ACHTUNG!
Rückenstärke angelegt auf 8 mm, muss ggf. angepasst werden.
CLUSTER REPORT
Transport, Mobility and Logistics in Berlin-Brandenburg

THE GERMAN CAPITAL REGION
excellence in mobility
Transport, Mobility and Logistics

Quality of life and economic growth are strongly affected by transport, mobility and logistics. The enhancement of value chains in these sectors, from research to production to commercial application, contributes to the increase of industrial capabilities and employment. With the establishment of a joint cluster for transport, mobility and logistics, the federal states of Berlin and Brandenburg agreed to aim for further growth-oriented development while conserving natural resources. The cluster focuses on networks that have already been developed, intensifies the region’s expertise with development aimed at continuity and makes important contributions to future transport systems.

Fields of activity

The five fields of activity cover the main transport modes – automotive, railway technologies, aeronautics and aerospace – as well as the cross-cutting topics of logistics and intelligent transport systems. This thematic scope is one of the major cluster strengths. It promotes cooperation between industry and the sciences as well as the use of innovative ideas and products from the different disciplines. Important markets lie outside national borders. The cluster therefore focuses its support on small and medium-sized enterprises (SMEs) and uses relevant instruments and projects for market development and involvement in international RTD partnerships.

Cluster figures (number of jobs):

- **Railway technology:** 20,400
- **Automotive:** 21,100
- **Intelligent Transport Systems (ITS):** 4,000
- **Logistics:** 56,400
  (180,000 in logistics activities)
- **Aeronautics and aerospace:** 7,100
  (17,000 incl. services and operators)

Plus services and operators spanning the entire cluster, approx. 38,500

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The TSB Technologiestiftung (Technology Foundation) Berlin stands for innovation and technological development in the capital region. It promotes science and supports the economy. The foundation’s work focuses on strategy development, education and scientific communication.

The TSB Innovationsagentur Berlin GmbH – a 100% subsidiary of the TSB Technologiestiftung Berlin – helps companies and research institutes in the Berlin-Brandenburg region become more innovative and competitive. TSB operates within the framework of the innovation policy of the State of Berlin at the interface between science and industry. In this context, TSB and its partners are responsible for implementing and developing the Joint Innovation Strategy of the States of Berlin and Brandenburg (innoBB). The core tasks of TSB Innovationsagentur are cluster management, network creation and technology transfer in the fields of life science and healthcare, transport and mobility, energy technology, optics and microsystem technology, information and communication technology.

First Stop: Berlin Partner GmbH

Berlin Partner GmbH is the state of Berlin’s corporation for economic development and location marketing. Its business promotion divisions assist investors wishing to start a business here and help Berlin companies expand, internationalize and secure their economic futures in Berlin. Berlin Partner markets the city’s strengths and potential, both nationally and internationally, and uses the “be Berlin” campaign to promote the capital as a strong brand. As a public-private partnership, the corporation is supported by powerful partners – 236 companies and scientific institutes are currently part of the “Berlin-Partner Network”.

Berlin Partner is the main contact for companies and offers customized, individualized services from finding free, compact, competent and naturally confidential consultations in matters relating to business, innovation, technology and export promotion. As the State’s energy agency, we are also the contact for companies and communities wishing to find out more about energy efficiency. We work closely with the InvestitionsBank of the State of Brandenburg (ILB) and BC Brandenburg Capital GmbH to support industrial location, investment and start-up projects. We can thus offer customers in-depth professional advice on incentive tools provided by the State, the Federal Government and the EU as well as financing options. We market the German capital region in coopera-
ogy (ICT) as well as technology-oriented industrial sectors.

In the cluster management of innoBB, TSB Innovationsagentur closely cooperates with Berlin Partner GmbH and ZukunftsaAgentur Brandenburg. The clusters healthcare and transport, mobility and logistics are under the auspices of TSB.

To develop R&D network projects at regional, national and international levels, TSB supports the following as part of the innovation strategy:

- Identification of topics and supporting programmes
- Consortium forming, costing and application preparation
- Project management and administration

The handling of the project management is an option if the consortium wishes to have a neutral coordinator. TSB Innovationsagentur offers companies from the Berlin-Brandenburg region assistance with internationalisation mainly by means of involvement in European R&D projects that have the potential to develop into international development partnerships.

www.tsb-berlin.de

a location, to financing and funding issues to hiring personnel. Berlin Partner provides information about areas of growth and industries with future potential. It also promotes Berlin as an attractive economic and scientific center, creative capital, cultural and sports metropolis and a livable city. The activities are aimed at investors as well as decision makers and facilitators in the fields of business, science, politics, culture and the media.

Berlin Partner offers a unique type of service through its Berlin Business Location Center. All important economic information about Berlin is available here, free of charge. Industry data, real estate offers, floor plans, geo-data, a 3D model of the city with an integrated solar atlas, as well as labor market and structural information can be accessed in the showroom in Berlin and via the Internet. Companies are supplied first-hand multi-media information from one source.

Berlin Partner effectively enables growth by bringing people, companies and new markets to Berlin.

www.berlin-partner.de

settlement through business and industry information, customised location packages and offer assistance in finding the right space and personnel as well as financing. We assist companies already located in the area with expansion investments, introduction of new technologies, cooperation in industry networks and with scientific institutions, with the rational use of energy as well as with the penetration of national and international markets. The services of the ZAB include the development of start-up concepts and applications for subsidies.

www.zab-brandenburg.de
Background

Berlin-Brandenburg is world famous for being a centre of excellence for rail technology. With over 100 companies and more than 20,400 employees, it is one of the largest sectoral locations in Europe. With leading system manufacturers such as Siemens, Bombardier and Stadler as well as numerous component suppliers, all main segments of the value chain are well represented in the region. These range from vehicle production to track construction to signalling equipment and services. This unique concentration of research and development expertise and industrial manufacturing in the largest rail locations of Berlin, Hennigsdorf and Brandenburg-Kirchmöser has shaped the image of the region as a leading rail centre of excellence. Important transport operators such as Deutsche Bahn, Veolia Verkehr, the Berlin urban rail and BVG, Germany’s largest local transport company, have their main offices in the capital, generating dynamic economic integration and creating high employment levels.

Berlin-Brandenburg is also an internationally acclaimed location of science centres. The technical universities in Berlin and Cottbus as well as the Brandenburg University of Applied Sciences offer significant innovation potential and strategically secure engineering competence.

The fact that the capital region is host to “InnoTrans”, the foremost global trade fair of the sector, simply underlines the importance of this economic and scientific location. With more than 2,200 exhibitors, an exhibition area of over 140,000 m² and 105,000 trade visitors from over 110 countries, “InnoTrans” is the largest showcase for international rail technology.

Trends and Projects

The sustained expansion of regional key skills for future rail systems is generated by integration into well-known international projects (EUDDplus, RailEnergy, ECORailS, etc.).

As in all metropolitan areas, regional passenger rail transport is generating inherent advantages in efficiency and ecology over cars in Berlin and Brandenburg. In order to maintain this advantage in view of lower future emission levels of cars, targeted projects such as ECORailS were developed to increase the energy efficiency and environmental friendliness of regional rail transport services.

The EUDDplus project coordinated by the transport and mobility department of the TSB Innovationsagentur Berlin is making the decisive step towards standardisation and harmonisation of a future European driver’s cab for locomotives. Numerous other interdisciplinary projects are linking operators with partners from science and industry to promote the development of innovative solutions which will raise the competitiveness of rail as a transport system.

European projects to optimise university education such as “FutuRail” and “SkillRail” are providing an essential contribution to maintain and expand the pool of specialists and to encourage key players. The joint initiative of 48 leading European university and research institutes, EURNEX e.V., has its main office in Berlin. An Advisory Board staffed with top-class members promotes and initiates interdisciplinary research and development to raise the competitiveness of rail transport on a European basis. The CETRRA and SMARTRAIL projects utilise the specialist knowledge concentrated under the EURNEX umbrella and provide access to highly qualified research capabilities for small and medium sized companies. International exchange and cooperation with research and development institutes outside the European Union are also promoted on a long term basis.

Outlook

Berlin and Brandenburg lie at the intersection of the most important pan-European transport axes. Already, more than half of all goods flows in rail transport are cross-border. In view of the dynamic growth of the international goods and passenger transport
Berlin and Brandenburg form the leading sectoral competence centre in Germany and Europe. This is where a long tradition meets the tremendous innovative force of a sunrise industry.

sector, emphasis lies on harmonisation of the various rail systems in Europe.

The challenges posed by competition and co-modality require multi-disciplinary R&D cooperation at a European level. The technology platform ERRAC is working on a European consensus and common strategy. On a regional basis, the main priority is to intensify cooperation between industry and science, in particular with small and medium sized companies. This is reflected in the development strategy of regional rail centres such as Brandenburg-Kirchmöser.

The capital region of Germany sees itself as a driving force for a competitive rail system of the future and a flourishing European centre for training, research and development/engineering in rail transport systems.

Germany’s capital region has traditionally been one of Europe’s leading centres of rail excellence.

Reliable Power.
PCS Rail Puts Progress on Track.

Small, lightweight, reliable and economical – PCS Rail is a synonym for the latest auxiliary power supply systems for rail vehicles of all types. Whether regional transit or long-distance, tram or high-speed train; the specific requirements for each solution are combined using a modern, energy efficient technical system to ensure a well thought-out integrated concept. For further information please visit www.pcs-converter.com

Battery charger units for high speed trains
Auxiliary power supply for double deck coaches and trams
Pre-assembly components
Excellent European Transport Research

The main focus of the European research network Transport & Mobility (EURNEX e.V.) is the integration of fragmented rail research in Europe with the objective of raising efficiency. The goal is a single European market for rail research to foster a sustainable transport policy in the European Union.

EURNEX comprises 48 excellent research institutes from across the whole transport sector in 20 EU countries and Russia, including the Technical University of Berlin and the TSB Berlin. EURNEX concentrates research efforts in a single source with the highest quality.

Clients from the industry and transport operators are involved via the Advisory Board. The Advisory Board comprises top decision-makers in the rail industry and determines the direction of research.

Multidisciplinary R&D is organised in 10 EURNEX “Scientific Poles of Excellence”. This benefits clients and researchers alike:

- Creation of international partnerships and direct access to the skills of European partners

EURNEX members

ACTIVITIES

At the request of operators and with the support of the European Commission, EURNEX organises interdisciplinary research and development in its “Scientific Poles of Excellence”:

- Integration of research infrastructure and knowledge management in EU27
- Provision of bundled know-how everywhere in EU27
- Innovative, application-oriented solutions to help raise the competitive capability of the rail transport system

- Continuous learning process and on-going discussion of future issues in direct dialogue with industry and operators
- Initiation of transport research projects across the EU

EURNEX Scientific Poles of Excellence

Pole 1 Strategy and Economics
Pole 2 Operation and System Performance
Pole 3 Rolling Stock
Pole 4 Product Qualification Methods
Pole 5 Intelligent Mobility
Pole 6 Safety and Security
Pole 7 Environment and Energy Efficiency
Pole 8 Infrastructure (and Signalling)
Pole 9 Human Factors
Pole 10 Training and Education

EURNEX e.V.

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Brandenburg University of Applied Sciences (FHB)

FHB has been at the top of CHE and StudiVZ rankings for some time as the range of studies is evaluated as good or very good. FHB offers modern courses in three areas: business, engineering and computer science/media. Up-to-date lab equipment and more than 70 motivated professors and scientific staff along with intensive company contacts make FHB an interesting partner for research projects, studies and advanced scientific training. At the moment, 3,000 students are enrolled in Brandenburg/Havel. There is a wide range of different courses: business administration, business information systems, technology and innovation management, security management, digital media, intelligent systems, network computing, medical information systems, applied computer science, mechatronics and automation, IT electronics, Microsystems and optical technologies and mechanical engineering.

FHB is partner in the national initiative of the railway sector Eco Rail Innovation (ERI) that supports FHB with an endowed professorship for energy-efficient systems of railway technology. The professorship is nucleus of an interdisciplinary research federation, which will identify and enhance, in cooperation with the partners of the ERI, energy efficiency potentials in the railway system. FHB operates laboratories for analysing properties of materials and substances where a number of different problems and constructions can be evaluated using a variety of techniques and processes. The usage of renewable energies, energy storage and recovery systems together with components like air condition systems can be evaluated and optimized with methods and test rigs. High quality design projects are implemented in CAD and design labs. The labs for production measurement technology and the room for micro-measurements allow the use of exact measuring processes during production. The labs for control technology, production automation, physical measuring technology, sensor technology and laser material treatment are crucial for the successful innovation of modern production in electrical engineering. In the micro technology area, FHB offers labs with excellent equipment covering all important steps from design to structuring and characterisation of functional elements. Regarding laser technology, FHB offers high quality equipment, consisting of industrial lasers, coordinate tables and image processing systems for work process automation.
Track and Railway Operations

The Chair of Track and Railway Operations has around 20 employees and concentrates on a holistic view of the railway system in its research projects and its teachings. The department’s expertise is divided into the three fields rail operation, track and strategy. In all three fields, the focal point is placed on the investigation and development of operational and traffic processes as well as technical innovations with the aim of improving efficiency and preserving resources of the railway system. The railway operation section uses a simulation facility for operation processes in its rail operational and experimental area. The track section has a well-equipped track laboratory at its disposal and can offer many years experience in the investigation of track components. The focal point of the strategy section concentrates on rail transport of goods. In addition to general investigations into production processes and concepts, its work concentrates on specific market segments. In its research work, the department participates in public and privately sponsored projects and consultancy projects of varying scope. Do not hesitate to contact us.

ACTIVITIES

Core competences in research and consulting:
• Generation and analysis of operational concepts and processes
• Goods traffic, cost estimates, seaport hinterland traffic
• Migration of new systems
• Capacity analysis and infrastructure simulation
• Training courses in the rail sector
Railway technology research

Currently around 20 persons at the Department for Rail Vehicles at the Technical University of Berlin are involved in on-going research in the field of rail systems. This includes comprehensive investigations into the main focal areas:

1. Vehicle dynamics
2. Vehicle design and passive safety
3. Acoustics
4. Telematics and maintenance in freight rail transport

In all questions a targeted combination of measuring and simulation is aimed for. The parameters needed for simulation can be determined by measurements made on real systems to provide an exact replica in simulation models. The simulation results provide the basis for proposals for constructive changes to existing systems.

Current research projects are investigating issues of wear behaviour on rail vehicle wheels in test bench trials. More detailed investigations concentrate on automatic detection of flat spots and damage axle bearings in local public transport vehicles. On-board monitoring of the superstructure condition is performed on a pilot track for stateful maintenance. This can increase the efficiency of little-used lines to ensure local public transport in rural areas.

