KARLSRUHE MOVES THE WORLD

Jochen Ehlgötz
Managing Director
of the TechnologieRegion
Karlsruhe GmbH
Together with our partners, the Karlsruhe Technology Region will be presenting itself as a profile region for mobility solutions at IT-TRANS, the international trade fair for public transport at Messe Karlsruhe. With the synergies generated in the innovation triangle of academia, business and the public sector, our region is an innovation system for product development in the mobility sector and for the development of new business models.

We would like to invite everyone with an interest in this field to discover the hotspot for future-oriented mobility solutions in Karlsruhe. We will be presenting our regional flagship projects such as RegioMOVE, the Autonomous Driving Test Area and the Profile Region for Mobility Systems in Market Update Forum A on 7 March from 11:00 to 12:30. In the TRK Forum there will also be a series of more in-depth talks and project presentations on our joint stand no. 120/Foyer on all three days of the exhibition.

Yours sincerely
Jochen Ehlgötz
Market Update Forum A

WEDNESDAY, 7 MARCH 2018, 11:00 – 12:30

KARLSRUHE MOVES THE WORLD:
Cluster for Transport Excellence:

The Karlsruhe TechnologyRegion is a regional innovation system for project and product development in the mobility sector. With the synergies generated in the innovation triangle of academia, business and the public sector, the region is a hotspot for future-oriented mobility solutions. In our seminars you will find out more about the mobility expertise and flagship projects in our region. We offer you an insight into the world of mobility today and tomorrow.
Chairperson/Introduction
Dr. Frank Pagel
Officer Traffic & Quality Management, Karlsruhe Transport Authority (KVV), Karlsruhe

RegioMOVE – One Face to the intermodal customer
Prof. Dr.-Ing. Thomas Schiegel
Head, Institute of Ubiquitous Mobility Systems, Karlsruhe University of Applied Sciences, Karlsruhe

Profilregion – High Performance Center for Mobility Research
Dr.-Ing. Matthias Pfriem
Cluster Manager, Karlsruhe Institute of Technology (KIT), Karlsruhe

Cognitive Mobility 4.0 – for the future of bus and railway transport
Dr. Matthias Haun
Head of Cognitive Interoperation Solutions, ITK Engineering GmbH, Rülzheim

Optimization of Karlsruhe’s network – dealing with high demand and capacity restraints using comprehensive modelling tools
Dr. Rainer Schwarzmann
Managing Director/Pierre-Alain Böswillwald, Project Manager, Transport-Technologie-Consult Karlsruhe GmbH (TTK), Karlsruhe

Smart windows and ubiquitous traveller information systems
Dr. Alexander Viehl
Division Manager Intelligent Systems and Production Engineering, FZI Research Center for Information Technology, Karlsruhe

Test area for automated driving – Technology building blocks and initial operation
Thomas Mager
Business Development Manager, Volocopter GmbH, Bruchsal

Volocopter – Reinventing urban mobility

Smart windows and ubiquitous traveller information systems
Prof. Dr.-Ing. Thomas Schiegel
Head, Institute of Ubiquitous Mobility Systems, Karlsruhe University of Applied Sciences, Karlsruhe

Test area for automated driving – Technology building blocks and initial operation
Dr. Alexander Viehl
Division Manager Intelligent Systems and Production Engineering, FZI Research Center for Information Technology, Karlsruhe

Volocopter – Reinventing urban mobility

Dr. Rainer Schwarzmann
Managing Director/Pierre-Alain Böswillwald, Project Manager, Transport-Technologie-Consult Karlsruhe GmbH (TTK), Karlsruhe

Optimization of Karlsruhe’s network – dealing with high demand and capacity restraints using comprehensive modelling tools
Dr. Alexander Viehl
Division Manager Intelligent Systems and Production Engineering, FZI Research Center for Information Technology, Karlsruhe

Volocopter – Reinventing urban mobility

Thomas Mager
Business Development Manager, Volocopter GmbH, Bruchsal

Dr. Rainer Schwarzmann
Managing Director/Pierre-Alain Böswillwald, Project Manager, Transport-Technologie-Consult Karlsruhe GmbH (TTK), Karlsruhe

