



Cluster Report

Transport, Mobility and Logistics

in the Capital Region Berlin-Brandenburg

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Berlin Partner
für Wirtschaft und Technologie GmbH
Ludwig Erhard Haus
Fasanenstr. 85
10623 Berlin
+49 30 46302-500
info@berlin-partner.de
www.berlin-partner.de
www.businesslocationcenter.de

in cooperation with

Brandenburg Economic Development
Corporation (WFBB)
Babelsberger Str. 21
14473 Potsdam
+49 331 730 61-0
info@wfbb.de
www.wfbb.de

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With eScooters from COUP and Emmy, Berlin is the capital of electric scooter sharing, © COUP - www.joincoup.com

A Strong Location

Mobility is a basic need in modern society. It is a key driver of innovation and growth, creating a basis for our lives and commercial enterprise. The futurologist Matthias Horx even speaks of mobility as a megatrend, stating: "Hardly any other factor characterises life in a globalised society quite as much as mobility. It is an indispensable enabler. Mobility means movement, change, and adaptability on an individual and social level."

Nevertheless, mobility in its various forms and manifestations presents us with significant challenges. This is particularly evident in cities. They need to find solutions to the congested roads, impairments in air quality, and noise pollution caused by traffic. The European Union also confirmed this fact in its White Paper on the Single European Transport Area, which sets an ambitious target for 2030: "Urban traffic accounts for 25 percent of all transport-related CO₂ emissions and is responsible for 69 percent of all road accidents. The aim is to gradually lower the number of vehicles with conventional drive systems in order to reduce dependence on oil and cut greenhouse gas emissions, as well as local air and noise pollution. Essentially CO₂-free urban logistics and an infrastructure to charge and refuel vehicles powered by alternative drive systems should be created in larger urban centres by 2030."

We are standing at a crossroads. 'Business as usual' is not a viable option. Faced with the needs of a growing number of urban inhabitants, many of whom no longer perceive car

ownership as a status symbol, a paradigm switch is needed in the area of mobility. It is no longer a question of regional travel, the use of transport systems, or vehicle features. In the future, mobility will come to mean 'sustainable mobility', invoking terms such as new energy infrastructures and post-fossil mobility concepts. New developments such as the increasingly widespread use of electric drive systems and networked vehicles – along with a change in user habits – already present the opportunity to implement innovative mobility concepts. They have the potential to reduce congestion, noise, and pollution in urban areas and hence to improve the quality of life.

The progressive digitalisation of our society is a key driver of this development, opening up new perspectives in the area of mobility. This applies not only to vehicles and infrastructures, but in particular to new mobility services and business models: Networked vehicle communication, car sharing models, smart transport systems and services, and virtual companies are all aspects of this development.

Smartphones & co. already contribute to a significant reduction in personal dependence on vehicle ownership. Smartphones are increasingly becoming mobility managers that enable the use of on-demand transport services, allowing users to select the best means of transport in any given situation. The technology is built on comprehensive real-time data analysis, as well as location and information systems. But even if public debate is focused on road trans-

port, digitalisation will also provide fresh opportunities for rail, air, and ship transport to increase efficiency, safety, and service quality.

Through the looking glass: Testing autonomous driving in Schöneberg with 'Olli' and 'Watson'

Visitors to the EUREF Campus in Schöneberg, where a driverless, electric minibus named 'Olli' transports employees and guests across the campus grounds, can already catch a glimpse of what the future of transport in cities like Berlin might look like. It is a pilot project by the US manufacturer Local Motors from Phoenix, Arizona, which has now also come to Berlin. Launched at the start of the year, the company is using the field trials to test the waters in automated urban mobility under near-realistic but protected conditions.

