



Karlsruhe Mobility Lab

powered by  Technologie
Region
Karlsruhe

Hub for intelligent urban and
regional mobility concepts

Please visit us
at our joint stand in the dm-arena!

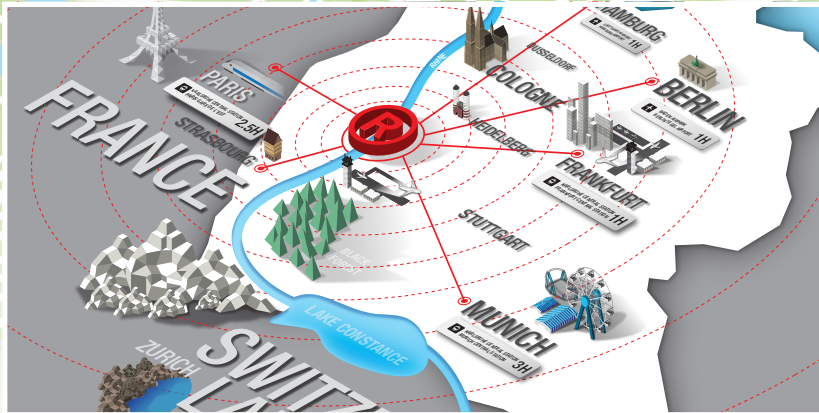
POLIS ANNUAL
CONFERENCE
2024
CITIES AND REGIONS FOR TRANSPORT INNOVATION

27-28 NOVEMBER 2024

KARLSRUHE (DE)

www.trk.de/mobility

TechnologieRegion Karlsruhe GmbH



www.trk.de

Public authorities have joined forces with businesses, chambers of commerce and scientific institutions to form the TechnologieRegion Karlsruhe GmbH.

Together we are shaping the development of the region with the aim of strengthening and promoting it as a hub for business, science and innovation. Our focus is very much on the themes of mobility, energy, bioeconomy and IT. Projects are initiated on a real-lab scale through the strategic networking of partners from business, science and the public sector. The TechnologieRegion Karlsruhe GmbH acts as an innovation platform, takes over the steering of the different actors and contributes to co-financing.

Facts and figures

- Around 1.7-million people living within an area of 6,000 km²
- Working population of 675,000
- Around one-third of the labour force work in technology-intensive industries
- Economic output above the German average for many years¹⁾
- Regional GDP risen to more than € 60 billion in recent years

1) Includes only the figures for the German cities and districts of the Karlsruhe TechnologyRegion



Jochen Ehlgötz
Managing Director
TechnologieRegion
Karlsruhe GmbH

Through its partners, the Karlsruhe Mobility Lab powered by TechnologieRegion Karlsruhe GmbH (TRK) has developed into a globally recognised centre of intelligent concepts in urban and regional mobility. In a unique ecosystem, science, industry, the public sector and innovative transport companies work together on interdisciplinary approaches for sustainable and user-friendly mobility. In this unique climate of innovation, ideas for tomorrow's mobility are being created, put into practice, analysed and tested. The TRK paves the way for lighthouse projects and assists in the search for co-funding.

A major focus of the Karlsruhe Mobility Lab is on continuously developing local public transport and new mobility concepts. As a hub of research, the Karlsruhe region offers a unique density of mobility-related institutions. Together, all actors contribute to the mobility revolution worldwide.

On the following pages we proudly present the solutions for the future of mobility made in Karlsruhe to be experienced at our joint stand.

Yours sincerely
Jochen Ehlgötz

Karlsruhe Mobility Lab

powered by Karlsruhe TechnologyRegion

Hub for intelligent urban and regional mobility concepts

The Karlsruhe Mobility Lab powered by Karlsruhe TechnologyRegion is a globally recognized Centre for the development of intelligent concepts for the urban and regional mobility of the future. A major focus of its innovation efforts is on the further development of local public transport and the development of new mobility concepts - both essential for the mobility transition. The Karlsruhe Mobility Lab is a pioneer in sustainable mobility development.

In the unique ecosystem of the Karlsruhe TechnologyRegion, science, business, the public sector and innovative transport companies work together on interdisciplinary approaches. In the region, public transport and new mobility concepts are

developed, put into practice, analyzed and tested with the citizens. This sense of community is a driver of the region's strong innovative power.

