highly automated fleet vehicles, it researches the complex interaction between road users and infrastructure, develops methods for recognition and prediction of map objects, tests the integration of data platforms and uses cooperative processes in the area of traffic control based on V2X communication. Autonomous driving is not only restricted to urban projects in our region: several digital inland waterway projects along with a vibrant array of drone application projects round out the AVs' project landscape in Berlin-Brandenburg.



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Digital inland waterway transport

Berlin-Brandenburg's geographical and industrial position has triggered research projects in autonomous waterway transport systems with applications in city-logistics, supply and disposal, transshipment and intermediate storage like the digital inland waterway test field Spree-Oder for the research of autonomous vessel geo-positioning, DigitalSOW, led by Alberding GmbH.



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Alternative drive systems for all transportation modes

Innovative propulsion solutions find application in Berlin-Brandenburg in all transport modes: from the T-CELL-Transformer project by the BTU Cottbus for the production of electricity and hydrogen for e-vehicles, to the iSmartC project by the BTU Cottbus for intelligent charging control, optimizing the electricity consumption and reducing load peaks.



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Driving assistance systems

Berlin-Brandenburg offers a decisive competence in designing and fitting driving assistance systems, leading to an autonomous or partially automated vehicle operation. The TH Wildau with its digital factory "Wildauer Maschinen Werke" is a platform for research, development and transfer of digital competences, which can be tested on site.



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Mobility data

A versed competence in data gathering and evaluation is key for the development of Intelligent Transport Systems. Several start-ups in the field of intelligence and analytics have settled in the capital region, such as Hella Aglaia with its data-based product development in the public transport project "Shuttles & Co" and Kontakts IT-solutions GmbH with its Kondor project, which is dedicated to the dynamic measurement of ridership on trains.



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Unmanned aircraft systems (UAS) applications

The use of decentral stationed drones to support rescue teams and improve the effectiveness of firefighting measures, the inspection and measurement of hard-to-reach systems, the aerial analysis and optimization of cultivation areas are some of the applications being already researched in Berlin-Brandenburg by the network CURPAS e.V. Drones can also accelerate and facilitate processes such as the urgent transport of lab samples, as in the project by Labor Berlin in cooperation with Matternet.

OTHER PROJECTS

- eUVM Construction and operation of an advanced environmentally sensitive traffic management system in Berlin, Senate Department for Environment, Transport and Climate Protection
- Digital Platform Urban Transport, Senate Department for Environment, Transport and Climate Protection

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