"Every day is a learning experience for Olli. He is like a child that needs to be taught how to walk," explains Prof. Andreas Knie, Managing Director at Innovationszentrum Mobilität und gesellschaftlicher Wandel GmbH (InnoZ), which is collaborating on the project together with Deutsche Bahn and the state of Berlin. Indeed, the capabilities of the shuttlebus have not simply been programmed: 'Watson', a cognitive computer system by IBM, is what makes it smart. Olli obtains a slew of data from the over 30 sensors installed on the vehicle, which it then analyses continuously to enhance its capabilities. It does not merely respond to its environment or learn how to recognise other road users. Instead it also reacts to its passengers. For instance, Watson allows Olli to understand and answer questions. Olli explains to the passengers how the vehicle works or responds to requests like: "Olli, can you drive me to the city centre?", "Where can I find the best pizza?", or "Will we be there soon?"

Operating as a 'people mover', the minibus will contribute to closing the gaps in the local public transport network and to significantly improving accessibility and comfort for passengers. In this respect, the overarching goal is to reduce personal vehicle use and therefore to make transport safer, cleaner, and quicker. Increasing numbers of municipalities and major employers are currently recognising the benefits of autonomous buses, and in some cases are incorporating the technology in their regional and corporate mobility management systems. The minibus is also manufactured to



"Olli" the electric, self-driving bus at the EUREF Campus, © InnoZ

high environmental standards. At least half of the components are produced using a 3-D printer. Production takes place in small factories and low unit numbers, always to meet current requirements. This kind of in-house manufacturing in micro-factories is currently being established in Berlin. Local Motors intends to use the facility to develop its European business.

Local Motors picked Berlin as its only European location due to the general conditions that the start-up finds in the German capital. It is imperative for companies like Local Motors to test the road capability and acceptance of new smart mobility technologies and services as the only way for them to reach market maturity. "The German counterpart to Silicon Valley in America, Berlin is an outstanding location due to the availability of test sites for autonomous driving and the market demand for multimodal mobility," says Wolfgang Bern, CEO at Local Motors Berlin.

Faced with the technical challenges of urban mobility, the expanding capital city metropolis is indeed already a large-scale field testing laboratory with varied and manifold touch points to pilot projects in the area of sustainable and smart mobility. Gernot Lobenberg, director of the Berlin Agency for Electromobility eMO, confirms this fact: "There is no other city with so many different mobility services. We also have numerous companies and research institutions in the fields of mobility here in the city. Our local public transport network is among the best in the world, and there are over 100 innovative mobility projects. We also lead the field in the area of car and scooter sharing. Taken together, the city therefore possesses an immense depth of innovative power and bright ideas."

eMO and Cluster Management for Transport, Mobility and Logistics have launched the initiative 'Intelligent Mobility in Berlin-Brandenburg' to help companies like Local Motors



Manufacturing according to Industry 4.0 principles at Mercedes Ludwigsfelde, © Daimler

identify and – if necessary – establish suitable test sites. This includes urban areas that are equipped with smart infrastructure, for instance wireless networks and the necessary technical facilities, or with sensor systems for parking space management. The development and testing take place in a ‘real urban environment’, not in the laboratory. Companies, research institutions, and local administration cooperate with users on the ground to test new, smart, networked, distributed, and electric mobility.

There is plenty happening on the EUREF Campus to bring together the mobility and energy transitions. This includes the ‘Future Railway Station Berlin Südkreuz’ by Deutsche Bahn. The densely built-up inner-city area of City West around Kurfürstendamm, Bahnhof Zoo and Ernst-Reuter-Platz is another possible test site. A modern traffic concept has also been introduced to develop the Campus Berlin-Buch in the borough of Pankow. Moreover, there are plans for smart mobility concepts using innovative technologies to ensure follow-up use of Berlin-Tegel Airport.

Benchmark: Industry 4.0 at Mercedes-Benz in Ludwigsfelde

While Olli is patiently completing its circuits at the test site in Schöneberg, driverless transport vehicles (DTV) are already automatically supplying the employees in the Mercedes-Benz factory in Ludwigsfelde with materials. Here, Industry 4.0 has become a tangible reality. Home to over 2,000 employees and 122 trainees and students, the factory is among the largest creators of industrial jobs in Brandenburg and Daimler’s third-largest van assembly plant worldwide. Ludwigsfelde is the only European production site to manufacture the ‘world van’, the Mercedes-Benz Sprinter, in its open versions (flatbed truck and chassis) for a broad variety of superstructures. Operating in three shifts, the factory produces around 250 vans every day, which it

delivers to roughly 130 countries. The plant therefore fulfils an important function within the Mercedes-Benz global production network.