Optimization of Karlsruhe’s network – dealing with high demand and capacity restraints using comprehensive modelling tools
Dr. Alexander Viehl
Division Manager Intelligent Systems and Production Engineering, FZI Research Center for Information Technology, Karlsruhe

Volocopter – Reinventing urban mobility

Thomas Mager
Business Development Manager, Volocopter GmbH, Bruchsal

Dr. Rainer Schwarzmann
Managing Director/Pierre-Alain Böswillwald, Project Manager, Transport-Technologie-Consult Karlsruhe GmbH (TTK), Karlsruhe

Optimization of Karlsruhe’s network – dealing with high demand and capacity restraints using comprehensive modelling tools
Dr. Alexander Viehl
Division Manager Intelligent Systems and Production Engineering, FZI Research Center for Information Technology, Karlsruhe

Volocopter – Reinventing urban mobility

Thomas Mager
Business Development Manager, Volocopter GmbH, Bruchsal
Autonomous driving is corner stone for various new mobility concepts – not only in the field of passenger cars. Our model demonstrates, how autonomous driving can work in a bus depot and help to reduce operating costs. It was built up in a joint study of the Karlsruhe Institute of Technology (KIT), the FZI Research Center for Information Technology and the Stuttgarter Straßenbahnen AG within the “Profilregion: High Performance Cluster for Mobility Research”.

### Programme TRK Forum

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Event</th>
<th>Speaker</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tuesday, 6 march</td>
<td>11.00 to 11.30</td>
<td>The Karlsruhe test area for autonomous driving Baden-Württemberg</td>
<td>Dr. Alexander Pischon, Chief Executive Officer, Karlsruhe Transport Authority (KVV), Karlsruhe, Germany</td>
<td>Karlsruhe, Germany</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Words of Welcome</td>
<td>Britta Wirtz, Managing Director, Karlsruher Messe- und Kongress GmbH, Karlsruhe, Germany</td>
<td>Karlsruhe, Germany</td>
</tr>
<tr>
<td></td>
<td>12.00 to 12.30</td>
<td></td>
<td>Mohamed Mezghani, Secretary General, UITP, Brussels, Belgium</td>
<td>Karlsruhe, Germany</td>
</tr>
<tr>
<td>Wednesday, 7</td>
<td>10.00 to 10.30</td>
<td>KARLSRUHE MOVES THE WORLD: Cluster for Transport Excellence</td>
<td>Jochen Ehlgötz, Managing Director, Karlsruhe Technology-Region, Karlsruhe, Germany</td>
<td>Karlsruhe, Germany</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Test area for automated driving – Technology building blocks and initial operation</td>
<td>Dr. Alexander Viehl, Division Manager Intelligent Systems and Production Engineering, FZI Research Center for Information Technology, Karlsruhe, Germany</td>
<td>Karlsruhe, Germany</td>
</tr>
<tr>
<td></td>
<td>11.00 to 11.30</td>
<td>Integrating public transport into the travel demand model mobiTopp</td>
<td>Lars Briem, Institute for Transport Studies, Karlsruhe Institute of Technology (KIT), Karlsruhe, Germany</td>
<td>Karlsruhe, Germany</td>
</tr>
<tr>
<td></td>
<td>11.45 to 12.15</td>
<td>Success potential through data analytics</td>
<td>Lennart Willms, ITK Engineering GmbH, Rülzheim, Germany</td>
<td>Karlsruhe, Germany</td>
</tr>
</tbody>
</table>