Further examples for on-going research projects are:
- New calculations for derailing safety, energy consumption in diesel vehicles, optimisation of collision safety in traction units, optimisation of freight car telematics systems with regard to shortening marshalling operations and implementation of simulation systems for the approval process.
Allianz pro Schiene e.V.

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Alliance for over 100 members

The Allianz pro Schiene (pro-rail alliance) is an alliance in Germany that aims to encourage eco-friendly and safe rail transport – Germany’s most unconventional transport alliance as well as a strategic alliance. 18 not-for-profit organisations have joined forces as members and intend to promote rail transport for non-commercial reasons: environmental associations, trade unions, professional associations and consumer organisations, representing more than 2 million individual members. The Allianz pro Schiene is a close alliance between civil society and industry. More than 100 companies from the entire railway sector support the Allianz pro Schiene as supporting members. They include rail transport and infrastructure operators, manufacturers of rail technology, construction companies, banks, insurance companies and more, both world market leaders as well as small and medium sized enterprises. Members and supporting members collaborate in a cooperative manner and on equal footing.

The main objective of Allianz pro Schiene is to increase the market share of rail transport both for passenger transport and freight transport. The organisation’s other goals closely follow its main aim, namely:

- improve the image of traffic carriers in politics and in public

ACTIVITIES

- Lobbying, press relations,
- Public relations (publications, events, workshops, exhibitions),
- Competitions: “Train station of the Year”, “Rail employee with a big heart”, EU campaign “No Mega Trucks”,
- EU and national transport policy projects (http://www.allianz-pro-schiene.de/eng/eu-projects/)
- secure and increase public funding for railways and use them more efficiently
- create a level playing field for all modes of transport
- foster harmonisation of the European rail transport market
- expand and improve availability and accessibility of rail transport.

Allianz pro Schiene provides the public with information about the environmentally friendly character of railway transport and its advantages in terms of safety and campaigns within the sector that these two welfare benefits compared to other modes of transport are maintained and expanded in the future. It initiates discussions on the outlook and visions for the future of rail transport.
Antonics-ICP Antennen | Antennas

Leading edge antenna technology

Antonics-ICP GmbH is a leading manufacturer of innovative antenna system technology. At its Velten site near Berlin, the company develops and produces antenna solutions for professional applications based on leading edge technologies. Its product portfolio features planar antennas primarily oriented to mobile system solutions as well as stationary cellular systems. The planar antennas of Antonics-ICP GmbH offer innovative communication solutions to leading industrial manufacturers and users for their products and systems.

Customers such as public utility companies, transport companies, automotive manufacturers, energy companies, public authorities, system manufacturers, infrastructure suppliers and system suppliers in the markets of telecommunications, transport and industry rate the company highly as a specialist with in-depth knowledge of applications in the field of planar antenna technology. The company’s products are based on modern solutions and technologies offered by planar waveguide and switching technology. The range consist of well established international brands with names such as OmniPlanar, DirecPlanar and SectorPlanar and offer users innovative communication solutions for their products. Antenna systems have been revolutionised largely by new development and production technologies based on high performance metallic radiating elements.

ACTIVITIES

The antenna products of Antonics-ICP GmbH in the frequency range 50 to 8,000 MHz are divided into six business units:

- Railway antennas & motor vehicle antennas
- Machine antennas M2M
- Infrastructure antennas
- Automotive antennas
- Special antennas & embedded antennas
- Camouflage antennas

Incorporating planar antenna systems gives end device manufacturers obvious advantages since these antenna systems are very inconspicuous and have a low installation height. Their compact design makes them very stable and they can be fully integrated in industrial systems and end devices. Antonics-ICP and its customers are thinking ahead of their time to develop PLANAR antenna systems combined with high technical accuracy to create added value in relation to their multifunctional performance, efficient installation and adaptability to existing customer systems.
At the Top of the Railway Technology

Bombardier Transportation is a worldwide leading manufacturer of railway technology and related services and is active in over 60 countries. The company with its headquarters in the German capital of Berlin achieves a yearly turnover about ten billion US-$ and is part of the Canadian Bombardier Inc., a worldwide leading provider of innovative transport solutions.

In Germany, Bombardier Transportation employs approximately 9,200 staff at ten locations (Aachen, Bautzen, Berlin, Braunschweig, Frankfurt, Görlitz, Hennigsdorf, Kassel, Mannheim, Siegen). The exceptionally strong presence in Germany is further underlined by the location of Bombardier Transportation’s worldwide headquarters in Berlin.

Bombardier’s manufacturing locations in Germany cover the entire product range of rail vehicles: metros, regional and commuter trains, trams and streetcars, single and double deck electric multiple units (with or w/o tilt technology) as well as passenger coaches, locomotives and high speed trains.

Furthermore, extensive maintenance and engineering services as well as rail control systems are offered. More than half of the rail products manufactured by Bombardier in Germany are in service around the world.

Hennigsdorf is the largest site of Bombardier Transportation in Germany and Europe and is the base of the worldwide management team for the Division Mainline&Metros. In addition to the final assembly of trains for commuter, regional and long-distance transport as well as metros, there is a test and commissioning centre as well as a competence centre for engineering. More than 800 engineers are working on worldwide projects and in special areas such as aerodynamics and crash test simulation. Special competencies include the centre for industrial design, the Diesel competence centre with a test stand and the special engineering department. Deutsche Bahn’s new Talent 2 regional trains are being manufactured here as well.
büro+staubach gmbh

Concept and design

The result of our work cannot be reduced to form or shape. It gains its significance and importance through diverse relations of usage. From our point of view design is a social, economical and cultural process. We believe that the challenges of design are not basically subjective, aesthetical matters. The attitude towards design is important and it is not a question of style. An attitude is formed through dialogue with project partners from different disciplines. Only teamwork enables interaction of expertise, which is the first step developing strategies for solving relevant problems. The understanding of correlations between object and usage leads to our understanding of what design is – a reflexive and interactive process. We take networking and interdisciplinary project work for granted. Our scope of work ranges between objects, processes and virtual spaces. The focal points of our work are mobility and practical implementations of new ideas and processes.

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GBM Gleisbaumechanik – your competent and reliable partner for rail vehicles

Our central site offers excellent transport connections as well as spacious workshop facilities with inspection pits and technical equipment. Tailored solutions are our motto as a specialised workshop with all certifications and welding permits for rail vehicles. In order to ensure high flexibility and hence rapid availability of vehicles, we offer employees trained in all necessary specialisations as well as our own modern bogie workshop.

**ACTIVITIES**

- Vehicle development and manufacture
- Inspections of rail vehicles according to customers’ instructions
- Accident repair
- Modernisation/retrofits
- 24 hour service – servicing performed on-site or at your premises
Interdisziplinärer Forschungsverbund Bahntechnik e. V. (IFV – Interdisciplinary Railway Research Network)

IFV Bahntechnik e.V. is an association of specialist partners from research and industry. Systematic networking of clients (buyers) and contractors (manufacturers and suppliers), service providers, selected research institutes, associations, public administration and political bodies is the driving force behind the targeted research activities of IFV’s partners. Continuous modernisation of transport technology increases profitability and hence the competitive capabilities of rail transport as a mode of handling for safe, eco-friendly transport of passengers and goods.

IFV BAHNTECHNIK e.V. networks approx. 9,000 members, partners and sponsors (as of May 2012).

The activities of the network are varied from the promotion of research to organisation of conferences for professionals.

- Organisation of railway technology expertise networks for more than 25 topics
- International symposia (Passive Safety, Trainsafe)
- National conferences for professionals (track construction, vehicle technology, vehicle approval, (TSI)
- Interdisciplinary workshops (rail acoustics)
- BLUE SERIES RAIL TECHNOLOGY (guest speakers)
- RED SERIES RAIL TECHNOLOGY (career promotion, management training)
- Project management (Sicher Reisen (passive safety), sonRAIL, LEILA bogie)
- Publication of a series of scientific journals and books on current rail transport technology “Bahntechnik aktuell” (www.fachpublikationen-online.de)

Topics addressed by IFV BAHNTECHNIK e.V.:

- OVERALL SYSTEM OF RAIL TRANSPORT
- TRACK SYSTEMS
- RAIL VEHICLES
- COMMAND AND CONTROL TECHNOLOGY
- RAILWAY OPERATION
- TRANSPORT POLICY

ACTIVITIES

Practical research projects (incl. acquisition of subsidies), results-oriented knowledge transfer (conferences and specialist publications) and customer-based services in all aspects of modern rail and transport technology. Numerous research projects of an interdisciplinary nature.

- RESEARCH PROMOTION
- INNOVATION MANAGEMENT
- RAIL AERODYNAMICS
- RAIL ACOUSTICS
- RAILWAY FIRE PROTECTION
- RAILWAY MAINTENANCE
- HVAC FOR RAIL VEHICLES
- RAILWAY MANAGEMENT
- RAILWAY SAFETY
- RAILWAY SOFTWARE
- RAILWAY MATERIALS & MATERIAL EFFICIENCY
- ENERGY EFFICIENCY & EMISSIONS
- PRM IN THE RAIL SECTOR
- QUALITY (IRIS-CERTIFICATION)
- FREIGHT RAIL TRANSPORT
- PASSENGER RAIL TRANSPORT
- TRAMS AND UNDERGROUND RAIL
- RAILWAY CERTIFICATION (TSI)
Adaptable consultancy supports networked mobility

The IGES Institute was founded in 1980, and with more than 70 highly qualified experts today is the largest institute of its type in the private sector for consultancy, research and development in the fields of mobility and health in Germany. Through integration of transport planning, economics, statistics and social research the Institute is creating a decisive basis for consultancy and research in the mobility sector.

In the Mobility business division, IGES provides consultancy regarding the profitable organisation of transport markets and transport offerings such as strategic proposal optimisation, operational planning and market research on road and rail based public transport. IGES also focuses in-depth on questions related to the regulation of transport markets and develops appropriate instruments of regulation.

Customers of the Mobility business division include regulating organisations such as the Federal Network Agency or the Monopolies Commission as well as public service providers, governmental organisations as well as municipal and private transport companies in local and long-distance transport. In addition, IGES advises industrial companies, investors and associations with a focus on transport and mobility.

Furthermore, through its health business division IGES advises infrastructure and transport companies on all aspects of corporate health management and analyses work processes from a technological and ergonomic perspective. IGES elaborates concepts related to human factors science in order to ensure longer employment of workers in companies and hence to combat current demographic challenges.

ACTIVITIES

- Strategic transport planning
- Regulation of rail transport markets
- Financing and price policies in the rail sector
- Market research & quality in local rail transport
- Corporate health management and employee qualification strategies for transport companies

IGES Institut

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Strategic transport planning from underground networks to buses on demand
ime® Elektrotechnik GmbH

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Electrical engineering for rail vehicles

ime® Elektrotechnik is a company which assists and advises customers in their search for solutions in the field of electrical engineering for rail vehicles.

We have specialised in identifying substitutes for products that are no longer available in the market or – should such products no longer exist – in developing alternative solutions.

"Never thought it would be done so quickly"  
Wolfgang Thierbach, Fogtec GmbH

ACTIVITIES

Sale of electrical systems and components for railway systems, based on decades of experience.

From low voltage switchgear to command and reporting units, from fire detection systems to automation technology and complex EMC filters for rail vehicles: we are happy to advise you in all fields. We collaborate closely with leading manufacturers and take special care to ensure that the products offered comply with railway regulations.

Our team treats customer service as much more than an empty phrase.
Automatic passenger count with optimum accuracy

INTERAUTOMATION, a leader in technological systems for automatic passenger counting and real-time passenger information, is closely connected with Berlin, where it is located. As a company with a technical focus on passenger rail transport, it supports transport companies and public authorities with reliable system solutions for the optimisation of their tasks.

Real-time information from travel time analyses and guaranteed connections informs passengers in regional rail transport about punctuality and guaranteed connections for their trains. In a further application, this is the proof of quality in relation to the agreed performance levels between public authorities and transport companies.

An automatic passenger counting system with especially high accuracy of up to 99% is the ideal basis for billing and planning transport services. Public authorities and transport companies are increasingly choosing precise and effective recording of services provided. In contrast to the prior method of sampling with manual random checks, in this case a company for public transport service in its franchise is able to have its true share in the transport services recompensed.

At its site of many years in Berlin-Pankow, INTERAUTOMATION employs around 30 staff. It provides innovative and flexible adaptation to customers’ requirements with its own developments for software solutions and hardware components. Cooperation with scientific institutes in Berlin is proof of its capabilities.

Having its own component production at the same site is another important factor in ensuring reliability and a flexible response to customers’ expectations. In-house production and research are an important cornerstone in the technology cluster for railway transport systems in Berlin Brandenburg. This environment has confirmed our decision in favour of Berlin as a location.
Kompetenznetz Rail Berlin-Brandenburg GmbH

Our strengths are your advantage.

The Kompetenznetz Rail Berlin-Brandenburg GmbH (KNRBB GmbH) is a network initiative with partners from industry and commerce. It was founded on August 1st 2011 by three associates, Havelländische Eisenbahn AG, BUG Verkehrsbau AG and Lokomotivtechnik Kirchmöser GmbH. The network already has in excess of twenty cooperation partners with a wide range of core competencies. KNRBB GmbH promotes cooperation of the competence and network partners in the field of rail transport engineering and cross-sector industries. The main focus is on vehicle engineering, roadway engineering and innovation.

Our offering is your competitive advantage.

One objective of the network is to strengthen the economic structure of the Berlin-Brandenburg region through well organised and coordinated cooperation. In this respect, KNRBB GmbH has accepted a wide range of tasks and acts as the interface between politics, research and business. For example, the tasks include project development, retention of skilled workers, identification of potential subsidies, research and development, identification of project related core competencies and much more. In addition, the rail location Brandenburg/Kirchmöser is to be developed through activities of the network to become a leading European centre for the rail industry.

ACTIVITIES

With our targeted development of projects, numerous high quality contacts and close cooperation with business, research and politics

- we can ensure a successful start-up in Brandenburg for you,
- we can offer constructive project development,
- and achieve the best economic growth with optimum support in public relations.

You are very welcome to participate in our network activities.
PCS Power Converter Solutions GmbH

Power converters keep things moving in the area of energy, industry and transportation. And it is nice to know that these sectors can rely on PCS since over 100 years: be it rail vehicles or wind turbines, be it industrial applications or test benches. Having the flexibility of a medium-sized business and the experience of decades, we add momentum to the business. Including yours.