At the same time, Ludwigsfelde is a benchmark and blueprint for the manufacture of smart vehicles: Lean, sophisticated processes and an efficient logistics system indicate what factories may look like in the future. The process was launched at the end of 2012 to achieve significant improvements in the interfaces and collaboration between assembly and logistics. In an initial phase, the experts scrutinised the entire process from the supplier to the point at which a component is installed on the assembly line. At the same time, they worked on the establishment of high-quality, robust, and above all lean processes between assembly and logistics – with evident success. Where once the assembly lines were penned in by a jumble of countless wire baskets, shelves and load carriers stuffed with materials from which the employees were required to pick the right components for each van, we now find – thanks to state-of-the-art IT technology – driverless vehicles transporting everything that is needed. Operating in a fully automatic capacity, they supply the employees working on the lines with component baskets prepared in the logistics and picking zones.

“What sounds simple is actually a highly complex process. After all, our employees on the assembly line assemble the Sprinter in hundreds of different configurations, depending on the wheelbase, weight, motorisation, or colour. This means that the sequence applied for each vehicle varies, and so every Sprinter needs an individual set of parts,” says Sebastian Streuff, Managing Director at Mercedes-Benz Ludwigsfelde GmbH. Sophisticated IT networking ensures that precisely the right components are prepared in a car set trolley and then delivered to the assembly line for each Sprinter. The DTVs also handle fully automatic unloading: Upon arrival, the car sets are pushed right up to the belt. Employees only have to accept the right trolleys with their components, attach them to the overhead vehicle conveyor, and then start installing the parts. The benefits: Improved workplace ergonomics, less running around, direct access to the material, more space on the assembly line, and a reduced risk of accident due to the elimination of forklifts from the process.

More efficient operation: Improved fleet availability thanks to real-time information

The dynamic trend toward digitalisation spread to the rail sector some time ago. The smart integration and analysis of real-time data already allows rail customers to benefit from prompt information on delays and cancellations during their journey. The benefit: Customers appreciate the comprehensive information, even if individual circumstances mean that a connection cannot be reached as scheduled.

In the near future, this kind of real-time information will also help in the optimisation of rail operations, contributing to smoother and safer processes – with positive repercussions for customers in personal and cargo transport. INNOWAG (INNOvative monitoring and predictive maintenance solutions on lightweight WAGons) is a good example for an ongoing project. It was initiated in November 2016 as part of the European research alliance Shift2Rail. Besides the rail vehicles department at the Technische Universität Berlin, Havelländische Eisenbahn AG is the other important regional player among the eleven project partners from seven European countries.

The aim of the project is to make maintenance and repair of freight wagons more efficient and to substantially reduce costly downtime in the classification yards. At the moment, a laborious system is applied to check the operating safety and railworthiness of the wagons by hand. But this can take up to four hours before each journey. The use of digital technology and process automation could reduce this process to just 20 minutes. Sensors installed on each wagon will deliver the necessary real-time data for technical monitoring during downtime and also the journey, therefore obtaining information on imminent defects in wagon components. The measures required for maintenance, operation, and the installation of new components will then be inferred from this data.

Rollout of so-called condition-based maintenance (CBM) is planned for the medium-term. It will mean the introduction of maintenance procedures precisely when they are necessary. This could even put an end to scheduled maintenance intervals. Implementation of the INNOWAG project findings in daily operations could therefore enable a tangible increase in fleet availability and therefore the economic efficiency of rail cargo transport.



“Clusters foster collaboration between hugely different partners – in research, practice, and above all in an alliance between these two areas. This helps to develop new and innovative concepts and solutions for mobility and transport in Berlin-Brandenburg, and to use digital technologies to make them useful in a practical setting. The broad variety of actors in the region and their networking within the cluster transform Berlin into a showcase for mobility and transport.”