**Tuesday, 6 March 2018**

11.00 to 11.30

The Karlsruhe test area for autonomous driving Baden-Württemberg

**Dr. Alexander Pischon**, Chief Executive Officer, Karlsruhe Transport Authority (KVV), Karlsruhe, Germany

12.00 to 12.30

Words of Welcome

**Britta Wirtz**, Managing Director, Karlsruher Messe- und Kongress GmbH, Karlsruhe, Germany

**Mohamed Mezghani**, Secretary General, UITP, Brussels, Belgium

**Wednesday, 7 March 2018**

10.00 to 10.30

KARLSRUHE MOVES THE WORLD: Cluster for Transport Excellence

**Jochen Ehlgötz**, Managing Director, Karlsruhe Technology-Region, Karlsruhe, Germany

10.30 to 11.00

Test area for automated driving – Technology building blocks and initial operation

**Dr. Alexander Viehl**, Division Manager Intelligent Systems and Production Engineering, FZI Research Center for Information Technology, Karlsruhe, Germany

**Thursday, 8 March 2018**

11.00 to 11.30

Integrating public transport into the travel demand model mobiTopp

**Lars Briem**, Institute for Transport Studies, Karlsruhe Institute of Technology (KIT), Karlsruhe, Germany

11.45 to 12.15

Success potential through data analytics

**Lennart Willms**, ITK Engineering GmbH, Rülzheim, Germany
There will be a series of talks and project presentations on our joint stand no. 120/Foyer on all three days of the exhibition. We look forward to seeing you there!
The FZI Research Center for Information Technology is a non-profit institution for applied research in information technology and technology transfer. Its task is to provide businesses and public institutions with the latest research findings in information technology. It also qualifies young researchers for their career in academics or business as well as self-employment.

Facts and Figures
Legal Form: Non-profit foundation under public law
Foundation: 1985
209 Employees | 98 Visiting Researchers | 347 Research Assistants
Overall Budget 2016: 17.8 Million €
227 Projects: 158 Industrial Projects, 69 Public Projects
10 Dissertations | 95 Diploma and Master Theses | 83 Term Papers and Bachelor Theses
(as of 2016)

www.fzi.de/en
Led by professors from different faculties, research teams at the FZI interdisciplinarily develop and prototype concepts, software, hardware and system solutions for their clients. Scientific excellence and interdisciplinary practice are therefore well established at the FZI.

Led by the FZI, the city of Karlsruhe, Karlsruhe Institute of Technology, Karlsruhe University of Applied Sciences, Heilbronn University, Fraunhofer Institute of Optronics, System Technologies and Image Exploitation and the city of Bruchsal as well as further associated partners create the Test Area Autonomous Driving Baden-Wuerttemberg. The Karlsruhe Transport Authority as an external and neutral operating company enables the operation of the test area.

In the Test Area Autonomous Driving Baden-Wuerttemberg, vehicle systems, additional services, and applications for automated and connected driving can soon be tested under real traffic conditions, for instance automated driving of buses or street cleaning services. Furthermore, this is an opportunity to update the regulatory and legal conditions.

Contact
Dr. Alexander Viehl
Phone: +49 (0)721 9654-414
E-mail: viehl@fzi.de
Karlsruhe University of Applied Sciences offers degree programs in the engineering, computer science, business, and media fields. These programs are taught across the following six faculties: Architecture and Civil Engineering, Electrical Engineering and Information Technology, Information Management and Media, Computer Science and Business Information Systems, Mechanical Engineering and Mechatronics, as well as Management Science and Engineering.

Facts and Figures
Student body (approx.): 8,200  
Full-time faculty: 204  
Part-time faculty: 18  
Full- or part-time lecturers and instructors: 461 plus 6  
Staff: 528

www.hs-karlsruhe.de
Institute of Ubiquitous Mobility Systems

Mobility is a major topic in the present and future, combining many areas including computer science. Starting with the basic task of moving individuals from one place to another, mobility develops into a complex system of interacting vehicles, vehicle systems, goods, people and information. Ubiquitous mobility systems enable flexible, intelligent Systems of Systems to support mobility in all situations as best as possible and to combine new services and technologies into a “mobility experience” for mobile customers.

The Institute of Ubiquitous Mobility Systems (IUMS) carries out research in the field of mobility systems, especially at the interface between interactions and models in ubiquitous systems. The expertise is therefore found in omnipresent, distributed systems (ubiquitous computing), in human computer interaction and usability of ubiquitous systems as well as in the modelling of complex systems and processes for adaptive systems.