Politics and science are also focusing on this unique climate of innovation: the region is home to state institutions such as the Baden-Württemberg Institute for Sustainable Mobility and a location of the German Center for Future Mobility (DZM).

As a university and research location, the Karlsruhe TechnologyRegion offers a unique density of mobility-related research projects and institutions. In addition to science, some internationally leading companies such as INIT or PTV have their



on-demand mobility

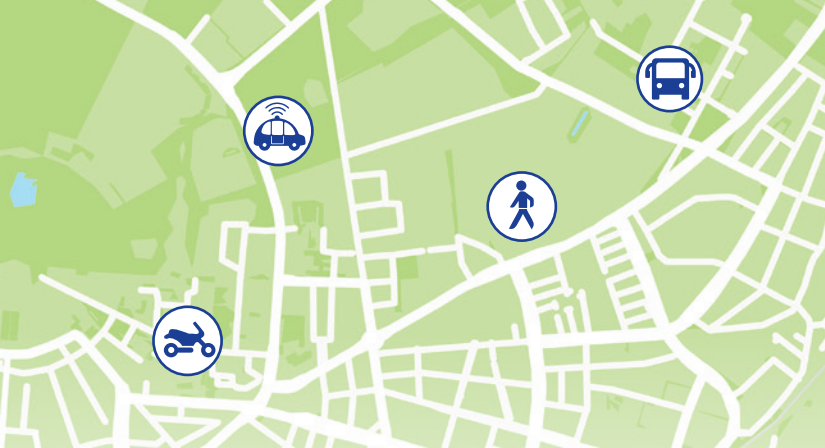
modelling & simulation & gamification

automated mobility systems

data & artificial intelligence

multimodal transport planning

multimodal logistic solutions



Mobility Portal



headquarters in the region and successfully spread mobility solutions “Made in the Karlsruhe TechnologyRegion” all over the world.

Much has already been achieved in the Karlsruhe Mobility Lab, e.g. a convenient mobility platform that integrates individually usable means of transport such as car and bike sharing as well as intermodal traffic control, via autonomous first/last mile services in on-demand traffic, cross-border mobility solutions, a large-scale network of cycle paths and innovative high-speed cycle routes, and last but not least the Karlsruhe Tram Train Model, which has attracted worldwide attention.

Karlsruhe Mobility Lab

powered by Technologie Region Karlsruhe

e-mobility

last mile

PT networks optimization & operation

Free information services on multimodal mobility

The Mobility Portal run by the Karlsruhe TechnologyRegion and the City of Karlsruhe offers current information on mobility in the regions of Baden, Southern Palatinate and Northern Alsace. It serves as an essential component in the city’s and the region’s traffic information service and provides guidance on various questions regarding multimodal mobility, from car and cycle traffic to public transport.

mobil.trk.de



MobileCity app

 **Fraunhofer**
ISI



With the MobileCity app the KAMO: Karlsruhe Mobility High Performance Center network partners KIT and Fraunhofer, together with the game developer takomat, brought less accessible transport models on mobile devices with a handy user interface. The simple development of scenarios and broad impact indicators make MobileCity to a practical tool for urban strategy development and communication for cities and undertakings. A demonstrator for Karlsruhe is ready for testing on site.

The research project was awarded the German Mobility Prize 2023 in the category “Digital Transformation & Data Driven Mobility”.

www.isi.fraunhofer.de/mobilecitygame

FZI Shuttle



Automated shuttles are ideal for last-mile transport. They offer maximum safety and efficiency by using advanced sensor technology and intelligent, networked infrastructure. Without virtual rails, they use the entire lane area, perform complex maneuvers and benefit from being connected to infrastructure and intelligent stop areas, which can improve safety in this area. Thanks to a virtual environment, a seamless transition between the exhibition hall and the public space is made possible in order to realistically simulate the deployment of the FZI shuttles and demonstrate different scenarios. This on-site demonstration will be complemented by a tour of the Test Area Autonomous Driving Baden-Württemberg (TAF BW).

www.fzi.de



Karlsruhe University of Applied Sciences



TKA
Hochschule Karlsruhe
University of Applied Sciences
Institut für
Energieeffiziente Mobilität