Prof. Barbara Lenz

*DLR Institute of Transport Research
Berlin-Adlershof*

Charting a course to the future: The Bahntechnologie Campus Havelland

It is no coincidence that Berlin-Brandenburg is such a major player in the European research projects within Shift2Rail. The region is known worldwide as a traditional hub of rail transport technology, and its more than 100 companies make it one of the most important industry clusters in Europe. The rail sector is among the mainstays in the industrial landscape of the German capital region. Besides important transport operators like Deutsche Bahn, S-Bahn Berlin and BVG, this also includes leading system manufacturers such as Bombardier in Berlin and Hennigsdorf, Siemens in Berlin, or Stadler in Berlin and Velten. Moreover, Berlin and Brandenburg in particular can point to an extensive supplier infrastructure that is dominated by specialised medium-sized companies. University institutions like TU Berlin, BTU Cottbus-Senftenberg and TH Brandenburg provide significant innovation potential and can strategically underpin the overarching engineering excellence.



Newly-developed Berlin U-Bahn IK from Stadler, © Stadler

Development of the Bahntechnologie Campus Havelland (BTC) emphasises and expands this prominent position and competency. It is an important infrastructure project in the district of Havelland to the west of Berlin. Over the coming years, a practice and test centre for various companies in the area of railway technology, energy, and infrastructure will be built on the 34-hectare grounds of the disused Wustermark marshalling yard, and the site will also be home to a number of scientific institutes. The location is already used for applied research by prestigious research institutions in Berlin and Brandenburg, among them TU Berlin, TH Wildau, TH Brandenburg, the Fraunhofer Institute for Transport and Infrastructure Systems, and the German Aerospace Centre (Institute of Transportation Systems). Among other things, the institutions test controlled derailing, geothermal track heating, and quiet braking procedures. The plan now is to continue expanding the facilities at Bahntechnologie Campus Havelland in order to create a research nucleus that in the medium term will become an integral part of the European scientific landscape.



Integrated Bahntechnologie Campus Havelland, © HVLE

This is closely linked to the creation of new dual and modular training and education programmes with a practical bias. Trainees will be able to acquire qualifications up to degree level, while graduates will complete additional courses to obtain technical specialisation.



European Railway Clusters Initiative (ERCI)

The European Railway Clusters Initiative (ERCI) is a successful example for international cluster cooperation. It brings together twelve research and innovation-driven railway technology clusters from ten countries, including the Cluster Transport, Mobility and Logistics. ERCI represents over 1,000 small and medium-sized companies and aims to promote innovation and the development of new business opportunities as a means of sustainably bolstering competitiveness within the European railway industry. ERCI fosters collaboration between industry and research, initiates innovation projects, and organises B2B meetings and workshops. This also includes the promotion of good visibility and networking at an EU level.

www.eurailclusters.eu

The future market of civil drones: Research, development, and use

Berlin-Brandenburg is one of Germany's three most important aviation technology regions, as evident by dominant market leaders like Rolls-Royce Germany, MTU Maintenance and Deutsche Lufthansa, as well as innovative small and medium-sized enterprises such as aireg – Aviation Initiative for Renewable Energy in Germany, PACE Aerospace Engineering and Information Technology, or Holmco Holmberg. They are complemented by prestigious research and education institutions, of which TU Berlin is the most prominent. TU Berlin has more satellites in orbit than any other university worldwide.



sitebots drones in action, © sitebots

With this in mind, it is hardly surprising that the capital region is at the vanguard of new technological trends and is currently carving a niche as a centre of 'Unmanned Aerial Vehicles' (UAV) – better known as drones – for civilian purposes. Over 60 actors from research (e.g. TH Wildau, BTU Cottbus-Senftenberg), development (e.g. sitebots, service-drone.de) and application (e.g. germandrones, Airteam, Copterview) are active in the region. Industry experts believe that UAV have the potential for significant growth in the coming years. This is particularly evident in the increasing presence of civil drones at the ILA Berlin Air Show.