Contact
Institute of Ubiquitous Mobility Systems (IUMS)
Faculty of Information Management and Media
University of Applied Sciences Karlsruhe
Moltkestraße 30, 76133 Karlsruhe
Prof. Dr.-Ing. Thomas Schlegel
Director of Institute
Phone: +49 (0)721 925-2569
E-Mail: thomas.schlegel@hs-karlsruhe.de
INIT is the worldwide leading supplier of integrated planning, dispatching, telematics and ticketing systems for buses and trains.

For more than 30 years, INIT has been assisting transport companies in making public transport more attractive, faster and more efficient.

**Facts and Figures**
- More than 30 years of experience
- More than 700 employees
- More than 600 satisfied customers
- More than 100,000 vehicles
- More than 120 ITCS/RTPI systems
- More than 130 Ticketing systems
- More than 3,000 TSP installations

www.initse.com
Together we shape the future of mobility

Mobility is constantly evolving. New technologies and business model continuously appear.

Public transport providers need a reliable technology partner with far-sighted concepts to help navigate the future of mobility.

We understand the specific needs and challenges our customers face each day. To provide them maximum support, we cover all operational processes within a fully integrated ITS system and offer a wide variety of services to make their life easier. Every single day.

More than 600 customers rely on our integrated solutions to support them with their daily tasks:
- Planning & Dispatching
- Ticketing & Fare Management
- Operations Control & Real-Time Passenger Information
- Analyzing & Optimizing

They also benefit from our proven service & maintenance support.

Contact
INIT GmbH
Käppelestrasse 4-10, 76131 Karlsruhe, Germany
Andrea Mohr-Braun
Marketing Director
Phone: +49 (0)721 6100-113
Mobile: +49 (0)172 6181-113
E-mail: amohr-braun@initse.com
Founded in 1994, ITK Engineering GmbH, is an internationally active technology company. Its customers are at home in railway engineering, building and urban technology, automotive, robotics, and medical systems. Our interdisciplinary team offers expertise in embedded software engineering, safety, security, networking, and interoperability as well as wired and wireless communications and operating systems.

In addition to tailored technical consulting and development services, the company provides a 360-degree spectrum of services for the Internet of Things. ITK employs more than 1,000 people at its headquarters in Rülzheim, Germany and nine branch offices throughout Germany. In addition, ITK is represented in Austria, Japan, Spain, and the United States.

**Facts and Figures**

Fields of industry: Railway Engineering, Building and Urban Technology, Automotive, Commercial Vehicles, Robotics, Industry 4.0, Medical Systems, Aerospace, Agricultural Machines, Motorsports

Employees: 1,100 worldwide

Offices: Austria, Germany, Japan, Spain and the U.S.

[www.itk-engineering.com](http://www.itk-engineering.com)
[www.itk-career.com](http://www.itk-career.com)
Your Compass for the IoT World

The Internet of Things leads to changes in work environments and processes within companies. We feel a duty to help our customers and their employees prepare perfectly for digitalization, which is why we provide consulting and training. ITK also serves as a development partner to guide customers all the way – from conceptualization and development to production-ready implementation. We offer tailored IoT solutions for data analytics, connected buildings, urban automation, and energy management as well as production optimization, including state-of-the-art security technology and intelligent systems.

We actively help define tomorrow’s technologies with our diligent work on committees and in many research alliances. The insights we attain in these collaborations flow straight into our knowledge management – and on to our customers.

Contact
ITK Engineering GmbH
Im Speyerer Tal 6
76761 Ruelzheim, Germany
Phone: +49 (0)7272 7703-0
E-mail: industry40@itk-engineering.com
From 6 to 8 March 2018, IT and public transport experts from all over the world meet in Karlsruhe to exchange, discuss, and invent IT solutions for tomorrow.