Experience plus Curiosity Equals Competence
As early as 1869, our company began to deliver complex systems for rail vehicles. In the 1920s, we started to develop, test, and manufacture electrical components as well. Since 100 years we are deliver electrical components. We have alone delivered as FAGA Fahrzeugausrüstung Berlin train equipments for around 60,000 rail vehicles between 1948 to 1993. Since that time, almost 10,000 high reliability auxiliary power supply units, battery chargers and traction converters were produced. As a medium-sized company, located in Berlin-Tegel, PCS Power Converter Solutions GmbH is continuing its success story."

PCS Rail – Puts Progress on Track
Lightweight, reliable, small and economical – PCS Rail is a synonym for integrated, individual onboard power supply systems for rail vehicles of all types.

Our product families at a glance:
• PCS Rail AU 500: successful standard devices for use in passenger transit systems – from trams, light rail vehicles to underground trains.
• PCS Rail AU 1000: the ideal solution for regional and long-distance rail service – from multiple units to passenger coaches, all the way up to high-speed trains.
• PCS Rail CU: The powerful direct current supply for more than just vehicle batteries and for every kind of rail vehicle.
• PCS Rail Pre-assembled Components: Individual service packages for pre-assembled electrical components such as switchgear, electrical cabinets, control panels and driver desks

ACTIVITIES
• PCS develops, designs, manufactures and distributes converters and electrical systems for rail vehicles, wind turbines and industrial test rigs.
• In the rail sector PCS supplies auxiliary power supply units, battery chargers and traction converters as well as pre-assembly components.

PCS Rail TU: traction converters for new rail vehicles and modernization projects.

PCS After Sales
Every solution from PCS can be combined with a comprehensive package of qualified services. PCS After Sales stands for individual service and complete support – worldwide.
Excellence in materials and product testing

RST GmbH is an independent medium-sized company offering highly specialised testing and engineering services for all sectors. With its range of services it offers competent and effective support for all developers and manufacturers from the start of product development through market launch to quality control during production and maintenance/servicing throughout the service life. Furthermore, RST specialises in identifying the error and failure rates of components and systems and minimising them in close collaboration with the client.

RST – TESTING THE WORLD FOR TOMORROW – stands for a unique service in the sector of materials and product testing. With its laboratory divisions for environmental simulation, fire protection and new technologies, it is able to identify the properties of components and systems in test and operating conditions. In addition, tests in the materials laboratory reveal what creates these properties or causes failures. In this respect RST sees itself as a sparring partner for our clients in order to increase the safety of products internationally.

RST GmbH was founded in 2003 and started life in the rail vehicle industry. RST has been located in Hennigsdorf on the northern edge of Berlin since its inception. The major part of RST’s services is used by a wide range of transport engineering industries. The company employs a total of 35 full-time engineers, technicians and materials testers. An important factor in the HR policy of the company, and hence its development potential for the future, is training specialist staff and providing subjects for graduate and post-graduate theses. Close cooperation with educational institutes and sponsors in the region is an essential basis for successful collaboration with young, motivated employees and managers.
Innovative Rail goods traffic – Cargo Rail Lines

In the Project CaRL®-Seagate Siemens has investigated and proved the market potential in a feasibility study together with his network partners, to which extent the harbor hinterland traffic can be structured more efficiently by intelligent collecting and distributing traffics from seaports using an innovative train system. The focus of the investigation laid on the market requirements and the quantities to be transported under consideration of the horizontal loading.

An essential success factor was the acceleration of the intermodal container handling as well as the discharge of the goods. By this the attraction of the rail in comparison to the road can be strongly increased.

Typical trains with 80 containers (20ft) can be unloaded within 30 minutes with the Siemens solution. The system is compatible to the special requirements of general cargo-, courier services and general cargo of seaports and can provide the required time slots and flexibility. Our innovative new development to the intermodal container handling does not require modifications of containers, wagons or trucks.

Profitable general cargo traffic by new business models

A further novelty in the railway cargo traffic is the possibility to load and unload part quantities under the overhead traction line during intermediate stops. Even by this new concept a true network with hub traffics in the hinterland will become possible. Further cost reductions will be caused by the delete of shunting and converting of trains. The fast constitution of new transport relations (e.g. in East – West traffic) will be enabled by the economic structure of the terminals.

Business model: the system is more flexible and lower in costs than actual rail bound transport systems. The economic prospects and usability have been positively judged. There is sufficient market potential.
Centre of excellence for the development of rail vehicles

Stadler Pankow GmbH is a company of the international Stadler Rail Group. As a system provider it offers customised solution in the field of rail vehicles from its sites in Berlin and Velten, Brandenburg. The Stadler Group also has other sites in Switzerland (Altenthurk, Bussnang, Winterthur, Biel), Germany (Berlin-Pankow, Berlin-Hohenschönhausen, Berlin-Reinickendorf, Velten), Poland, Hungary, the Czech Republic, Italy, Algeria and the USA.

The product portfolio of the Stadler Group comprises rail vehicles for regional passenger transport – diesel-electric, electric and diesel-mechanical, locomotives, railcars, control trailers, passenger coaches, suburban trains, metros, inter-regional vehicles, double decker motorised trains as well as trams and urban trains and specialised rail vehicles. In addition, Stadler is the world’s market leader and largest supplier of rack railway vehicles and systems.

ACTIVITIES

The Stadler Group offers a full service package in all market segments of local passenger transport as a single provider. Services range from the development, design and manufacture of vehicles, through assembly, painting and bringing into service to maintenance, modernisation, repair and retrofitting.
Mobility, Water, Energy, Raw Materials and Environment

As a global operating consulting and engineering company, we support our customers and partners with strategic management consultancy and comprehensive project management. We focus on sustainable solutions in the fields of mobility, water, energy, raw materials and the environment.

We have been elaborating individual, customised solutions around the globe for over 20 years. Our strength is our expertise and experience which enables us to set standards of efficiency, quality and sustainability into our projects. Over 400 reference projects indicate the extent of our growing success. Our staff are experienced and highly qualified, creating an international team of experts. Our methods are interdisciplinary and our work is supplemented by specialists from various fields where necessary.

We always offer our clients the best solutions based on the magic triangle of quality, resources and time. Our quality management is standardised and is DIN EN ISO 9001: 2008 certified.

With its manufacturer neutrality, Tewet Aktiengesellschaft has been able to maintain complete independence from industry and operators. Our offers and solutions guarantee future functionality and cost efficiency.

Consultancy, project management, engineering, procurement and training

We offer a wide range of services tailored to the value added chain of our clients. Our many years of in-depth experience in the fields of consultancy, project management, engineering, procurement and training have made us experts in these areas. Detailed know-how and comprehensive training count – and we work on these aspects continuously.

We combine knowledge of markets and systems, methodology and the latest trends.

Together with our clients, partners and qualified employees we shape the future – step by step, every day.

SCOPE OF SUPPLY AND SERVICES

- Feasibility and profitability studies
- Management consultancy
- Planning, proposals and implementation
- Project management, development and execution
- Management for financing, procurement and operations
- HR and training
Opportunities

In recent years, the automotive region of Berlin Brandenburg has developed into one of the sectoral centres of excellence in Germany. Around 21,000 employees in the industry and the specialist knowledge of 600 scientists in research institutes form the basis for a sector which is one of the engines for driving economic growth.

The sectoral spectrum ranges from production and logistics, to original parts and components, through to production of complete vehicles. In addition to global players such as BMW, Volkswagen and Mercedes-Benz, over 160 innovative small and medium sized companies are active in the capital region. They develop and manufacture system components and parts for the national and international automotive industry. Core competences in certain areas, such as drive systems, undergo intensive development in collaboration with science, research and industry to create innovation networks throughout the value added chain. This successful integration of complementary companies and researchers is strategically important and raises the long term competitiveness of the regional supplier industry to underscore its reputation as a centre of innovation for future areas such as electromobility and clean tech.

Outlook

The focus of strategic development of the sector is to strengthen the companies underneath Tier 1 level, specifically by securing their future through concentrating R&D activities on the areas drive technology and new fuels. Other areas of focus are traffic and vehicle safety as well as innovative production methods and processes. The positioning of Berlin and Brandenburg as a European centre of excellence for electromobility is exemplary for focusing on inherent strengths of the region.

In September 2010, the eMO, Berlin Agency for Electromobility, was founded to bundle the expertise of science, commerce and politics in the capital region of Germany. The complete value chain for electric vehicles - from research and development to production to testing and application - is to be located in Berlin and Brandenburg. The agency is borne jointly by the leading Berlin Partner GmbH and TSB Innovationsagentur GmbH. The eMO is financed through public and private funding.

Until the end of 2011, Berlin and Potsdam together formed one of the German model regions for electromobility. New mobility services and business models were developed and tested from the point of view of traffic, energy, environmental and urban planning. A number of advanced projects are currently being started in the “Berlin-Brandenburg Electromobility Showcase” to create an even more extensive and sustainable basis in the region.

The capital region is taking on the challenges posed by globalisation and climate change with the intention of becoming a leading international centre for clean...
The power of innovation and performance of component suppliers in Berlin and Brandenburg can be found in every German car.

Germany’s capital region is creating a reputation for itself as a leading international centre for clean mobility.

mobility. Reputable projects such as the Clean Energy Partnership Berlin - a regional project for hydrogen testing, introduction of natural gas powered vehicles at logistics service providers or operation of a natural gas powered taxi fleet comprising 1000 vehicles in the German capital - represent this strategic approach.

INFABB - the initiative “Innovative Fahrzeugantriebe Berlin-Brandenburg e.V.” (Innovative Vehicle Drives Berlin-Brandenburg) bundles the R&D capabilities of the region for innovative drive systems and promotes exchange between science and industry.

The electromobility platform “Forum Elektromobilität” founded by the German Federal Ministry for Education and Research and the Fraunhofer-Gesellschaft in Berlin took up its role as a contact point for all stakeholders in September 2009.

Know-how transfer and intensive cooperation between engineering service providers and science enjoy the long term support of a highly efficient cooperative network (aBB automotive Berlin-Brandenburg e.V.) and the working group for road traffic. The German capital region intends to and will expand its position as a competent centre of excellence for automotive development and research.
Expertise

The department is investigating aspects of transport across all transport carriers and its interaction with the fields of environment, technology, society, politics and economics. Hence it exercises a central, integrative role in transport studies and research. The objective is to develop concepts for sustainable development of transport systems.

In view of its complexity, transport is modelled in scientific scenarios for strategy development and implementation evaluation via cross-discipline, inter-sectoral analyses. Decision patterns of participants and players in transport are subjected to empirical investigation using special field research, and evaluation processes provide support to the implementation of transport measures.

Research

Research is determined by a demand-oriented perspective which regards consumers as a motor for sustainable development and as stakeholders in transport-related environmental policy. It is based on three pillars:

I. Stakeholder research and mobility routines as a subject of research into the causes of transport. The motives for people’s actions in transport are analysed, with special focus placed on recurrent behaviour patterns and on the question of how these mobility routines can be influenced.

II. Future-oriented research and generation of inventions. The task comprises forecasting social and technical trends and profiling future requirements of transport users.

III. International mobility and transport research. Global trends of transport development and transport planning concepts are investigated. Research projects evaluate acceptance and implementation of innovative transport services.
Expertise

The department is specialized in planning, designing and operation of road infrastructure. The main interest lies in infrastructure for motorized private transport, public passenger transport and for bicycle and pedestrian traffic. In addition to teaching, the department concentrates on research and consultancy. Clients and sponsors include e.g. the European Commission, federal and regional ministries, local authorities, industry and foundations as well as the German Research Foundation (DFG). The primary focus of the department’s research activities lies in the following fields:

Analysis and evaluation of traffic quality
- analysis of transport demand (transport data capture and forecasts)
- optimization of transport flows
- developing measures to manage transport
- compilation of transport development plans and local transport plans
- design of road infrastructure
- evaluation method for assessing the need for expansion of road infrastructure

Analysis and evaluation of traffic safety
- accident analyses
- safety assessment of road transport networks
- recommendations for further development of the pertinent guidelines and regulations for roads and transport

ACTIVITIES

Currently, the department is carrying out research projects to improve traffic safety for cyclists and to avoid car accidents when overtaking on rural roads (BASt – Federal Highway Research Institute – and UDV – accident research institute of insurers) as well as to improve intelligent traffic information systems for large events (EU project).

In addition to extensive stationary measuring equipment, the department has modern vehicle equipment at its disposal for measuring and analyzing vehicle based drive and handling parameters (e.g. speed, car-to-car distance and lane keeping behavior).
Chair of Human-Machine Systems

The Chair of Human-Machine Systems (HMS) is attached to the department of Psychology and Ergonomics of the Technical University Berlin and specialises in the analysis, design and implementation of human-machine systems with a special focus on human capabilities and characteristics. The chair is headed by Professor Matthias Rötting.

We investigate and develop new interactive technologies which provide people with the possibility of technical interaction and which are natural and efficient to use.

The objectives and focal points of the chair concentrate on the provision of methods for optimisation and evaluation of HMS based on our knowledge of human perception and ability to process information, the development of HMS adapted to the demands on and capabilities of users and the development of emotional and multimodal HMS. In this environment the department is active in five fields of research:

1) eye movement in HMS,
2) psycho-physiological interfaces,
3) augmented/mixed reality,
4) design for intuitive use and
5) user modelling.

The focus and aims of research conducted by the chair of HMS are characterised by interdisciplinary processes in numerous projects, research commissions and our own research projects and are expanded continuously by new aspects. In applied projects we work with a wide range of partners from science and industry. This active and cooperative form of research enables us to integrate trends and innovations in the field of human-machine systems effectively and efficiently in our daily work and to shape them by our work. The chair of HMS is able to offer students and interested parties a wide range of courses – lectures, tutorials and seminars – in this exciting field which deal with current issues on aspects and questions of human-machine systems. We also offer the option to actively work on questions around human-machine interaction with and in our interdisciplinary team.
Consulting, development and software – for your success

Software for vehicle electronics has been our core business since Carmeq GmbH was founded in 2002. As a competent advisor, experienced project manager and innovative developer, we use state-of-the-art technology and methods to explore the current trends and guide you through all the implementation phases for new solutions – from drawing up technical concepts all the way to their practical realization.

Our staff work with dedication, passion and team spirit. They benefit from practical knowledge transfer and the optimum integration ability of new solutions in your work environment. Moreover, for special assignments we work with leading suppliers and experts. We ensure that all the components slot together perfectly. Consequently, we connect people and technology and create quantifiable added value from the strength and interaction of all the actors involved. We work for the international automotive and supply industry and observe international standards and models.