Indeed, the future of drone technology is linked to a broad variety of applications, especially for civilian and commercial purposes. Similar to the development of computer technology, the true innovation is not found in the drone itself, but in its technical equipment with sensors, high-performance cameras, and the necessary software. It is these factors that make drone technology a more convenient and affordable solution for a broad variety of tasks, compared with the systems currently in use.

The companies sitebots in Velten and service-drone.de in Berlin and Brieselang, which offer drone services for many different commercial scenarios, are already setting the stage. The applications largely comprise of aerial visualisation, measurement, and data capture procedures. The companies are able to deliver two or three-dimensional models of structures, infrastructure facilities, surface mines, quarries, landfills, undeveloped properties, industrial complexes, or sophisticated roof designs very quickly and with impressive results. The drones provide more precise images than satellites and are substantially cheaper than expensive survey aircraft.

Increasing numbers of companies are also using this comparatively recent technology to inspect large-scale industrial facilities, where they dispatch drones to examine inac-

cessible or inhospitable system parts. "Our drones can replace extremely dangerous operations, in which human resources would otherwise have to ascend tall towers or fly helicopters close to power lines," explains sitebots CEO Daniel Dirks.

The use of UAV has also spread to agriculture. Equipped with the right camera technology, they are able to document herd sizes, diagnose diseases, control the deployment of herbicides, optimise irrigation, and identify the ideal time for harvesting. "The use of drones will become an indispensable production factor in the agricultural value chain," says Volker Rosenblatt, CEO at service-drone.de. Drones can also handle a broad variety of tasks in the area of civil protection during flooding, natural disasters, mountain rescue, or maritime search and rescue.

The possible fields of application are diverse. But nevertheless there are a number of challenges to overcome. Besides the definition of a legal framework, it will also take a more concerted technological effort to transform these fascinating UAVs into commercially useful and safe tools for everyday use by companies. Several networks have been established in the capital region in order to promote this development. The cooperation network SiBeL (safety and user-friendliness for unmanned civil aircraft) includes companies and research institutions from throughout Germany that are determined to establish solutions for a reliable and safe operation of drones. The main focus is on the use of safe IT systems. The CURPAS e.V. association (Civil Use of Remotely Piloted Aircraft Systems) seeks to promote the civil use, research and development of unmanned aerial technology. The association brings together companies and scientific institutions located mainly in the region of Berlin-Brandenburg. The DRONEMASTERS platform in Berlin attracts people with a shared fascination for drones and the underlying technology. Its purpose is to organise regular inter-industry and cross-sectoral meetings to unite innovative players and hence to foster the development of new business models.

The competencies and infrastructures in the capital region provide an ideal breeding ground to establish a regional hub of testing and innovation and therefore to boost the location's appeal for national and international stakeholders.



Electric carrier bikes for last mile transport, © F.S.K. for Velogista

Pioneer: Cargo bikes for a better city

Today already, the use of drones in parcel delivery services would make our cities in particular greener and the costs of shipping cheaper. But alternative solutions will remain necessary to ease the burden of logistic transports in cities and conurbations until suitable systems can be put in place. While a large number of innovative procedures have become standard practice in the long-distance and regional logistics sector – Euro 6 technology, the avoidance of dead-heads, telematics, etc. – the greatest potential for innovation in the ongoing sustainability discussions and mobility concepts within the logistics sector remains untapped in the so-called final mile logistics, meaning consignment delivery to customers in urban centres.

Besides the familiar negative implications – exhaust gas emissions, increase in traffic density, mobility restrictions, and ‘double parking’ – the low success rate for first-time delivery and the associated additional delivery attempts present particular problems from the perspective of parcel delivery services. Urban logistics is therefore a critical success factor for the CEP industry (courier, express, parcel), both in the interests of sustainability and to increase customer satisfaction and efficiency. The hardest nut to crack is in this area, especially as air pollution control is an urgent concern, online trade is growing and generating increasingly large volumes of delivery traffic, and migration to urban centres remains a persistent trend.