IT-TRANS is THE leading Conference and Exhibition worldwide when it comes to digitalisation in public transport. Here is where the sector meets to drill down into the issues such as account-based ticketing, the API economy, on-demand travel

Facts and Figures
40+ Speakers
14 Conference Sessions
500+ Conference Attendees
5,000+ International Visitors
60+ countries
2 Networking Events
1 Technical Visit
250+ Exhibitors
10+ Market Updates

www.it-trans.org
and numerous others which are changing and disrupting the business.

Through a variety of session formats, the Conference focuses on innovation and concrete recommendations for the implementation of IT solutions. This will be framed in high level plenary sessions, putting the issues into the context of the impact of digitalisation on the sector, the smart city, the smart traveller and the future of urban mobility. The Conference programme is complemented by the Market Update Forums in the Exhibition where IT-TRANS exhibitors share their experiences and present their products and services.

It is the mission of the joint organisers of IT-TRANS, UITP and Karlsruher Messe- und Kongress GmbH (KMK), to provide the framework and the forum where new impetus will be given and where everyone - irrespective of the conditions in their local public transport market - can understand the latest trends and find intelligent solutions to further grow their business, to become more efficient and more attractive.

For further information, please visit: www.it-trans.org

Contact

Project Management (KMK)
Jochen Georg, Head of Team
Phone +49 (0)721 3720 5140
Fax +49 (0)721 3720 99 5140
E-mail: jochen.georg@messe-karlsruhe.de
Karlsruhe TechnologyRegion Mobility Portal

Intelligent mobility. Information on all aspects of mobility in the region in real time.

Unique in Germany, mobility can be planned online in the Karlsruhe TechnologyRegion. Save time looking for parking, finding the right tram or planning a tour of the region: at mobilitaet.trk.de you can now also find information on Germersheim, Wörth and Bruchsal.

With 300,000 page views per day, our mobility portal is already one of Germany’s leading portals. Make the most of intelligent mobility – in real time.

mobilitaet.trk.de
- Traffic flow and traffic web cam
- All tram and bus stops with live departures and route information
- Current construction sites, construction site preview
- Car parks with numbers of vacant spaces
- P+R, P+M, parking ticket, parking disc
- Charging stations for electric vehicles
- Disabled parking spaces
- Car sharing, bicycle hire
- Cycle paths
- Winter maintenance on roads and cycle paths

Contact
E-mail: mobilitaetsportal@technologieregion-karlsruhe.de
Karlsruhe Institute of Technology (KIT) creates and imparts knowledge for the society and the environment. From fundamental research through to application, it excels in a broad range of disciplines, i.e. in natural sciences, engineering.

Facts and Figures
365 professors
9239 employees
25,000 students
851 million € annual budget

www.kit.edu
The KIT Mobility Systems Center
The KIT Mobility Systems Center pools the multi-disciplinary competencies and resources in the field of ground-based traffic to develop solutions for tomorrow’s mobility, aiming at the best possible integration and coordination of different means of transport for passenger and goods in a concept of Seamless Mobility. About 800 KIT employees at more than 35 institutes focus on mobility research at KIT. The clustering of research activities in the field of mobility systems considerably strengthens the innovation potential of KIT and represents a major element of KIT’s profile.

The Institute for Transport Studies
The interdisciplinary concept of the Institute for Transport Studies at KIT aims at an efficient and sustainable organization of traffic. The key areas of research activity are the assessment and analysis of all determinants of travel behavior, modeling and simulation of travel demand based on the findings of empirical research, and traffic engineering with a focus on modelling and simulation of traffic flow.

Contact
Karlsruhe Institute of Technology
Institute for Transport Studies
Otto-Amman-Platz 9, 76131 Karlsruhe
Prof. Dr.-Ing. Peter Vortisch
Phone: +49 721 6084 2251
E-mail: info@ifv.kit.edu
The Rhine-Neckar Metropolitan Region encompasses vivid cities and communities where many successful industry companies, renowned research facilities, universities and cultural institutions are located. These regional players work closely together to form an alliance of strong partners that contributes to make Rhine-Neckar one of Germany’s most attractive regions for living and working. A prolific cultural scene, professional and popular sport events and impressive natural surroundings enrich the Rhine-Neckar region just as the wide range of attractive jobs in business, research and teaching does. The wealth of nearby possibilities allows its 2.4 million residents to work smart and live well.
Along with their strong sense of involvement, open-mindedness, creativity and a confident, active civic spirit the Rhine-Neckar people ensure the region’s future prosperity.