This gives us the security to always keep one eye on all quality aspects. You can trust our service one hundred percent. As a subsidiary of Volkswagen, we benefit from the concern’s membership of international development committees. Therefore, we have our finger on the pulse of current developments and also give fresh impetus ourselves. Besides our company headquarters in the heart of Berlin, we also have branches in Ingolstadt and the AutoVision Forum in Wolfsburg and Stuttgart.
DIW Berlin – German Institute for Economic Research

The DIW Berlin – German Institute for Economic Research – is the largest institute for economic research in Germany. Its core mandates are applied research, economic policy consulting and provision of research infrastructure. As an independent institution, the DIW Berlin is committed to solely non-profit purposes.

At the DIW Berlin, transportation research is part of the Department for Energy, Transportation, Environment. The department investigates energy, transportation and environmental strategies for sustainable development. The main focus is on sustainable energy supply, mobility and economic evaluation of climate change and climate protection policy.

ACTIVITIES

The compendium „Transport in Numbers“ gives a detailed description of transport in Germany with its institutional and functional structure. Official transport statistics are supplemented by the Institute’s own calculations on infrastructure assets as well as passenger and goods transport. www.diw.de/sixcms/detail.php/239434

The core areas of transportation research include statistics and data for Germany, investigation of pricing, regulation and competition as well as work on surveying, analysing and continuous mapping of transport demand. The statistical compendium „Transport in Numbers“ is compiled annually (in its 40th year in 2012) on behalf of the Federal Ministry for Transport, Construction and Urban Development.
Planning parking

GIVT mbH is an engineering and planning office specialising in all aspects of stationary traffic. It offers multivendor and multi-operator capabilities. Founded in 1993, it has made a name for itself with its comprehensive approach to solutions for parking and parking facilities for road vehicles of all types. Parking is considered to be an indispensable link in the mobility chain. Open system parking solutions are optimised according to the aims of urban planning, as well as traffic, economic and ecological aspects. User-friendliness is an integral component of parking solutions in order to ensure their acceptance.

GIVT mbH acts as a general and specialist planning office and offers engineering or consultancy services depending on the individual project. Planning user-friendly parking facilities of all construction types is central to the company’s operations. The team at GIVT mbH has expert knowledge in the field of automatic parking systems. It was the leading member of the pilot project commissioned by the regional capital of Munich for planning an automatic residents’ underground parking facility with 284 parking spaces and was actively engaged until the facility was fully operational. This project has won several prizes.

Since 2010 GIVT mbH has been conducting multi-storey car parks tests on behalf of the German automobile association ADAC and is involved in the continued development of the procedure for certification of user-friendly multi-level car parks by the ADAC and the applied illumination level measuring procedure.

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<th>ACTIVITIES</th>
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<td>Planning services for all types of parking facilities:</td>
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<td>• Parking space studies and concepts</td>
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<td>• Specialist and general planning for parking facilities</td>
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<td>• Automatic parking systems</td>
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<td>• Location and economic feasibility studies</td>
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<td>• Redevelopment planning</td>
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<td>• Certification of multi-level car parks and implementation of multi-level car park tests</td>
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Quality annealing

HWL Löttechnik GmbH (founded in 1983) is co-founder of the heat treatment knowledge group of Berlin Brandenburg, together with the Technical University of Berlin. It cooperates with the Technical University of Berlin and the State Technical School of Berlin (project work) and is a training company for the profession of materials technician with focus on heat treatment. HWL Löttechnik GmbH collaborates with well-known organisations and research institutes, primarily in the field of heat treatment and material science.

HWL Löttechnik supports various charities, e.g. SOS-Kinderdörfer (as sponsor), provides schools with teaching aids and promotes youth sports in Berlin.

**ACTIVITIES**

**Heat treatment:**
- Vacuum hardening, protective gas hardening, case hardening, CNC induction hardening, plasma nitriding, gas nitriding, vacuum annealing, vacuum soldering with Cu and Ni, soldering with Ag
- Special heat treatment for avionics, automotive industry, power plant technology, mechanical engineering, sample heat treatment of new materials
- Special heat treatment of titanium for automotive industry and avionics. Soldering for battery systems and fastening systems, e.g. brackets, pressure systems
IAV GmbH

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Engineering expertise

IAV has been driving automotive technology forward in development partnerships for almost 30 years. Today, the company counts all global automotive manufacturers and system suppliers as its customers. It employs more than 4,500 people across three continents. The main sites in Germany are located in Berlin (headquarters), Gifhorn and Chemnitz.

The unique feature of IAV is its expertise in all aspects of vehicles: in contrast to its competitors the company is active in all areas of automotive development – its engineers and technicians are equally familiar with classic combustion engines as they are with alternative drive systems. In addition, IAV offers comprehensive expertise in the fields of electronics and software, driver assistance systems and vehicle safety. IAV is fully familiar with the market for private vehicles as well as the specific challenges of commercial vehicles thanks to numerous projects completed for its customers.

The company’s close links with industrial users ensures that advanced technologies rapidly find their way into products. IAV’s global presence means that its customers always have a local contact for international projects – the company is represented not only in many European countries such as France, Great Britain and Russia, but also in the USA, Japan, Brazil, India and China.

IAV was founded in 1983 by Professor Hermann Appel who headed the department „Motor Vehicles“ at the Technical University of Berlin from 1972 to 1998. Corporate shareholders today are Volkswagen AG, Continental Automotive GmbH, Schaeffler Technologies GmbH & Co. KG, Freudenberg & Co. KG and SABIC Innovative Plastics B.V.
InnoZ – Mobility through changes

As a research, test and consultancy company we develop innovative concepts, products and services together with industry, science and local authorities in the challenging environment of mobility and societal change. We unite research and practical implementation in-house. A systematic approach is essential for us: mobility, telecommunication, energy, climate protection and urban development are viewed as a whole.

We see e-mobility as a catalyst for innovative inter-modal mobility concepts and services. These are tested under real conditions with the aim of developing sustainable fields of applications for networked mobility and energy services.

ACTIVITIES

We accompany our partners in the pilot and introductory phases for new mobility products and services, provide test areas for complex applications, carry out user acceptance investigations and organise events and coordinate the whole project.
Automotive software development

The Berlin software company OpenSynergy offers the standards-based software platform COQOS for the automotive industry. This solution allows operating systems such as Linux or Android to be used in vehicles and integrated on a chip with automotive software. This means that drivers will find their familiar consumer electronics in their vehicles and can use features that relate to the condition of the vehicle or to driving itself.

This is something new because previously the technical worlds of telecommunications and consumer electronics were considered to be incompatible with the technical world of the car. In the final analysis, these worlds will continue to be very different in the future. However, COQOS has managed to bridge this gap because it is based on a certified microkernel that creates various logical software partitions. Several operating systems can run in each of these partitions with very different requirements because the partitions operate independent of each other. This means they do not impact each other. For example, safety critical functions in vehicles can be provided very quickly, even though operating systems with a long start-up run on the same hardware.

A further important component of COQOS is its interface which complies with the AUTOSAR automotive standard. AUTOSAR means “AUTomotive Open System ARchitecture” and is an open, standardised automotive software architecture developed jointly by car manufacturers, suppliers and tool developers. Via the AUTOSAR interface, COQOS allows software to be integrated seamlessly in vehicles.

In view of the positive development of the company, the number of employees has increased to 40. In addition COQOS, OpenSynergy offers consulting and engineering services for software development and software architectures in the fields of infotainment, connectivity and AUTOSAR.
Support to sustainable transport and renewable energy projects

Spilett new technologies offers expert services in project coordination and management. We:

- accompany our clients from the idea to the implementation and evaluation of their projects (including funding application, impact assessment and knowledge management).
- develop integrated approaches for an effective project organisation in complex projects with numerous players.
- coordinate, organize and control project processes to ensure progress and quality
- offer tailored solutions for project information and knowledge management

Shaping tomorrow’s mobility and energy systems –

Spilett new technologies supports leading companies in automotive, mineral oil and energy industries to successfully implement their strategies.

REFERENCES

Clean Energy Partnership (CEP)

CEP is the largest demonstration project for hydrogen mobility in Europe. The Clean Energy Partnership (CEP) focuses on clean, quiet, low-emission mobility for the future. 16 partners are testing the system compatibility of hydrogen (H2) in everyday use. This does not only include the ability to continuously operate hydrogen vehicles efficiently and refuel them quickly and safely; the CEP is also involved in the clean and sustainable production of hydrogen, its transportation and storage in liquid and gaseous states. Spilett has been supporting CEP since 2008 as a project coordinator.

www.cleanenergypartnership.de

Clean Hydrogen in European Cities (CHIC)

The CHIC project is the next step towards commercialisation and widespread introduction of hydrogen buses throughout Europe. Spilett new technologies has been commissioned by the EU to investigate influencing factors to social acceptance of hydrogen mobility.

www.chic-project.eu
For urban mobility …

Mobility in an urban environment is the focal point of the work of the engineering company stadtraum. Traffic processes and urban planning are subject to a continuous process of change. The objective of the work of stadtraum is to initiate and accompany this change and provide orientation.

The engineering company stadtraum has been a reliable partner for local authorities, regional authorities, regional corporations, ministries and private investors for over 20 years. Its interdisciplinary team is characterised by motivated and highly qualified engineers who are experienced and recognised within their field.

The main focus of their design work lies in analysis, consultancy, planning, supervision and management of projects for road traffic infrastructure and urban planning. Dialogue with all players in the planning process and a direct approach to the various specialist disciplines is at the fore of the planning process. We adapt to the individual wishes of our clients and the results of the latest research and planning practice.

Since its foundation in 1990 stadtraum has successfully completed over 2.000 projects. With its innovative ideas and traffic expertise, stadtraum will continue to act as a pioneer for sustainable, compatible urban mobility in the future.

Mobility of the future will be characterised by the development and availability of e-mobility. Electric vehicles are quiet and clean and will reduce the exhaust emissions in towns significantly.

stadtraum plans the sites for charging stations and supplies the required charging infrastructure. In addition, stadtraum compiles complex mobility concepts to create a local charging infrastructure for electric charging posts in line with planning, urban design and technical requirements.
Takata AG

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Takata – A pioneer as a safety systems manufacturer

TAKATA is one of the world’s leading suppliers of automotive safety systems with a turnover of 383 thousand million Yen (EUR 3.455 million). At present, 36,858 employees are working at TAKATA in 53 plants in 20 countries all over the world, 13,000 in Europe. R&D activities are globally organized in Europe, the Americas and Japan.

TAKATA launched the operation in 1933 in Shiga Prefecture, Japan, as a maker of woven textile fabrics. In the 1950’s the company began to develop seat belts for automobiles and, as a pioneer in this field, started in 1960 series production of belts. After that TAKATA developed, designed and manufactured airbags, child restraint systems and additional safety products. In 1983 the company changed its name and is known since that as “TAKATA Corporation”.

Since that date TAKATA’s expertise and presence on global market is continuously growing.

TAKATA is a reliable and professional partner to the world’s leading automakers in Europe, the Americas and Asia. The portfolio includes steering wheels, airbags and inflator, seat belts, child restraint systems as well as technical electronics and sensors.

In 2000 TAKATA acquired Petri AG, a major German steering wheel manufacturer and established TAKATA AG. Since that TAKATA AG is leading the European activities of TAKATA Corporation. The European headquarter is in Aschaffenburg, Germany.

Takata enjoys a strong reputation for safety around the globe.

ACTIVITIES

TAKATA is a reliable and competent partner for the automotive industry and designs, develops and manufactures passenger protection systems and components. Our product portfolio includes steering wheels, airbags and generators, safety belts, technical plastic parts, child car seats, electronics and sensor systems.
ubitricity Mobile Metering: comprehensive and affordable infrastructure for electric vehicles

ubitricity Mobile Metering puts electric vehicles on the road. For e-mobility to succeed, frequent charging opportunities for EVs, comfortable and affordable, are key. Conventional vehicles, powered by internal combustion engines, are served by centralized gas stations. But with EVs, both users and the energy system stand to profit from an infrastructure that offers two or more charging points per vehicle (at home, at work, while shopping etc.): any drive can start on a full battery and users can rely on full battery range, expensive battery capacity can be reduced and the operation of heating and cooling aggregates is carefree. And regarding the expansion of renewable energy generation and grid stability, charging points that enable grid connections whenever vehicles are parked for longer periods of time are highly desirable. Only then can vehicles serve the grid as a system of decentralized storage capacity, charging whenever the wind is blowing.

Mobile Metering realizes this potential. EV users take metering and communication technology along on any drive, inside the vehicle or as part of the charging cable, and charging points are reduced to simple and cost-efficient system sockets. This considerably reduces the price per charging point, and the grid connection no longer incurs running costs. Charging infrastructure is made affordable. Thus, installing charging points becomes an attractive option for providers of parking space (employers, operators of parking garages, store owners etc.). Charging infrastructure can be tailored to EV users’ needs and usage patterns. Frequently available system sockets and Mobile Metering technology also enable strategic charging of a large number of EVs.

In realizing the Mobile Metering concept, ubitricity currently cooperates with leading partners located in the energy and automotive sectors.

ACTIVITIES

In the future, ubitricity enables ubiquitous smart charging for EVs, both at home and en route. Mobile Metering entails attractive services for EV users, infrastructure providers, and energy providers.
Expertise – since 1975

1. **Think Global & Act Local:**
   - An approach adapted to the local environment minimises potential risks.

2. **Listen & act promptly: active since 1984.**
   - Parties involved and parties affected become partners in shared activities.

3. **Co-creative prototyping:**
   - SMEs, institutes, associations + corporate groups create their prototypes “co-creatively”.

4. **Active & pictorial communication:**
   - Interactive, visual processes for management, staff, customers and suppliers efficiently generate joint innovations.

**ACTIVITIES**

**Innovation coaching:**
- Customer related effectiveness
- Commercial and sectoral innovations
- External creativity resources

**Change facilitation / moderation:**
- Business model relaunch
- Corporate integration
- Re-orientation of roles + jobs

**Behavioural training:**
- From ideas, conflicts, strategies to actions
- Job performance through more creativity
- 360° communication and cooperation

**Sample projects:**

1. **Innovation scouting**
   - User related: eVehicles, eShops
   - Technology related: sustainability, eco design
   - Resource efficiency: mobility, recycling

2. **Business model prototyping**
   - Consolidate competitive strengths of SMEs

3. **Innovation process teaming**
   - Changing project controlling
   - Towards a new shop floor as supplier
   - Towards process oriented management

4. **Business “co-option” management**
   - With competitors in the same industry
We offer complex solutions for adhesive tapes, abrasives and highest product quality for the automotive industry, for the manufacture of rail vehicles, as well as for aviation businesses.