The solution is not as complex as it appears at first glance. Martin Seißler from the Berlin company Velogista demonstrates what final-mile logistics may look like in tomorrow's cities. Launched under the motto “For a better city”, he speaks up for using its proprietary electric delivery bicycles, which already replace many motorised transports in the city centre. The Kreuzberg-based company has operated its electro-assisted transport bikes to deliver all kinds of goods within the Berlin S-Bahn ring since 2014. The capacity of the bikes – they are loaded by forklift with a complete euro-

pallet or products weighing up to 250 kilograms – can compete with conventional vehicles. At the moment, Velogista has two mini-depots in Kreuzberg and Charlottenburg to support deliveries to customers. But until now, a 7.5-ton truck has been used to supply these centres with parcels from the main warehouse. Seißler is placing his hopes in the development of electric trucks with sufficient load-bearing capacity. The company has eight bicycles that it uses to deliver the products within a radius of five kilometers. It plans to double the number of collection depots and bicycles in order to cater to the entire area within the S-Bahn ring.

The benefits compared to traditional parcel delivery services that throng city centre locations on a daily basis are obvious: “The bicycles are silent, compact, do not produce emissions, and are powered by genuine green electricity,” says Seißler. “Our delivery bicycles use less energy than any (electric) car and therefore reduce the consumption of fossil fuels. Ultimately also, we are quicker and more effective.”



“The digital revolution is in full swing. Improved digital quality standards in the supplier sector are spreading increasingly to small and mid-sized enterprises. This presents immense opportunities – and significant challenges – for Brandenburg with its largely equivalent business structures. We help companies in the areas of transport, mobility, and logistics to shape up for the age of 4.0. The practical projects supported by the cluster make an important contribution in this respect.”

Albrecht Gerber

Minister for Economic Affairs and Energy in the State of Brandenburg

tive than cars,” the founder adds. Unlike their motorised competition, the bikes are entitled to use cycle or bus lanes, are more agile, and get closer to the actual point of delivery.

Seißler is not worried about competition from major logistics companies like DHL, who are also developing similar models: “The city can only benefit if the concept becomes accepted. And competition is good for business,” he says, summing up.

Complete visibility: 360° transport monitoring for rapid response times

Time is money, especially in the logistics industry. It is also an immensely important field, as it acts as an interface between suppliers, manufacturers, and buyers. Internal and external processes will grind to a halt without timely supplies, punctual delivery, and rapid forwarding – and the consequences may even be serious. After all, a variety of external influences like inclement weather, congestion, safety checks, or strikes make the system vulnerable to disruption. Transport managers and stakeholders simply do not have the time to manually monitor all channels to obtain information on disturbances.

This is where the services provided by the Potsdam-based company Synfioo and its ‘360° transport monitoring’ come into play: Synfioo is a software platform used in the targeted



“The future of mobility is a key topic. In Berlin, we are developing tangible solutions. In doing so, the focus is not only on individual technologies, but also how they interact within the overall system. Electromobility, sharing, and mobility apps, as well as innovative concepts for sustainable inner-city logistics and digitalisation in rail transport – future mobility is now, more than ever, an important task for networking.”

Ramona Pop

Senator for Economics, Energy and Public Enterprises
Berlin

and real-time control of transport chains. “The permanent reconciliation of target and actual data provides logistics companies with on-the-spot information on where disrup-

Cluster Transport, Mobility and Logistics

Firmly integrated within the innovation strategy pursued by the states of Berlin and Brandenburg, the Cluster Transport, Mobility and Logistics supports the business and scientific communities to find responses to issues concerning mobility in tomorrow's world. This primarily means translating technological potential into projects designed to improve the regional value chain. The work focuses mainly on integrated approaches based on close collaboration between companies and research institutions across traditional industrial branches. The cluster management within Berlin Partner for Business and Technology and the Brandenburg economic development corporation assist in the networking and development of cooperation projects at a regional, national, and international scale.

More than 17,000 companies with around 201,000 employees in the industrial fields of automotive, aerospace, rail systems technology as well as in the cross-sectoral areas of logistics and intelligent transport systems belong to the Cluster Transport, Mobility and Logistics.