By 2020, the Rhine-Neckar Metropolitan Region wants to become a role model in Germany’s energy transition. The „Regional Energy Concept“ presented by the Verband Region Rhein-Neckar serves as a compass on this route. Electromobility, renewable energies, intelligent energy storage systems and energy efficiency are the central field of action.

The cluster network „Energy and Environment“ of the department “Energy & Mobility“ within the Rhine-Neckar Metropolitan Region is an alliance of around 70 companies and research institutions in the fields of energy efficiency, renewable energies and electromobility.

**Contact**

Metropolregion Rhein-Neckar GmbH  
M 1, 4-5, 68161 Mannheim  
Bernd Kappenstein  
Department Manager Energy & Mobility  
Phone: +49 (0)621 10708-430  
E-mail: Bernd.Kappenstein@m-r-n.com  
Luise Markert, Referent Digitization and E-Mobility  
Phone: +49 (0)621 10708-431  
E-mail: Luise.Markert@m-r-n.com
MG Industrieelektronik, based in Ettlingen, Germany has been developing manufacturing and marketing information systems for public transportation systems for years. The product portfolio consists of systems for influencing traffic light signals via automatic passenger counting systems, mobile and stationary passenger information systems, as well as the associated telematics and radio transmission systems. The characteristics of the products made by the company, specially adapted to bus and railway operations, are Innovative and reliable.

„Infotainment“ is the key word: information and entertainment in mobile vehicles. MG Industrieelektronik offers its customers with InfoVision a system for these requirements. Various sizes of displays are controlled by InfoVision Pc which serves as a multimedia platform with the operating system Linux.

Facts and figures
25 Employee
4 Mio. Turnover p.a

MG Industrieelektronik GmbH

www.mg-industrieelektronik.de
On the InfoVision displays the passengers are informed about the current route as well as any operational changes. It is also possible to display further information such as news, weather, touristic events and advertising. Highlights of the product line are the TFT displays. They convince by design, brilliant pictures as well as constructive details.

Even at less travelled or remote stops, passengers should be informed about operational concerns. Many stops are located at places where a power supply can only be installed with considerable effort. The operation of the InfoStation with solar cells and the use of components optimized for energy consumption offer the possibility of independent Power supply. Displays based on E-ink Technology are used here.

MG Industrieelektronik has designed the EYEONEsmart system for passenger counting in public transport systems. It is based on a counting sensor with a stereo camera system. One sensor is required per door.

In contrast to conventional sensors, a three-dimensional image is generated from the door area. Based on this image, the height of all scanned objects is determined. By means of this method, even in case of a large passenger volume, the individual person can be detected with high reliability.

Contact
Hans Ebert
MG Industrieelektronik GmbH
Nobelstraße 7, D-76275 Ettlingen
Phone  +49 (0)7243 5801-0
Mobile  +49 (0) 171 339 17 20
Fax    +49 (0)7243 5801-20
E-mail: hebert@mg-industrieelektronik.de
“Profilregion: High Performance Center for Mobility Research” is the association of Karlsruhe’s institutions for research and teaching in the field of mobility systems:

- Fraunhofer-Institute for Chemical Technology (ICT) with its group “New Drive Systems” (NAS)
- Fraunhofer-Institute for Optronics, System Technologies and Image Exploitation (IOSB)
- Fraunhofer-Institute for Systems and Innovation Research (ISI)
- Fraunhofer-Institute for Mechanics and Materials (IWM)
- FZI Research Center for Information Technology
- Karlsruhe Institute of Technology (KIT)
- Karlsruhe University of Applied Sciences (HsKA)

Facts and Figures

Seven leading institutions for research and teaching

Network of >25 industrial partners

Funded by the Ministry of Science, Research and the Arts and the Ministry of Economic Affairs, Labour and Housing in Baden-Württemberg and as a national High Performance Center by the Fraunhofer-Gesellschaft.

www.profilregion-ka.de
It is an open innovation platform for a cooperative exchange with the industry, economy, politics and other networks. For its activities, it utilises the rich research infrastructure and living labs in Karlsruhe, e.g. Test Area Autonomous Driving Baden-Württemberg, ef euCampus, eWayBW, ...