BWim Baden-Württemberg Institut
Für Nachhaltige Mobilität.
move.more
Nachhaltig mobil am Oberrhein

Karlsruhe University of Applied Sciences is one of the largest and most research-intensive universities of applied sciences in Baden-Württemberg. Our broad spectrum of teaching and research shows practical solutions for the mobility of tomorrow. We present our expertise focusing on infrastructure, mobility, autonomous driving, and participatory mobility transformations in the form of selected projects such as “move.mORE – Sustainable Mobility in the Upper Rhine Region” (a joint project with Offenburg University of Applied Sciences), the Institute of Energy-Efficient Mobility and the Baden-Württemberg Institute of Sustainable Mobility.

www.h-ka.de

Inclusive travel made easy



init

As a digital travel companion, ASSISTIVetravel offers real-time information not only on departure times but also on the vehicle's position during the journey – and even just before the destination stop!

Users can tailor their profile according to their specific needs:

- Visually impaired? Text-to-speech and simplified navigation ensure a safe journey
- Hearing impaired? In-bus announcements are transmitted directly to hearing aids.
- Mobility impaired? Drivers are informed and assist with boarding and alighting.

Inclusion begins with smart technology!

www.initse.com

KAMO: Karlsruhe Mobility High Performance Center



The transition in mobility has many facets. Sustainability, individuality and independent travel must be harmonized and implemented with the technical possibilities of mechanical engineering, computer science and electrical engineering. Interdisciplinary solutions are required in order to develop demand-oriented mobility offers.

Since 2016, the institutions for research, education and transfer in Karlsruhe, Germany have been working together on innovative mobility solutions.



Hochschule Karlsruhe
University of Applied Sciences



www.kamo.one

KIT Mobility Systems Center



© M. Frey/KIT



We show how future, automated mobility and logistics solutions can influence urban and rural traffic. Therefore we present results from current research projects at KIT. The target group are municipal decision-makers and interested municipalities who would like to get an idea of what future mobility could look like.

www.mobilitaetssysteme.kit.edu

Handbook: Autonomous driving in public transport



This handbook is intended to support municipalities as well as transport purchasers and providers in promoting the positive effects of operating autonomous, networked public transport services.

To be published in Q4/2024.

Partners:



Rödl & Partner

www.mobilitaetssysteme.kit.edu

MobiData BW®

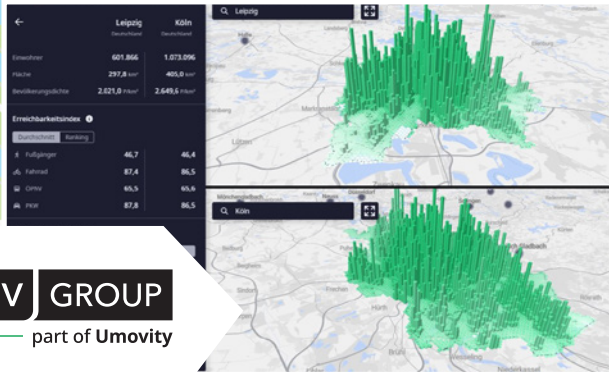


As an official platform of the federal state of Baden-Württemberg, MobiData BW® bundles mobility data for a wide range of applications and publishes them as open data. MobiData BW® works in partnership with regional authorities and platforms such as Karlsruhe TechnologyRegion, which provide data on their local mobility services and infrastructure. MobiData BW® bundles these data in its state-wide integration platform and serves as a central competence center, offering information on the collection and provision of mobility data and data-driven digital applications to data providers as well as users.

www.mobidata-bw.de

PTV Group

regioKArgoTramTrain



PTV GROUP
part of **Umovity**

Whether private or public transport - traffic should flow. To achieve this, traffic modeling and simulation are becoming increasingly important. In addition, sustainable modes of transport should be promoted and the safety of road users ensured. At the PTV stand, Polis visitors can see how data and software can be linked in a meaningful way: for multi-modal forecasts, for planning demand-driven services or for detailed accessibility analyses. Using VR glasses, the visitors can immerse themselves in a virtual traffic management center and experience the power of traffic simulations and traffic forecasts at first hand.

www.ptvgroup.com



© Bildquelle: AVG/Paul Gärtner

regioKArgoTramTrain addresses the increasing demand for logistic and mobility services as well as transportation infrastructure while living spaces are becoming more limited, as a result of urbanization and increasing e-commerce.