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Over the last few years, transport telematics have developed into an indispensible element of modern traffic management. The entry, assessment and forecasting of local and large area traffic situations requires modern sensor technology, powerful algorithms and reliable simulation models. The traffic management measures and road user information to be derived from these often represent complex optimisation problems. Whereby intermodal traffic management, which is effective across individual modes of transport, represents a special challenge. It’s been a long time since traffic management was limited to determining alternative routes in case of traffic jams.

After all, information and management measures have to be transmitted to the users via a large number of media and devices. The range spans from dynamic traffic signs mounted on gantries to the internet and smartphones all the way to “on-board” units in cars and commercial vehicles. The entire chain from recording the traffic situation to transmitting the information is made possible by the hardware and software solutions of traffic telematics (telematics = telecommunication and information technology). Traffic telematics thus not only enrich traffic management in the sense of statutory management tasks but also provide the technological basis for all privately offered information and management systems related to transport applications. This also includes booking systems for public means of transport and car sharing, fleet management solutions in the transportation of goods and complex operational control systems for public transport. Recently, the rapidly growing availability of smartphones has resulted in a large number of new traffic telematics applications.

The region is well-positioned in the traffic telematics value chain. It offers a creative environment for innovative and intermodal solutions. The scientific aspect is adequately covered by the faculties of universities and technical colleges, e.g. the TU Berlin, TH Wildau and the HTW Berlin. In the non-university sector, the two institutes for Transport System Technology and Traffic Research of the DLR and the Fraunhofer Institute FOKUS play special roles.

Established specialised companies such as IVU Traffic, PSI Logistics, BLIC, and Hella Aglaia develop hardware and software solutions in the capital region, whereby new approaches and stimulation frequently come from the very broad landscape of Berlin’s small and flexible IT companies. At this point, there is a close connection between the clusters of transport, mobility and logistics on the one hand and IKT on the other hand.

Large companies, some of which are positioned globally like Siemens, Bosch Software Innovation and PTV are represented in the region with relevant “telematics” locations. Toll Collect, operator of the truck toll system, is based in Berlin as well as Nokia gate5 who is responsible for developments relating to location-specific services, digital maps and navigation of the mobile telecommunications corporation; and TomTom has chosen Berlin as the location for its R&D centre. Transport and freight operators as users of modern traffic telematics systems complete these value chains. Overall, 10,700 people are employed in manufacturing companies and science as well as telematics service providers.

The claim to have the potential for Europe’s most modern traffic management is based on the interaction between statutory traffic management and private sector traffic information services. The Berlin traffic control board (Verkehrslenkung Berlin, VLB) with the modern traffic control centre (VKRZ) and traffic information centre (VIZ) as well as the connection to the Brandenburg traffic computer centre (VRZ) form the backbone of real-time traffic management in the region. For the definition of the VIZ reorientation, ten years of operation of its predecessor VMZ (traffic management centre) were carefully analysed.

Even though the field is relatively new, the Berlin-Brandenburg region has already gained a significant body of knowledge in traffic telematics and traffic...
The capital region sees itself as a region of innovation where intelligent transport concepts are developed, resources are carefully managed and transport times shortened.

management, which is used to optimise the systems. This is complemented by findings from research and development projects such as the federally funded IQ Mobility, which was used to develop a quality-oriented traffic management system and the EU project COOPERS, which developed new technologies for vehicle infrastructure interactions whose main purpose is to improve traffic safety.

The network of Telematics Pro e. V. concentrates a large part of the transport telematics community in the Berlin-Brandenburg region and thus assumes the function of an industry network. Another networking approach currently developing at the interface between telematics and logistics aims to more systematically determine the need for customised telematics solutions for trade and goods transport purposes and meet that need with projects and products from regional stakeholders.

**Subsidised coaching for innovative technology ventures in Berlin**

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Transport research

In the Transport sector, DLR is a pan-European orientated partner with the goal to foster existing skills in transport research and technology in the metropolitan region. The overriding goal of research activities is an environmentally friendly and socially acceptable transport system and innovative transport management. Scientists from various areas work collectively on socially important research topics. In addition to analysing relations in passenger and commercial transport and the interaction between transport and economy, society and environment, concepts spanning various modes of transport are developed and the use of the very latest technology for transport is researched and developed. The DLR conducts research for long-term mobility assurance and is active in projects and partnerships with regional, national and international organisations from economy and science.

In the Transport sector around 80 members of staff are working in two institutes at the DLR site Berlin-Adlershof, the Institute for Transport Research and the Institute for Transport System Technology.

ACTIVITIES

- Basic research through to application-oriented development of mobility and traffic behaviour and management
- Generation and operation of demand models, traffic simulation
- Data acquisition and analysis and development, evaluation and optimisation of solution strategies for cross-modal transport

Furthermore, the expertise of the Institute of Planetary Research as well as of the department Optical Information Systems at the Institute of Robotics and Mechatronics are used to address transport research topics.

Approximately 7,000 people are employed at 16 locations in Germany: Cologne (headquarters), Augsburg, Berlin, Bonn, Braunschweig, Bremen, Goettingen, Hamburg, Juelich, Lampoldshausen, Neustrelitz, Obergpaffenhofen, Stade, Stuttgart, Trauen, and Weilheim. DLR also operates offices in Brussels, Paris, and Washington D.C.
Efficient mobility management

Fraunhofer FOKUS develops technologies for an efficient mobility management.

Our researchers analyze traffic data from different sources and develop intelligent routing algorithms which ensure that mobile devices display quickly, reliably and continuously current traffic information and reliable prognoses on travel time and traffic volumes. Traffic data as well as local information, e.g. hotel addresses, are transmitted as TPEG messages. TPEG enables traffic information to be compiled from different sources and distributed promptly and comprehensively. Because of its small demand of transmission bandwidth TPEG is well-suited for digital broadcast (DAB, DRM, DVBx). The transmitted information can be used on mobile platforms (e.g. navigation systems or cell phones) as well as in stationary systems like digital traffic signs or for web-based traffic information services. Fraunhofer FOKUS is offering a TPEG client kit for the reception and utilization of coded TPEG messages. The kit facilitates management of TPEG messages with little memory requirements and makes them available to subsequent applications. Fraunhofer FOKUS has also developed an Android app for reception of up-to-date traffic information on smart phones. Current TPEG messages, for instance on traffic jams or construction sites are displayed on a road map and refreshed upon contact with the touchscreen. At present, applications exist for the cities of Berlin and Hefei (China).
Traffic system planning and traffic telematics

Forecasts and simulation based analyses
How can traffic be improved? How will a new road affect the traffic system? How can high construction costs be avoided using alternatives? The Department “Transport System Planning and Transport Telematics” is part of the Institute of Land and Sea Transport Systems, Faculty V of the Technical University Berlin and processes these types of questions using simulation software developed by the Swiss Federal Institute of Technology ETH Zurich and partners from industry.

Against this background the focus of the working group is based on elaboration, modelling and simulation of traffic planning measures. This includes improvements to infrastructure as well as measures not related to construction, e. g. road charges, telematics or innovative mobility concepts. The effects of such measures on man and environment can be analysed based on simulations.

ACTIVITIES

Elaboration, modelling and simulation of traffic planning measures
- Infrastructure, telematics, mobility concepts
- Effects on man and environment throughout the network, economic evaluation based on the individual
- Behaviour-related, microscopic simulation software for traffic in conurbations
adisoft systems – secure mobile communication

adisoft systems has been a leading supplier of communication solutions for over 20 years, offering mobile users reliable and secure access to corporate networks independent of their location.

With MOBILEmanager®, adisoft systems has developed a software solution that can be used across all sectors where direct access to corporate networks can optimise business processes or for the integration of new future-proof value added services. For example, MOBILEmanager® is used as an unattended application in M2M communications for rail systems or in the automotive field. Analytical data or updates have to be transmitted securely to mobile systems located in transmission networks that are in constant change.

However, as a platform independent solution, MOBILEManager® can also be applied on notebooks or PDAs to provide field staff with convenient mobile and secure access to corporate networks as though the employees were at their workstation in the office. Customers benefit from the company’s expertise in comprehensive solutions. Multi-faceted cooperation with partners help customers to optimise their value chain and develop new areas of growth.

As a technology company, adisoft is actively participating in research projects to develop new fields.

adisoft systems is your one-stop shop for IT, from the concept stage to permanent live operation. Successful projects and prime contractorships in large projects with over 10,000 installations proof of the technical competence of adisoft systems in the field of secure mobile communications. References include Deutsche Bahn AG, Allianz, Deutsche Messe AG, Siemens and Techem.

ACTIVITIES

- IT consulting for mobile communications and systems integration
- Customizations and functional enhancements based on the mobile communication platform MOBILEmanager®
- Integration services in the target environment of the customer
- Support through defined Software Service Levels

Flexible MOBILEmanager® platform
Our products create connections, our solutions overcome obstacles.

ASCI develops innovative solutions for transport companies. ASCI has in-depth knowledge based on many years of experience in software development based on the latest software technologies, in application oriented database design and in modern communication technologies.

The application of a flexible development process means we can respond flexibly to customers’ wishes. This is illustrated by an exact analysis of needs and individual conception of customised solutions. Our flat corporate hierarchy means that we can react rapidly to changes (requirements, general conditions, problem areas). Our comprehensive service concept has resulted in long-term customer loyalty and raised customer satisfaction. The focus of our work is on permanent constructive collaboration with our customers and based on trust. This ensures the incremental introduction of company-wide solutions and uncomplicated development which translates into superior value for the customer and a decidedly short ROI.

The public transport solution SyABO was included from the Initiative Mittelstand less than 2.500 candidates in the Top 20 Best List 2012 of category Line Of Business Software.

In our current R&D projects, ASCI concentrates on the topic of energy savings in rail based public transport. Together with our project partners we are investigating processes how traction energy can be saved using process control technology and an innovative driver assistance system.

Core areas of the company:
- Research and development services for transport companies
- Software products and mobile solutions for train and bus
- Planning and implementation of document management solutions and collaboration software
- Consultancy and services

For some time, ASCI is working on developing solutions to reduce energy consumption in public transport. For some time, ASCI is working on developing solutions to reduce energy consumption in public transport. Various research and development projects have been initiated together with our university partners as well as small and medium sized enterprises. ASCI will be launching the first products in the market over the coming two years.
Technology and management expertise

Dornier Consulting is your innovative management consulting and engineering partner for driving sustainable metropolitan and mobility solutions. Our expertise and experience focuses on traffic management, transport telematics, energy infrastructure and electric mobility, specification, integration and testing of electric, electronic and telematics systems and project management.

We serve our clients from business concepts to implementation. Our in-depth technical expertise combined with broad business know-how and extensive knowledge of the industry leads to long-term sustainable results. With our three hundred employees we are consulting on projects of high national political and public interest for in the field of metropolitan and mobility solutions.

We manage project volumes of about 20 billion Euros in total. Our key customers include the World Bank, KfW, EU, governments, public authorities, airport operators, infrastructure operators, automotive and aerospace industry and energy providers.

Our business division Mobility/Traffic & Transport offers the following services: development of mobility solutions for metropolitan regions, strategies and master plans for integrated passenger and freight transport systems, development of concepts, design and implementation support for intelligent transport systems, financing schemes for transport infrastructure, planning and development of intermodal transport corridors and logistic centres, ports and airports.

Our business division Electric Mobility/Energy Infrastructure offers the following services: strategy and management consulting services for utility companies as well as for players in the field of electric mobility, including strategy development, business development, product and services development, process modelling and optimisation, specification and evaluation of (IT-)systems and infrastructure (e.g. charging infrastructure).
**Hella Aglaia**

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Intelligent sensor systems

Hella Aglaia Mobile Vision GmbH, a 100 % subsidiary of Hella KGaA Hueck & Co., Lippstadt, is one of the leading developers of intelligent sensor systems worldwide. The company is a supplier for many of the large automotive manufacturers and has positioned itself as one of the leading innovators in the field of driver assistance systems.

With the growing complexity of traffic systems, it has become essential in the automotive sector to develop leading-edge technologies offering drivers assistance in critical situations. The ground-breaking camera and radar systems from Hella offer optimum safety in road traffic by continuously raising the level of awareness of the driver. Hella Aglaia uses its advanced knowledge to satisfy the demand for better safety systems, also outside the automotive sector. The company places its experience in 3D technology at the disposal of a wide variety of industries, offering them new impulses for technical safety systems. The basic technology is applicable on a wide basis and is expanding with the fields of application: in the public sector, in the economic sector and for private applications.

**ACTIVITIES**

Unique know-how worldwide in
- development and testing of driver assistance systems and sensors (2D + 3D)
- programming of embedded systems

Unique synergies with Hella in
- fusion of different sensors for DAS
- core expertise in electronics and optics

**People Counter: Stereo Counting System**

**Camera-based traffic sign recognition**
IQ wireless GmbH

IQ wireless – new products with new ideas for our customers

IQ wireless –

- develops and markets processes, devices and systems for wireless communication, video system technology and internet, e.g. Web TV products. Solutions and products combine many years’ experience with innovative technologies, enabling our customers to benefit directly, comprehensively and sustainably from technical progress.

- places the focus on new, profitable wireless network solutions for telecom providers: wireless local loop, wireless internet access, wireless far-range LANs.

- develops and markets video and monitoring systems for environmental protection and as a guarantee of civil safety. The latest processes for image processing, sensor technology and telecommunications/telematics are combined to create complex system solutions.

- implements customers’ wishes for complete technical solutions. More than 30 engineers and technicians apply their comprehensive know-how and specialised knowledge to ensure that even substantial systems and projects can be processed. And if we need additional services from other partners to complement our own technical expertise, naturally we ensure that these new components are fully integrated.

- cooperates with companies in Germany and around the globe. Collaboration starts with scientific cooperation with institutes and research institutes, for example the Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR – German Aerospace Centre) continues with product transfer for national component production and also includes international service and support.

ACTIVITIES

3D capture of objects
3D image analysis is used for tracking people and objects not only on a plane, but also in 3D space-time. Two cameras record the image scenario in synchronous operation - the rest is done by a software with specially developed algorithms.
PTV Group – Planung Transport Verkehr AG

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PTV. The Mind of Movement.

The PTV Group offers software and consultancy for transport, transport logistics and geomarketing. Whether transport routes, sales structures, private or public transport are concerned – we plan and optimise everything worldwide that moves people and goods.