**Mission**
The High Performance Center for Mobility Research bundles and interconnects competencies and experts across disciplines and organisations. Their joint goal is to explore and develop forward-looking mobility solutions in an open innovation platform.

It is the single point of contact for partners from its network and customers. It acts as an initiator and a consultant for the transformation of the mobility system and facilitates the transfer of new scientific findings into the economic and societal implementation.

**Contact**
Head Office Profilregion Mobilitätssysteme Karlsruhe c/o KIT – Institute of Vehicle System Technology Rintheimer Querallee 2, 76131 Karlsruhe
Dr.-Ing. Matthias Pfriem
Cluster Manager
Phone: +49 (0)721 608-45366
E-mail: pfriem@kit.edu
Mobility as a Service (MaaS) has become the most disruptive innovation in the transportation sector. Smart cities rely on a mobility mix that is demand-responsive – whether it is shared bikes or connected automated vehicles. To ensure a high quality of life in urban centres, traffic safety and emissions.

Facts and Figures

> 20 subsidiaries around the world
> 37 years of experience and innovation
> 2,500 cities use PTV technology
> 700 employees worldwide

www.ptvgroup.com
modelling are equally important, while real-time traffic management and prediction technology help make the best use of an existing infrastructure. PTV Group is dedicated to deliver software solutions for the future of mobility.

While public transport is the backbone of every city’s transport network, MaaS fleets come in to bridge the gap where individual demands call for more bespoke routes. As the integration of additional fleets into a multimodal system affects the entire network, PTV MaaS Modeller is the right tool to calculate the key performance indicators of new business models. The PTV solution is based on a traffic transportation model of the city in question and on PTV’s tour optimisation algorithms bringing journey requests and optimised routes together. The key is always to find an adequate balance between the operator’s objective to minimise the number of vehicles and the passengers’ desire to reach their destinations quickly. PTV MaaS Modeller is ideal to investigate this trade-off before introducing a new mobility service in any city.

Contact
PTV Group
Haid-und-Neu-Strasse 15
76131 Karlsruhe, Germany
Phone: +49 (0) 721 9651-0
E-mail: info@ptvgroup.com
The success of the tram-train concept was the starting point of TTK, which was established as a tram-train and light rail competence centre. TTK established itself as an independent company offering planning and consulting services for the Public Transport market.

Over the past 20 years the company has advanced its area of expertise and its scope of activities. TTK is known for all kind of strategic transport studies and public transport

**Facts and Figures**

Founded 1996
Around 30 German and French staff members
Main Office in Karlsruhe
Branch Office in Lyon

[www.ttk.de](http://www.ttk.de)
planning thanks to an international team of professionals that collaborate within projects.

We are offering a wide range of services for the design and planning of railway, tram-train and tram projects, starting with initial assessments of technical feasibility, followed by detailed design and going all the way of tendering and construction management.

Beside pure infrastructure projects, we are involved in strategic planning for railway, light rail, bus solutions to optimize the urban public transport network and mobility, developing long term transport plans and PT Visions.

The holistic approach of TTK provides important foundations even in apparently „only“ strategic projects without having to involve third parties. This applies especially to the reliable estimation of the investment costs and the technical feasibility of any public transport solution. In this context TTK’s background as a daughter of PTV Transport Consult and AVG provides further capabilities.