A concept for dual use of rail infrastructure and vehicles for both, passenger and cargo transport, will be developed. New technological opportunities of automation and digitalization are addressed by automated stopping and starting at platforms based on Artificial Intelligence. A living lab to demonstrate the developed system will be carried out in 2027.



Kofinanziert von der Europäischen Union



Baden-Württemberg

www.regioKArgoTramTrain.de

The integrated mobility concept of the city of Landau



Stadt Landau in der Pfalz



The university town of Landau is developing its transportation system based on a holistic, integrated mobility concept. To this end, a package of measures has been put together as part of the funding program for climate protection through cycling, which promotes cycling into a new era and connects numerous educational locations and traffic hubs. In addition, extensive measures have been implemented in public transport and for motor vehicle traffic.

www.landau.de

TTK – Your Mobility Expert



Challenging and sustainable transport solutions to connect people in your territory: TTK is an expertise provider for multimodal studies and public transport planning.

With offices in Karlsruhe (Germany), Paris, Lyon and Strasbourg (France), the international character allows TTK to offer a vision of transport and mobility enriched by multiple, and often complementary, experiences and cultures.

www.ttk.de

UITP Regional Training Centre Karlsruhe



Three times a year, the UITP Regional Training Centre Karlsruhe offers training programmes for public transport employees. Those programmes are: Ticketing, Bus planning and Scheduling, Cybersecurity, Autonomous Driving and Mobility as a Service.

In 2025, the Karlsruhe TechnologieRegion will host UITP training programs on the topics of data and business intelligence in public transport, ticketing and fare management as well as intelligent transport system (ITS) and IT technologies for public transport operations.

www.trk.de/mobility

URBANE

The project URBANE - Upscaling Innovative Green Urban Logistics Solutions Through Multi-Actor Collaboration and Physical Internet (PI) – supports the European Commission's goals towards achieving “zero emission last-mile deliveries”.

It will support the transition path towards effective, resilient, safe, and sustainable last-mile transport, through four Light-house Living Labs (LLs): Helsinki (FI), Bologna (IT), Valladolid (ES), and Thessaloniki (GR), that will demonstrate innovative last-mile delivery solutions (Wave 1 solutions).

An Innovation Transferability Platform comprising Digital Twinning Tools and a data-driven Impact Assessment Radar will enable the adaptation and replication of Wave 1 solutions in two Twinning Living Labs in Barcelona and Karlsruhe (Wave 2 LLs).

The Karlsruhe Team consists of City of Karlsruhe, Automotive Engineering Network, SEW-EURODRIVE and partners. The project will run until February 2026.

www.urbane-horizoneurope.eu

www.ae-network.de

Presentations by partners of the Karlsruhe Mobility Lab as part of the Annual POLIS Conference

We look forward to seeing you there!

Wednesday, 27 Nov. 9.00 – 10.30 Parallel Sessions 1	1A Assessing active travel Advanced training course for pedestrian-and-cycle-traffic-planners Jochen Eckart, Baden-Württemberg Institut für Nachhaltige Mobilität (Karlsruhe University of Applied Sciences)	1B Can data spaces accelerate the sustainable mobility pace? Empowering data-driven solutions: The role of open mobility data by MobiData BW® in transforming mobility Florian Stratz, MobiData BW®	1E Air quality and climate protection: two sides of the same coin Using microscopic traffic simulation to model emissions and quantify the air quality impacts of renewing and electrifying fleets Matthias Pfried, PTV Group	1F Unlocking the last mile: innovations in urban freight regioKArgo - Development and implementation of combined passenger and cargo transport Christian Höglmeier & Christoph Rentschler, Albtal-Verkehrs-Gesellschaft mbH
	14.30 – 16.00 Session 2	2G Supporting SUMP Improvement of SUMP-Methodology for Climate Mitigation Niklas Sieber, Fraunhofer Institute for Systems and Innovation Research ISI		
	16.45 – 18.15 Parallel Sessions 3	3B Gearing up cities and regions for automation Should city officials take a different perspective on the deployment of autonomous vehicles? Torsten Fleischer, Karlsruhe Institute of Technology (KIT)	Integrating Citizen Engagement and Modern Technologies to accelerate CCAM Deployment Maximilian Schrapel, Karlsruhe Institute of Technology (KIT)	3G Pathways to climate neutrality How can Baden-Württemberg's digital state wide transport demand model contribute to climate protection? Linda Heine, Baden-Württemberg Ministry of Transport & Volker Waßmuth, PTV Group
Thursday, 28 Nov. 9.00 – 11.15 Parallel Sessions 4	4C Driven by data Exploring the application of data fusion in monitoring sustainable travel in the trans-European transport network Lisa Ecke, Karlsruhe Institute of Technology (KIT)	4E Mobility as a right: DRT and regional public transport in practice – in cooperation with upper Accessible mobility for all – A holistic approach for public transport... and beyond Manuel Quinting, INIT Group		