Our offer includes concepts & solutions, software & services, components as well as data & content. Clients in more than 100 countries rely on our solutions. Thanks to them users in the public sector and industry are able to perform their daily tasks efficiently. Headed by our market leading product lines PTV Map&Guide for planning transport routes and PTV Vision Traffic Suite for planning and simulation of traffic.

Scientific expertise is one of our strengths. We apply a targeted and practical approach to projects. Around 650 employees around the globe are working on high-performance pioneering solutions. Our headquarters is in the technology region of Karlsruhe where our development and innovation centre has been located since the company was founded in 1979.


ACTIVITIES

Consultancy services in the fields of traffic planning and logistics:
- Concepts and solutions

Distribution and consulting for PTV software products
- VISION TRAFFIC SUITE
  - PTV VISUM,
  - PTV VISSIM,
  - PTV VISWALK,
  - PTV VISTRO,
  - PTV SAFETY

- VISION ONLINE
  - PTV BALANCE
  - PTV OPTIMA

- LOGISTICS APPLICATIONS
  - PTV MAP&GUIDE
  - PTV MAP&MARKET
  - PTV SMARTOUR

- LOGISTICS COMPONENTS
  - PTV X-SERVER
  - PTV NAVIGATOR

The representative office of the PTV Group in the capital acts as a contact point in the region. Within the extensive range offered by the PTV Group, in Berlin we focus on:

- International projects, especially transport planning
- Transport planning and transport master planning
- Traffic management
- Research projects
- Public transport planning
Expertise on the banks of the Spree

VAB – your expert system partner for innovative products in the realms of control, process and information technology for public transport! For over 20 years, our 40 employees have been developing IT system solutions that can be adapted to various operating conditions. A high level of quality and cost-effectiveness as well as customer-oriented support are a matter of course for us. Successful installations throughout Europe prove the high acceptance of our products.

VABdepot is an innovative system solution for depot management which controls all processes in a depot. Vehicle operation to comply with timetables is planned and monitored and work processes, vehicle servicing and maintenance optimised. Modern positioning systems mean vehicles can be tracked to parking spaces or accurate locations can be displayed, barriers and gates are controlled automatically and transfer vehicle data to the control room. The VABnet satellite based control and information system allows the development of innovative and cost-effective ITCS solutions for busses and trains. This solution is multi-client capable and is widely used. It contains modules for passenger and driver information as well as operations management in the control room, to ensure connections are secured and for implementing services on request.

VABnet allows ticket printers, on-board computers, smartphones, displays and optical signalling systems from different manufacturers to be integrated and controlled. The VABtrack infrastructure data management system manages installations and modules of the track infrastructure, carries out troubleshooting and assists transport companies with their strategic maintenance tasks. The VABcon system solution for managing season tickets and school transport offers transport companies and local authorities an integrated concept for managing special ticket sales. Process flows for applications, responses, notification of need, ticket dispensing and billing are supported with due consideration for individual rules and regulations.
Potential

Berlin and Brandenburg are among Germany’s leading logistics locations. Given their position in the heart of the continent that is growing together, Germany’s capital region presents itself as a geo-strategically attractive interface of the East-West and North-South arteries through Europe and offers excellent conditions for establishing value-added logistics services.

Germany’s capital region not only has an excellent infrastructure, it also enables logistics service providers to reach more than 100 million consumers within 24 hours.

Logistics professionals benefit from a unique research environment and the expertise of recognised scientific institutions such as the Technische Universität (TU) Berlin, with its Logistics department and the University of Applied Sciences in Wildau (FH). The proximity of science and practical application encourages rapid knowledge transfer to companies. The LogisticsNet Berlin-Brandenburg is a proactive operational management unit and contact partner specifically for this sector and develops sustainable initiatives to raise the profile of the capital as a logistics centre even further.

Outlook

Over the next few years, the strategy of the centre of excellence will focus on advancing the logistics centre by strengthening the logistical expertise in the region.

In doing so, the region concentrates on two core areas: developing and expanding the logistics services that yield significant added value on the one hand, and networking the shareholders in the region on the other hand.

The airport and sea port hinterland strategy generates new impetus for growth.

The construction of the Berlin-Brandenburg airport is opening up numerous opportunities for the sector, for passenger transport as well as for air cargo.
Berlin and Brandenburg form a geographically important intersection in the pan-European North-South and East-West axes.

Furthermore, Berlin and Brandenburg are expecting additional growth impetus from their sustained strategic positioning as a high-performance sea port hinterland location. This strategy is embedded in the transnational innovation strategy as one of the leading projects.

LogistikNetz Berlin-Brandenburg e.V. (LogisticsNet) was founded by experts from the logistics service chain and concentrates all activities and information of the sector in the capital region. It promotes cooperation between members and optimises individual consultancy and process cycles for its customers in the areas of marketing and public relations, business development, site selection and investment consulting, planning, financing and realisation of logistics properties, storage, transport and distribution, research, training and knowledge transfer.

Dock 100 Logistik: the cargo motel with daily pro rata billing

Storing goods at Dock 100 Logistik is like staying in a motel: check in, check out, pay. With round-the-clock service, also on weekends. Whether for a short or long stay – your costs are calculated on a day-to-day basis. Check in now!
Technologies for the future

The Fraunhofer-Institute for Production Systems and Design Technology IPK in Berlin was founded over 35 years ago. With its current workforce of 260, it carries out applied research and development for the whole process chain in manufacturing companies through its seven business divisions Corporate Management, Virtual Product Creation, Production Systems, Automation Technology, Medical Technology, Quality Management as well as Joining and Coating Technology. Together with the Institute for Machine Tools and Factory Management IWF at the Technical University of Berlin, technologies are developed in the Production Technology Centre for management, product development, production processes and the design of industrial production facilities.

Innovation through cooperation

The innovation cluster “Maintenance, Repair and Overhaul in Energy and Transport” (MRO) founded by Fraunhofer IPK in 2009 is especially important for resource and energy efficiency and focuses on questions of maintenance, servicing and repair of investment goods in the energy and transport sectors. For products with high investment costs and a long service life, a significant part of business profits is generated via after sales services. During the service of a product, mostly unforeseeable repairs occur in addition to regular and plannable maintenance. Reconditioning not only returns a product to a condition that is as good as new but also lifts it to a new technical and economic level beyond its original delivery condition. The task of the Fraunhofer innovation cluster MRO is to elaborate and establish the most resource friendly and energy efficient MRO processes and systems and establishing them in the metropolitan area.

ACTIVITIES

The Fraunhofer innovation cluster “Maintenance, Repair and Overhaul in Energy and Transport” (MRO) is aimed at developing resource friendly and energy efficient MRO processes and systems and establishing them in the metropolitan area.

Fraunhofer-Institute for Production Systems and Design Technology IPK
Technische Hochschule Wildau [FH] Verkehrslogistik/Transport Logistics

Logistic solutions for the future

The Technical University of Applied Sciences Wildau, located to the south of Berlin, combines the tradition of the former locomotive factory Schwartzkopff with a university education based on practical studies and innovation. 4,250 students are being educated in economic, administrative and engineering subjects in 23 degree courses, 6 of which are offered as distance learning. The Technical University Wildau is Brandenburg’s only university offering courses in areas such as logistics, telematics and aeronautical engineering. Its close collaboration with numerous organisations and institutions guarantees a constant transfer of technology and knowledge including student participation.

Practical research and international networking

The Technical University Wildau counts 117 education and research institutions in 56 countries as its partners. In addition, the university participates in 25 competence networks. Its logistics course, for example, has been exported to Kazakhstan, Croatia and the United Arab Emirates.

With around 230 on-going research projects, the Technical University Wildau is one of the top 5 research universities in Germany. According to third party funding per professor, the Technical University was in first place. Thanks to its consistent orientation on practical solutions, the Transport Logistics Research Group (FGVL) is a perfect partner for industrial customers. Its portfolio includes industrial projects, European network and individual projects, development of logistics ICT systems, consulting for policy makers in the fields of goods transport and logistics.
BEHALA – Berliner Hafen- und Lagerhausgesellschaft (Berlin port and warehousing company) – is a major logistics services company in the metropolitan area of Berlin Brandenburg, employing 120 staff and with a turnover and transport volume of around 4,000,000 tonnes per year. Its port sites include one of the largest inland ports in Germany, the West Port in Central Berlin, as well as the South Port in Spandau and the port in Neukölln.

In addition to turnover and storage for bulk cargo, piece goods and heavy cargo, BEHALA also develops project-related logistics concepts for intermodal transport at the request of customers. In its trimodal freight village Westhafen, BEHALA processes trains from German sea ports and from the Ruhr every day in the container terminal in order to supply the capital. As a rail transport company, BEHALA offers shunting services in the port as well as regional transport using its own locomotives. In addition, logistics immovable assets (offices, warehouses and outside storage) can be leased at all port sites.

BEHALA is also active in R&D. BEHALA is developing an innovative and environmentally compatible logistics solution for the future with its upstream liner service Liniendienst for heavy cargo traffic and the construction of a RoRo lighter adapted to Berlin’s waterways.
Reap the rewards of flexible docking

The logistics specialist Dock 100 Logistik operates one of the most advanced and efficient logistics facilities in Europe, at the Borsig Docks in Berlin-Tegel. Its integrative concept combining office, production, and logistics components makes the Dock 100 Multi User Centre unique in Berlin, offering the full range of logistics services and flexible storage space.

The fully automatic high-bay storage facility is equipped with leading edge control technology, IT support systems, and offers space for 71,000 pallets. The site covers a total of 50,000 m² (12 acres) production and logistics space as well as a modern office dock of 16,700 m² (4 acres). More than 400 movements in and out can be effected per hour at the 22 covered shipping bays for lorries – 24 hours a day, 365 days a year.

Cost-effective and flexible

The cost-effective, flexible storage facility is designed especially for palleted goods with frequent goods-in/goods-out movements and stock picking. Qualified personnel supervise the flow of goods, e.g. cosmetics, tinned goods and drinks, paper and packaging, metal goods, electronic articles, etc. The heated high-bay storage facility is available to customers from trade and industry and also offers a bonded warehouse for customs and tax purposes.

All requirements of the supply chain can be covered on site with a maximum level of quality and flexibility. Our flexible use of space and warehouse management system with multi-client capability ensures that logistics processes can be provided around the clock. The integrated infrastructure of office, production and logistics, combined with networking client cluster structures, results in high synergy effects and optimises the value chain and the transformation process. In addition, clients enjoy the benefits of a precise daily pro-rata billing of warehousing costs, enabling them to transform fixed costs to variable costs.
You have your route planned – we can help you get there.

Our company specialises in IT and logistics. We started operations in Moscow in 2008 and in 2011 opened our office in Potsdam. The owner and CEO has almost 30 years experience in logistics consultancy and has been involved in and helped to shape logistics development in more than 400 industrial projects as well as numerous research projects. Our proximity to universities and research institutes ensures we can offer our customers state-of-the-art methods, technologies and systems.

We use analysis, visualisation and simulation tools to identify optimisation potential in goods and passenger flows. We then develop optimisation scenarios and realistic operational instructions for implementation. We tailor our solutions to provide an exact fit for the situation and requirements of our customers. We have simulation tools at our disposal to analyse the effects of procedural changes.

Logistic processes are an important part of our consultancy work. We analyse transport chains with regard to their robustness and develop organisational and technology-based solutions in order to minimise disruption and respond appropriately to external factors. In connection with passenger flows (terminals, railway stations, malls, large events) we analyse infrastructure in relation to its capabilities and robustness in critical situations.

As part of our “implementation accompaniment” service we assume project management on behalf of our clients and ensure that projects based on our plans are brought to a successful conclusion.

Driving Force Logistics

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ACTIVITIES

- Documentation, visualisation, analysis of structures and process flows
- Load and capacity analyses (storage, transport)
- Analysis of clients’ service requirements
- Determination and evaluation of alternative transport scenarios
- Optimisation of process flows (simulation)
- System design
- System implementation

Load analysis

Process optimization
Service for the logistics location Berlin/Brandenburg

IPG is an enterprise which offers a large product portfolio in business location and transport infrastructure development for public and private clients. It is responsible for the development and marketing of the freight villages Berlin Süd Großbeeren, Berlin West Wustermark and Berlin Ost Freienbrink as well as the industrial parks Premnitz and Ludwigsfelde West, to mention a few.

IPG provides railway technology specialists for operating feeder lines and public sidings and cooperates with regional rail transport operators. IPG acts as an agent for the Ministry for Infrastructure and Agriculture of the State of Brandenburg in questions on the development of public local transport, logistics and freight transport.

With its consultancy projects for the harbour facilities’ JadeWeserPort, Mühlberg/Elbe, Schwedt and Wustermark as well as the subject of hinterland transport from seaports IPG is offering more and more services for waterways as a mode of transport which are proving of benefit to the EU projects SoNorA, Scandria, TRANSITECTS und Rail Baltica Growth Corridor.
IVU. Systems for vibrant cities.

**Founded**: 1976 • **Public offering**: 2000 • **HQ**: Berlin

**Branches**: Aachen, Birmingham, Bogotá, Dubai, Rome, Santiago de Chile, Veenendaal

**Personnel**: 350 • **Executive Board**: Martin Müller-Elschner (CEO), Dr Helmut Bergstein, Frank Kochanski

For more than 35 years, IVU Traffic Technologies AG with some 350 employees has been working to ensure that transport in the world’s major cities operates reliably and on time. People and vehicles in expanding cities are continually on the move – a logistical challenge requiring intelligent and reliable software systems.

These megacities are growing across the planet at an incredible rate. The only possibility to organise them and control the chaos is to guide growth with an eye to the future. High performance infrastructures for transporting people and goods are guarantees for the ability of a metropolis to develop. With its IT systems, IVU has its finger on the pulse of time. Standardised software products and customised solutions ensure that public transport and logistics processes can be well organised to operate efficiently. IVU’s systems guarantee optimum deployment of vehicle fleets and personnel, sell tickets, inform passengers, ensure connections are available, monitor operations, support the choice of branch locations, reveal development potential and ensure that election results are determined correctly. Every day, IVU products control hundreds of thousands of individual movements in public transport, workforce management or geomarketing while ensuring maximum efficiency.

IVU systems are installed at over 500 customers around the globe. Whether a fully integrated solution or individual components: all products are based on open standards and can be integrated in a wide range of system environments. Continuous development of new products and refinement of existing products in collaboration with the customer is a matter of course – so that complexity remains controllable, now and in the future.