Contact
Gerwigstraße 53, D-76131 Karlsruhe
Phone: +49 (0)721 62503-0
Fax: +49 (0)721 62503-33
E-mail: rainer.schwarzmann@ttk.de
Karlsruhe, a known name to the national and international public transport sector. The world renown fan-shaped city is subjected to the intimate collaboration of the Albtal-Verkehrs-Gesellschaft (AVG) and the Verkehrsbetriebe Karlsruhe (VBK).

The success story of the “Karlsruher Modell” commenced 25 years ago, when the AVG and the VBK enabled passengers

**Verkehrsbietsche Karlsruhe GmbH**
**Albtal-Verkehrs-Gesellschaft mbH**

Karlsruhe, a known name to the national and international public transport sector. The world renown fan-shaped city is subjected to the intimate collaboration of the Albtal-Verkehrs-Gesellschaft (AVG) and the Verkehrsbetriebe Karlsruhe (VBK).

The success story of the “Karlsruher Modell” commenced 25 years ago, when the AVG and the VBK enabled passengers

**Facts and Figures**

- Employees VBK/AVG: 1,305 / 833
- Passenger VBK/AVG: 106,4 m. / 75 m.
- Rolling stock VBK/AVG: 123 / 191
- Vehicular kilometres VBK/AVG: 13,1 m. km / 21,7 m. km

Updated Dec. 2016

www.avg.info      www.vbk.info
to comfortably reach the city centre from the outer region without having to change trains. Ever since, the cooperation between the two municipal transport companies has been intensified and the rail network notably enlarged in face of the increasing demand. The ever-growing number of passengers speak volumes: while the VBK is conveying 106 m. passengers per year through their tram and bus network, about 75 m. passengers make use of the light rail network of the AVG.

Due to its appeal, the “Karlsruher Modell” has been imitated globally.

The mutual control centre of the AVG and VBK is the perfect example to see how an ideal operation flow can be implemented efficiently and successfully. Not only does the inner-city and regional traffic get supervised and coordinated, in the near future the control centre will oversee the state-of-the-art test field for automated and interconnected driving. Karlsruhe is remaining true to itself as an innovative instigator of the public transport sector.

Contact

VBK - Verkehrsbetriebe Karlsruhe GmbH
Tullastraße 71, 76131 Karlsruhe
Call: +49 (0)721 6107-5885, E-mail: info@vbk.karlsruhe.de

Albtal-Verkehrs-Gesellschaft mbH
Tullastraße 71, 76131 Karlsruhe
Call: +49 (0)721 6107-5885, E-mail: info@avg.karlsruhe.de
Facts and Figures

Industry: Autonomous Air Taxis
Founded in: 2011 by Stephan Wolf and Alex Zosel
Management: Florian Reuter, CEO, Jan-Hendrik Boelens, CTO

Technical specs:
Max. speed: 100 km/h
Max. range: 27 km
Max. altitude: 2000 meters
Max payload: 160 kg - 2 passengers (2x 80 kg)
Batterie type: Lithium ion – exchangeable battery packs

Volocopter GmbH is the global leader in the development of vertically launching, fully electrical multicopters for the transport of people as autonomous air taxis. The technical platform is extremely flexible and permits piloted, remote controlled and fully autonomous flight. In addition, the
unique design offers a huge degree of safety based on the high redundancy of all critical components. The company’s stated objective is to make every human’s dream of flying come true and to help modern cities resolve their increasing mobility issues.

2011 the Germany-based company wrote aviation history with the world’s first manned flight with a purely electrical multicopter. Since then the young team has set new milestones: In 2016 Volocopter was the worldwide first multicopter granted provisional licensing, in this case by the German aviation authority. In 2017 the aviation start-up entered into an agreement with RTA Dubai over the global premiere of an autonomously flying air taxi, which was demonstrated in a fully autonomous flight in September 2017.

Volocopter has raised over 30 million Euros in capital in their last funding round in 2017 which included strategic partners Lukasz Gordowski, Intel, and Daimler. The funds will be used to further grow the team.

Contact
Helena Treeck, Public Relations
E-mail: press@volocopter.com
Zeiloch 20, 76466 Bruchsal, Germany