Site visits to highlights of mobility in the Karlsruhe TechnologyRegion! November 28, 2024, meeting time: 2 p.m.

#1 TRANSPORT TRANSITION IN KARLSRUHE: ACTIVE MOBILITY IN PUBLIC SPACE

Karlsruhe aims to systematically and extensively promote cycling and walking, thus making a significant contribution to reducing CO₂ emissions. Join a cycling tour to witness the transformation firsthand.



© Stadt Karlsruhe

#2 'KARLSRUHE MODEL' AND 'KOMBI'LÖSUNG': EXPERIENCE THE TRAM-TRAIN-SYSTEM AND THE NEW UNDERGROUND OF KARLSRUHE

You can experience both the tram-train system and the underground by riding a historical tram!

#3 VISIT THE NEW DM-HEADQUARTER 'DIALOGICUM'

Join a guided tour of the company headquarter 'dialogicum', that embodies a holistic sustainability concept, featuring a green façade, the use of recycled materials, and prioritising the needs of employees.

#4 HOW TO (SAFELY) GET 5760 KWH ELECTRICITY IN BUSES

Join a guided tour of the new depot to discover the essential features and considerations involved in planning and building an electric bus facility.



© Paul Gärtner

Find out more: www.polisnetwork.eu/
2024-annual-polis-conference

Messe Karlsruhe IT-TRANS | 3 – 5 March 2026

#5 ON-DEMAND MOBILITY WITH AUTONOMOUS VEHICLES IN BADEN-WÜRTTEMBERG'S AUTONOMOUS DRIVING TEST AREA

Innovative mobility systems are being tested in the Test Area for Autonomous Driving Baden-Württemberg and individual mobility is being linked with public transport.



© Paul Gärtner

#6 FOOTBALL MOVES – HOW TO BUILD A NEW STADIUM AND GET 30.000 FANS THERE

Join a guided tour of the new BBBank Wildparkstadion, where you will learn about the traffic management plan for match days of the Karlsruhe second league club and the role bicycles play in it.



As organiser of IT-TRANS, the leading international conference and exhibition for intelligent solutions in passenger transport, Messe Karlsruhe offers a platform for exchange to actively shape the future of passenger transport.

Therefore, Messe Karlsruhe is happy to announce the follow-up event in 2026, which will offer a dedicated stage to showcase future-oriented innovation and digital solutions.

With a new formed Steering, Market and Programme Committee made up of experts from industry, science and transport companies, Messe Karlsruhe identifies the latest trends and topics of the sector and takes IT-TRANS to the next level!

Join us: 3 – 5 March 2026, Karlsruhe Trade Fair Centre

www.messe-karlsruhe.de/en
www.it-trans.org/en

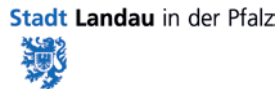


**Technologie
Region
Karlsruhe**

The partners of the Karlsruhe Mobility Lab at Annual POLIS Conference 2024:



Hochschule Karlsruhe
University of
Applied Sciences



In collaboration with:



Contact: TechnologieRegion Karlsruhe GmbH
Emmy-Noether-Strasse 11 | 76131 Karlsruhe | Germany
Telephone: +49 (0)721 40244 712 | info@trk.de

www.trk.de