**ACTIVITIES**

With the systems of its IVU.suite, IVU can offer the appropriate solution for all tasks of a transport company and ensure efficiency in daily operations: from planning and dispatching to fleet management, ticketing and passenger information through to the settlement of transport agreements.
IT systems for public transport
LNBB – Berlin-Brandenburg LogisticsNetwork

The Berlin-Brandenburg LogisticsNetwork strengthens the metropolitan region as a logistics and business location. We are a central contact point for companies from the consulting, commercial and services sector for all questions related to infrastructure, logistics solutions, business models and available aid. Our vision:

By 2020 Berlin-Brandenburg will be one of the top logistics locations in Europe.

We will continue to develop the region to become the hub for East-West and North-South transport routes. Berlin-Brandenburg is establishing itself as a logistics location in the Hinterland of the sea ports for transhipment of goods from abroad. We will intensify networking of science and commerce in order to position Berlin-Brandenburg as a leading logistics competence centre.

ACTIVITIES

We support national and international business contacts and business development for the logistic economy of Berlin Brandenburg with a special focus on Eastern Europe.

We are active for joint projects, location marketing and cooperative press work, joint presence at trade shows, conference and logistical events.
We put fashion on the map

Meyer & Meyer is a family owned and operated company with its headquarters in Osnabrück. The logistics company was founded in 1902 and has specialised in fashion logistics for over 60 years. Meyer & Meyer employ 2,000 people and control logistics activities in Europe, Asia and North Africa from the headquarters in Osnabrück via a network of subsidiaries and partner companies at home and abroad.

As a specialist in fashion logistics, Meyer & Meyer are fully aware of their special responsibility in relation to climate change and adhere to a comprehensive strategy of sustainability. The company’s commitment was recently rewarded with the Eco Performance Award 2011 by DKV Euro Service and the department for Logistics Management at the University of St. Gallen.

Meyer & Meyer have implemented various sustainable procedures. As part of a project sponsored by the BMVBS (Federal Ministry for Transport, Construction and Urban Development), Meyer & Meyer have been using the first fully electric trucks in Germany in the weight class up to 12 tons since May 2011. Two of these trucks are used to supply the branch in the Berlin/Brandenburg area. The aim is to reduce CO₂ emissions and noise pollution.

In addition, the use of fully electric trucks will be tested for city centre logistics. The Fraunhofer-Institute for Production Systems and Design Technology is monitoring the project from the scientific perspective. The company is also supporting pilot projects around the „EuroCombi", a combination truck over 25 m long. One of these large volume vehicles drove 115,000 km in a test program over a period of two years and saved 17,700 litres (c. 3,893 gallons) of fuel, reducing CO₂ emissions by 15 %.

Meyer & Meyer use innovative telematics software to monitor the fuel consumption of its vehicles and to plan their daily routes with maximum efficiency. This means the fleet can be deployed flexibly and unloaded journeys can be avoided.

ACTIVITIES

As a fashion logistics specialist, Meyer & Meyer offer their customers services throughout the whole textile value added chain. The range of services covers raw materials and production logistics through storage, conditioning and quality assurance to retail distribution.

Meyer & Meyer offer accessories needed by logistics: Individual solutions customised to the needs of each company
Customised transmodal transport consultancy

ProgTrans AG is a Swiss company with headquarters in Basel. It was founded in 2003 with the employees from the Transport division of Prognos AG which had withdrawn from its consultancy services in the field of transport and traffic as the result of a strategic re-orientation programme. ProgTrans AG compiles, analyses and forecasts based on research and offers consulting on transport policy and strategy for transport and traffic.

Since it took over all on-going commissions and customer relations at the time as well as all employees in the Transport division, ProgTrans AG was able to continue with the activities from the Prognos years almost seamlessly under the management of its founder Dr. Stefan Rommerskirchen, head of the Prognos division for many years.

Since July 2011, Prognos AG and Dr. Rommerskirchen are shareholders in ProgTrans AG. In May 2012, all activities of both companies focused on Basel were brought together under one roof in order to expand the very close collaboration that had been promoted since ProgTrans AG was founded, especially in the fields of economics, energy & climate protection, infrastructure and dialogue processes as well as innovation and technology.

ProgTrans AG can call on comprehensive database resources and numerous models developed in-house. Its interdisciplinary team also works with standardised transport planning and simulation software, standard specialist software for statistics and econometrics as well as geographical information systems.

The spectrum of services of ProgTrans AG includes:

- Analysis and forecasting of transport issues (for example on behalf of the Federal Ministry for Transport, Construction and Urban Development)
- Evaluations in the fields of logistics and transport (e.g. on behalf of the Federal Ministry of Economics and Technology)
- Mobility research and consultancy in the fields of goods transport, levying of road charges and infrastructure evaluation

ACTIVITIES

- We provide experts’ reports and studies on transportation
- We create transportation models as well as analysis and forecast tools
- We elaborate reports and carry out joint investigations
- We compile and present talks, moderate workshops and supply specialist contributions
Background

The aeronautics and aerospace industry has a long tradition in Berlin-Brandenburg, dating back almost 120 years to aviation pioneer Otto Lilienthal’s first attempts to fly.

The capital region has now established itself successfully as Germany’s third largest aerospace centre of excellence.

The sectoral competence of the region is characterised by the broad spectrum of companies located in the region who are primarily involved in the areas of engine development and production, lightweight aircraft, aircraft maintenance and servicing as well as testing development and production services. Berlin and Brandenburg today belong to the leading European locations for engine development and production. In addition to influential system leaders such as Rolls-Royce Deutschland and MTU Maintenance and also Deutsche Lufthansa, numerous small and medium sized companies as well as reputable research and educational capacities are represented in the area.

With around 17,000 jobs, the sector is one of the drivers of growth in the capital region. In 2011, products and services “Made in Brandenburg” represent the state’s most important regional export product with a volume of approx. EUR 2.4 billion and a share of 17.5% of total exports.

Upwind through major project BER

The construction of the new major airport Berlin Brandenburg “Willy Brandt” provides additional incentives. The airport is one of the largest infrastructure projects in Germany. With over 24 million passengers annually, the region is already Germany’s third largest airport location. Additional intercontinental connections will further raise the importance of the region as a key European hub. The construction and operation of the new airport have ensured continued growth and employment. In addition, the airport project offers excellent opportunities to present the technological innovation capabilities and performance of the region, for example, modern airport, logistics and security technologies.

In Berlin and Brandenburg, the regional sectoral network BBAA (Berlin Brandenburg Aerospace Alliance), the TSB (Technologiestiftung Berlin Gruppe - Technology Foundation Berlin Group) and ZAB (ZukunftsAgentur Brandenburg - Brandenburg Economic Development Board) are committed to continued successful development of the region to become one of the leading innovation and production locations.

Within the aerospace industry in Berlin and Brandenburg, the segment of small satellites has been growing by 25% every year since 2001. This is due to the ongoing strong demand for commercial applications and from emerging nations, but mainly due to the excellent quality of the products.
Berlin-Brandenburg has successfully established itself as Germany’s third largest competence cluster for the aerospace industry.

**Trends and further projects**

The sectoral network BBAA is committed to further improving the regional economic structure and networking the technology and innovation potential of the region with global system and service providers.

As a result of ongoing networking, 18 East German aerospace companies have joined forces to found the Berlin-Brandenburg Aerospace Technology AG (BBAT) as a competent supplier for the engine and maintenance sector.

Berlin-Brandenburg has strengthened its position as one of the most important international centres for the engine industry through targeted R&D projects in the innovation cluster maintenance, repair & overhaul (MRO) and testing. For example, in May 2010 a Mechanical Test Operations Centre (MTOC) equipped with the latest test and validation facilities for comprehensive mechanical gas turbine testing and evaluation that concentrates all the component and material testing activities of the whole Rolls Royce Group at the Dahlewitz location opened.

Another objective of the field of the future is promotion and further development of the cooperation between SMB and research institutes to build small satellite systems and develop services and missions based on these. The capital region is one of the world’s leading centres in this area and has comprehensive expertise thanks to eight successful missions developed and built since 1991.  

Brandenburg alone recorded growth in exports of 13.1% from 2009 to 2010. Companies and research institutes in the region are involved in 3 out of currently 4 major European projects.
Aerodynamics and fluid mechanics

Tasks of the Department of Aerodynamics and Fluid Mechanics at the Brandenburg University of Technology Cottbus include research and development, in addition to teaching, in the areas of fluid mechanics, aerodynamics and measuring technology. The Department conducts nationally and internationally acknowledged work in the area of experimental, theoretical and numerical fluid mechanics. This includes fundamental analyses as well as application-oriented research and development in close cooperation with industry partners. Lectures cover the areas fluid mechanics, aerodynamics, measuring technology, and aerospace applications along with numerical methods and communicate the knowledge required to complete challenging research and development tasks.

The Department currently employs 25 scientific and technical staff. The Fluid Centre was opened at the end of 2004. The Centre provides wind channels as well as test facilities for fluid flows and aeroacoustics along with aerospace labs and computer technology for R&D projects on an area of 900sqm (10,000 sqft). 3D time-dependent codes (e.g. FORTRAN, OpenFoam) are available for numerical flow simulation.
CFTM² – Center for Flow and Transport Modelling and Measurement

Modelling and measurement of complex flow and transport processes in nature and technology with the concomitant transport of particles (dust, drops, bubbles), exchange of momentum, heat and matter, possible superimposed chemical reactions as well as the creation of forces, noise and vibrations is a key competence for a wide range of specialist subjects.

It plays a decisive role in the design and operation of facilities in many areas of process engineering, energy technology, mechanical engineering and plant engineering as well as the automotive and aviation industries, when planning civil works, and also covers naturally occurring flows in watercourses and the atmosphere, e. g.

- modelling and optimisation of combustion processes and chemical reactions
- modelling of complex geophysical flows

ACTIVITIES

Modelling, numerical simulations, analysis and measurement of flow and transport processes using interdisciplinary methods and procedures.

- generation of global and localised climate models (indoor climate, urban climate)
- models on the spread of fire
- exhaust gas treatment and wastewater treatment
- generation and utilisation of renewable raw materials
- development of vehicles/engines as well as aircraft/jet engines

CFTM² as a cross-departmental initiative at the Brandenburg University of Technology in Cottbus (BTU) is able to solve tasks from these fields through the synergy of its technical departments.
From monomers to components

Together with the Chair of Polymer Materials of Brandenburg University of Technology Cottbus (BTU), at its sites in Teltow and Wildau, the Fraunhofer Research Institution for Polymeric Materials and Composites PYCO develops highly networked polymers (reactive resins/duromers) for applications in all industries, especially for transport engineering (primarily aviation), information and communication technology and instrument engineering.

Currently, the main focus lies on developments for use in light construction, microelectronics and optoelectronics: new (nano) materials, prepregs, core materials, laminates, fibre reinforced polymers, sandwich structures, bistable displays, integrated optical devices and barrier layers.

Main applications of reactive resins for light construction, microelectronics and optoelectronics are: adhesives, coatings, varnishes, binders, inmould and gelcoats, castings, prepregs, Resin Transfer Moulding (RTM) pultrusion resins and foams. These have special properties, such as high flame retardancy, high fracture toughness (brittleness), minimum volume shrinkage, fast and latent curing, disbonding ability (with adhesives), barrier properties (against water vapour and oxygen), adjusted coefficient of thermal expansion (CTE), adjusted refraction indices, rework and recycling abilities. Since these properties are frequently in contrast to each other, special emphasis is placed on balancing these properties.

The whole development chain from monomers to components is covered, which is unique for any research institute in Germany. Starting with monomer synthesis, prepolymer manufacturing is analysed including implementation of coreactants such as flame retardants, tougheners, fillers or other functional compounds developed in-house. Depending on the level of development required by the client, the results include formulas for reactive resins, fibre reinforced materials, sandwich structures or other components required for demonstration purposes.
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airberlin – hub of the BER airport

airberlin is Germany’s second largest airline. The company has a workforce of 9,200 employees. Each year, airberlin receives over 10 awards for service and quality. The fleet comprises 165 aircraft with an average age of five years, making it one of the most modern fleets in Europe. The airline’s state-of-the-art jets are highly fuel efficient, which contributes toward a long-term reduction in pollution emissions from aircraft.

As one of the major European airlines, airberlin flies to 162 destinations in 40 countries. In 2011, over 35 million passengers were transported. In December 2011, airberlin entered into a strategic partnership with Etihad Airways. Since 20th March 2012, airberlin has been a full member of the global airline alliance oneworld®.

airberlin operates codeshare flights with oneworld members American Airlines, British Airways, Finnair, Iberia, Royal Jordanian, S7 Airlines and Japan Airlines.

ACTIVITIES

- airberlin not only bears the city’s name and is market leader in Berlin, it is also expanding the BER airport to become airberlin’s hub
- via Abu Dhabi with Etihad Airways on to Asia, Australia and Africa
- with oneworld® partners to 800 destinations worldwide

Eco-efficient flights with airberlin: fleet age 5 years, 3.5 litres per 100 passenger kilometres, 42% CO₂ reduction since the mid 1990s
AQUILA Aviation is a growing medium-sized company located in Schönhagen. AQUILA Aviation provides perfection in every detail, handwork on a high level and we are proud about the attribute “made in Germany”. At our location south of Berlin we are currently producing our latest highlight: the Aquila A 210, a modern, innovative and certified VLA. Our Aquila A 210 is held in high esteem and is a favourite with clubs, flying schools and private pilots around the world, including airberlin, SWISS, KLM and RWL.

Our core skills include lightweight/fibre composite material and aircraft maintenance. Together with our partners and suppliers we command a strong, motivated and reliable network.

The high standards demanded by professional aviation and our many years of experience give you the certainty that your Aquila A 210 or your nonaviation project will be of the highest standard of quality.

With our team of 60 employees, we provide the full range of CAMO, Maintenance and Repair Service for our Aquila A210. Furthermore, we are approved for any sailplane, motorglider and small aeroplanes in composite design.
Space technology

Since 1993 staff at Astro- und Feinwerktechnik Adlershof GmbH has been developing, designing, manufacturing and testing successfully in the fields of precision engineering/optics, special-purpose machinery, scientific instrumentation as well as aviation and space technology. The company is at the forefront of technological developments with its state-of-the-art facilities and equipment.

In the field of space technology the company has unusual experience in the implementation of bus components and systems for small and micro satellites, e.g. reaction wheels, functional mechanisms, structures, solar panels and complete power supply units. We can offer comprehensive expertise in the field of optical (OGSE) and mechanical (MGSE) ground support equipment, including development and manufacture of test equipment and test rigs, handling facilities and special transport equipment (containers) for storage and transport of sensitive equipment and whole satellites. Our company is specialised in scientific payload in the field of toolbuilding for space applications.

The company is certified in accordance with DIN EN ISO 9001 and DIN EN ISO 9100. The certificates are renewed regularly.

ACTIVITIES

- Development and design from blueprint to complete production documentation
- Production and assembly of precision engineering and opto-mechanical parts, modules and systems
- Development and construction of measuring and test rigs

Satellite bus for TET-1 is developed and produced by Astro- und Feinwerktechnik (all systems for in orbit operation).

The reaction wheel RW 90 is used for attitude control of small satellites.
Analysis, reports, forecasts – for tomorrow’s air traffic

How many passengers will depart from an airport in the near future? What is to be expected concerning the environment? And: how good are the location’s security systems and processes?

Avistra GmbH offers consulting services and solution strategies for institutions and organisations with special focus on the field of air transport and is actively involved in various research projects.

Main business segments are

- safety and security analyses, environmental impact assessments, punctuality analysis and capacity computations as well as market studies and traffic forecasts.
- Avistra’s services are mainly engaged by airports and airlines, but also federal and state ministries and customers from other transport sectors. Avistra also offers security training as well as training for management personnel in the infrastructure and energy sector by its subsidiary Avioplan (www.avioplan.de).
European Aviation Security Center e.V.

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EASC – for secure aviation

Airport security – a topic that continues to attract a great deal of attention. For passengers, this means primarily derogating their enjoyment of travelling. For airport operators, this means above all an organisational challenge: security controls cost time, space and money. With its targeted research in cooperation with partners from science and industry, EASC intends to work on solutions that raise the efficiency of control processes and help to reduce costs for these processes while maintaining current security standards at passenger airports. An approach that is being followed explicitly is the Gate of Trust™ concept. The core task is to simplify the control process by using distributed sensors for detecting dangerous substances. The challenge is the question of how to integrate sensor networks in an airport environment and whether information gathered by these systems is appropriate to identify possible dangerous persons and direct them to a targeted in-depth security control.

EASC is involved in research and development of optical security technologies, including video analysis techniques and new entry/border crossing concepts using biometrics. The Schönhagen airfield as a research site has a decisive advantage in that it has a genuine operational infrastructure without the limitations that result from the security regulations at passenger airports.

ACTIVITIES

- Research in all aspects of airport security
- Test bed for security developments
- Platform for process innovations in airport security

Research airfield Schönhagen © Airfield company Schönhagen GmbH
EDAZ – Business Aviation

The Schönhaven airfield is one of the busiest commercial landing strips in Germany. With 50,000 aircraft movements per annum, it is the largest in the new federal German states in the East. It is designed optimally for business aviation and offers professional and private pilots an attractive site. With 170 permanent aircraft, Schönhaven has already become the most important relief airfield for the future metropolitan airport BER in the aircraft category up to 12 tonnes MTOM.

Flying before the gates of Berlin – in the heart of Europe: its attractive location in the heart of the growing economic region between Berlin to the south, Potsdam and the Schönefeld intersection gives the Schönhaven location additional momentum.

The Schönhaven airfield offers business passengers optimum conditions for business charter as well as parking airplanes or helicopters. In addition, good transport connections, conference rooms available at short notice, restaurant and catering facilities as well as a guesthouse add to the level of comfort. The Schönhaven airfield is also an attractive location for private and sports pilots, with its attractive range of services (shuttle service, hired cars, ground services, pilot rest area, pilots’ lounge, guesthouse with double rooms, restaurant, etc.) and is an exciting location for events and conferences.

Schönhaven is not only an airfield, but also a competent partner for innovative new businesses, conferences and events. To date, 35 companies as well as numerous clubs and associations have settled successfully in the modern offices and industrial buildings in the airfield and technology park. The focus lies on maintenance of airplanes and helicopters as well as training courses for all types of pilot’s licences, including airline transport and commercial helicopter pilots. Aircraft are also manufactured in Schönhaven, and research projects on various questions related to aviation are supported from here. Whether an Antarctic expedition or survey flights, companies from Schönhaven are active around the globe. With its airfield and technology park, Schönhaven is one of the most important economic locations of the region.
Washroom comfort

Franke Aquarotter has been the leading specialist for development and manufacture of wash and shower systems for commercial aircraft for more than two decades now. The system technology from Ludwigsfelde in Brandenburg is used around the globe in lavatories in the aviation industry. This innovative company developed modern, extremely light lavatory water supply systems for the Airbus A380, using the very latest technology to ensure minimum water consumption with maximum comfort when washing your hands. The first shower system for airliner was also developed by Franke Aquarotter and has been installed in the A380 of Emirates.

The product portfolio includes customised special solutions in addition to the standard systems. Franke Aquarotter also supplies the Airbus A320 series and other major aircraft manufacturers and completion centers such as Embraer, Bombardier, Lufthansa Technik AG or Jet Aviation.

With only 0.8 litres of water volume, the latest stand-alone heater developed in house uses a special temperature regime to secure safety against scalding when heating water. Created using the latest materials and electronic standards, the innovative heater is suitable for both conventional as well as the latest generation of carbon-based aircraft.

ACTIVITIES

Franke Aquarotter developed an innovative wash and shower system for the Airbus A380 as well as probably the smallest, lightest and most universal stand-alone heater for generating hot water in aircraft.

This new development can be used as a stand-alone component as well as combined with the new 3-piece lavatory system (LWSA). Installation can be performed with self-closing or electronic taps. Franke Aquarotter currently employs around 280 people in Ludwigsfelde. In addition to its modern production facility and offices, the site also houses a prestigious training centre.
MTU Maintenance Berlin-Brandenburg

The Ludwigsfelde-based company is MTU’s center of excellence for industrial gas turbines (IGTs) and the European specialist for Pratt & Whitney Canada Engines. A star in the company’s maintenance portfolio is the successful CF34 jet engine family built by GE Aviation. True to MTU Maintenance’s motto “Repair beats replacement”, the Ludwigsfelde shop repairs even heavily worn parts. “We are on a growth track,” says André Sinanian, managing director and senior vice president. “A key aspect of the further development of the location are investments in innovative processes and repair techniques.”

With over 700 employees, MTU Maintenance Berlin-Brandenburg, is a firmly established part of the MTU group. As the center of excellence for industrial gas turbines, the company provides service support for General Electric’s LM series and has the largest LM portfolio of all licensed independent maintenance facilities. Its IGT test cell is one of only two worldwide that can accommodate the most powerful LM gas turbines. The IGT on-site service based in Ludwigsfelde operates worldwide and is among the largest of its kind.

In the field of commercial aircraft engine maintenance, the company focuses on Pratt & Whitney Canada’s PT6A, PW200, PW300 and PW500 engine families.

MTU Aero Engines, the parent of MTU Maintenance Berlin-Brandenburg, is Germany’s leading and only independent engine manufacturer. MTU Maintenance is the world’s largest independent provider of maintenance services for commercial engines.

New in the company’s portfolio of services is the worldwide on-site service for large engines – a business segments that will be further expanded in future.

Another important program for the MTU Maintenance facility is the TP400-D6, the engine to power the new A400M military transport aircraft. MTU Maintenance Berlin-Brandenburg operates the only production test cell for this engine worldwide. It is one of the most advanced and powerful test facilities in the world, and the engine is the most powerful turboprop of the Western hemisphere. All production engines will be shipped from the Ludwigsfelde shop.

With GE Aviation’s CF34, the Ludwigsfelde shop has a best-selling engine in its portfolio: The CF34 is the most widely used engine for all regional jet classes. The company provides service support for the entire CF34 family and is the No. 1 in Europe in this field.

### ACTIVITIES

MTU Maintenance Berlin-Brandenburg’s portfolio includes GE Aviation’s CF34 engine family, Pratt & Whitney Canada aircraft engines and General Electric’s LM series of industrial gas turbines. The company provides a wide range of maintenance, repair and overhaul services and offers advanced high-tech repairs.

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MTU Maintenance Berlin-Brandenburg GmbH

84 CLUSTER REPORT • TRANSPORT, MOBILITY AND LOGISTICS
A perfect match: The GE CF34 is the best-selling engine in its class and MTU Maintenance Berlin-Brandenburg is a world-renowned provider of engine maintenance, repair and overhaul services. Firmly established in the capital region for over 75 years, MTU is known for its unparalleled repair processes, top quality and customized services.
Explore Resources – Discover Excellence

Based on the vision to shape the way organisations handle expertise, know-how and ideas, Dr. Toralf Kahlert founded Pumacy Technologies AG in early 2000. Pumacy has been able to consistently strengthen its pioneering role as a solution provider for active knowledge, process and innovation management particularly thanks to the trust of its longstanding clients from the traffic, transport and logistics sectors. Pumacy accompanies all required activities from the first step of innovation to creating processes for continuous knowledge management. This provides new possibilities for users to increase their added value. Whether it is creating expert directories, idea management platforms or PLM systems, Pumacy supports processes as well as suitable software.

Testimonial:

“Since 2005 Pumacy has been supporting knowledge transfers at Airbus. By now we are using the service throughout the organisation, and we are proud that the solution is being used intensively.”

Dr.-Ing. Frithjof Weber, Head of Knowledge and Competence Management, Airbus

ACTIVITIES

- Knowledge Management: Analysis, structuring and transfer of knowledge, experience and internal networks
- Process Management: Optimisation of business processes by creation of robust processes and ensuring an integrated flow of information
- Innovation Management: Systematic support of the entire innovation process – from idea generation to implementation of innovation projects
 Rolls-Royce

Global business activity

Rolls-Royce is a world-leading provider of power systems and services for use on land, at sea and in the air. The Group’s annual underlying revenues were £11.3 billion in 2011, the firm and announced order book stood at over £60 billion. The company has established a strong position in four global markets – civil aerospace, defence aerospace, marine and energy. In 2011, Rolls-Royce invested £908 million on research and development, two thirds of which had the objective of further improving the environmental performance of its products.

Civil Aerospace

Rolls-Royce is one of the world’s largest civil aero engine providers, with more than 13,000 engines in service with more than 500 airline customers.

Defence Aerospace

With 18,000 engines in service with 160 customers in 103 countries, Rolls-Royce is the world’s second largest provider of defence aero engine products and services, and Europe’s largest.

ROLLS-ROYCE IN GERMANY

Rolls-Royce Deutschland is Germany’s only certified engine manufacturer with complete systems capability for the design, production and after-sales support of modern civil and military turbine engines. In 2011 Rolls-Royce had a workforce of around 3,400 in Germany, including 2,200 people working at the Dahlewitz site.

The Dahlewitz site is the company’s development, assembly and test centre and the headquarters of the Civil Small and Medium Engine Business of Rolls-Royce with responsibility for the BR700, Tay, Spey and Dart engine series as well as final assembly of the V2500 engine for short- and medium-range aircraft.

Marine

This business sector covers marine propulsion for the merchant, naval and offshore markets as well as ship design for the offshore sector. Rolls-Royce has more than 4,000 marine customers and equipment installed on over 30,000 vessels world-wide, including those of 70 navies.

Energy

Rolls-Royce is a world leader in power for the offshore and onshore oil and gas industry. Customers in more than 120 countries use Rolls-Royce gas turbines, diesel engines and nuclear technology.
Unipack – Automated Baggage Loading

Modern airports have an automatic baggage handling system, which transports baggage items from the check-in counter to the luggage presentation belt for the flight. On the way to this point the luggage items are automatically X-rayed, temporarily stored and sorted.

However at the provision point, the heavy manual work begins. The baggage items are generally manually placed in a flight container (ULD) or stacked on a luggage trolley (ramp cart). During this process, one worker typically lifts about 16t per shift. The automated baggage loading cell completes this work step using a robot. The remarkable part of the process is the robot’s patented „gripper“. It comprises a telescopic surface with a stop. Consequently the telescopic surface precisely matches the size of the baggage item. This is advantageous for the actual loading process, as the maneuverability of the robot in the container, especially behind the forward non-accessible area, is considerably increased. The robot travels with its load precisely to the pre-calculated container position.

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<th>SURVEY OF ADVANTAGES:</th>
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<td>• Prevents workers having to carry out heavy manual work</td>
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<tr>
<td>• Simple handling of even super-heavy baggage items</td>
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<tr>
<td>• Reduction in damage to baggage</td>
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<tr>
<td>• Increase in flight safety due to avoidance of human handling</td>
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<tr>
<td>• Tracking right into the aircraft</td>
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<tr>
<td>• High filling level due to patented „gripper“</td>
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<tr>
<td>• Modular system, adjustable and adaptable to widely varying customer requirements</td>
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Mode of operation:

• Provision of passenger baggage from a conveyor belt
• Determination of position and shape of the luggage to be loaded using a scanner and image processing system
• 3D measurement of the flight container interior to measure the current loading state
• Calculation of the optimum place for the next baggage item
• Taking up of the baggage item from the conveyor belt by the robot and setting down at the calculated target position in the container

This procedure (duration about 10 to 15 sec.) repeats for each baggage item until the container is full.
In the area around Germany’s capital, Berlin-Brandenburg, trans-European transport routes cross. This region connects the growing markets of Central and Eastern Europe with the commercial centres of Western Europe.

The metropolitan area has a European air traffic node in the very centre of Germany, with the airport Berlin Brandenburg (BER). You can save up to two hours flying time from here on flights to and from Asia! A good reason to take a closer look at the surrounding area of the BER airport as an investment location.

The economic environment of the BER airport offers companies two very special plus points: its immediate vicinity to the capital and its location directly at the intersection of European transport axes between Rotterdam and Warsaw, Scandinavia and South Eastern Europe. The important West-East European axis from Rotterdam via Hanover to Warsaw and Moscow runs right through the heart of the airport region. Industrial sites, research centres and reputable international companies such as Mercedes Benz, DHL, eBay, Fielmann, MTU, Oracle, Rolls-Royce or VW Logistik can be found along this major corridor.

In the near vicinity of the BER airport are 34 attractive business sites, all eminently suitable for development. The airport region offers the right mix for every need: whether directly at the BER airport, in the inner city of Berlin, in one of the central cargo transport centres or at a location with a special industry profile - here you can find customised offers, at remarkably reasonable prices. Within a radius of one hour’s drive around the BER airport you will find 28 universities and institutions of higher learning and more than 100 research institutes of international repute.

At its headquarters in Schönefeld, the team of the airport region Berlin Brandenburg can offer you competent assistance with investments, in particular in the vicinity of the airport. Together with its partners, the team can provide comprehensive individual advice: from finding a location or trained personnel to financing and subsidies.

Airport Region Berlin Brandenburg
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