The cluster places a particular focus on an intermodal structure with a good balance of power between transport modes and industries. This applies to the transport situation in the region itself – Berlin as the ‘capital of intermodality’ – as well as to science and business. Indeed, science and research provide an essential foundation for the region's transport capabilities – across the entire range from automotive technology to logistics and mobility research within the field of social sciences.

tion may negatively impact transport schedules,” says Dr. Andreas Meyer, CEO at Synfioo. “Our ‘360° transport monitoring’ enables them to make decisions on alternative measures without losing any time,” Meyer continues.

Synfioo only requires basic information on a transport to provide this service: The starting point, destination, any stopovers, and the departure time. The Synfioo software then sources a broad variety of available real-time data to identify the relevant factors that may disrupt each individual



Berlin Agency for Electromobility eMO

The Berlin Agency for Electromobility eMO is the central port of call for electromobility issues in the German capital region. eMO combines the expert knowledge from business, science, politics and administration to drive electromobility technology and to ensure its sustainable integration within the Smart City Berlin. The agency applies a purposeful approach to bring together stakeholders and competencies and to support the initiation and marketing of regional, national, and international research and technology projects.

Coordinated by eMO from 2012–2016, the 30 core projects within the large-scale ‘International Electromobility Showcase Berlin-Brandenburg’ provided invaluable and varied impetus for the sustainable establishment of electromobility in the German capital region.

The Showcase set the stage for ongoing development of the eMO portfolio. Now it is important to collaborate with partners in the business and scientific communities to digitalize, automate and network transport in the interests of creating ‘smart mobility’.

eMO is an agency operated by the state of Berlin as a public-private partnership under the aegis of Berlin Partner for Business and Technology. eMO’s activities are closely integrated within the work of the Cluster Transport, Mobility and Logistics.

www.emo-berlin.de/en



Germany's largest eTruck in action at BEHALA, © BEHALA

transport, which it then sends as messages to all transport partners involved, either as a web service in the standard planning system, by text message, in a mobile app, by e-mail, or integrated directly in the Enterprise Resource Planning (ERP). Customers are therefore provided with more corroborated data, including all known disturbances, which they can use to make decisions and to ensure robust and reliable transport scheduling.

Studies among transport planners have also shown that responding to disturbances and rescheduling planned routes account for over 50 percent of the worktime, especially on longer and more vulnerable journeys. Initial analyses indicate that around 20 percent of this worktime can be saved by providing planners with up-to-date information on current events along the transport route – valuable time that can be used to process additional transport jobs and other tasks.



Cluster Transport, Mobility and Logistics – the relation to innovation in Berlin and Brandenburg (Photo: Glienicke Bridge © Fotolia)

Partners in the cluster management



Berlin Partner for Business and Technology is the corporation entrusted with promoting business and technology and location marketing in the state of Berlin. Besides corporate services to assist businesses in expansion and internationalisation and to support investors when moving to the German Capital, Berlin Partner focuses mainly on tasks relating to technology transfer between the scientific and business communities and on the innovation policies defined by the state of Berlin. Berlin Partner receives support for national and international Capital City Marketing from the Berlin Partner network as part of a public-private partnership. The network comprises 270 commercial enterprises and scientific institutions. Berlin Partner cooperates in ongoing development of the shared innovation policy strategy with Brandenburg and provides the Berlin contribution to managing the joint clusters.



Brandenburg Invest (WFBB) is the central port of call for investors, local companies, and technology-driven start-ups. It offers single-source support for economic development and job creation, realized through the comprehensive range of offered services, well-informed specialist support and consultation for its customers and its tight-knit network of partners throughout the state of Brandenburg and beyond. This provides a stable business environment in the region that forms the basis for companies' economic success. WFBB is a reliable partner that offers competent consultation on anything to do with economic development, support for innovation, technological advancements, and foreign trade, as well as skilled personnel development, introduction of new technologies, efficient use of energy, and opening up new national and international markets.

WFBB provides the Brandenburg contribution to the management of the joint cluster.

Brandenburg Invest (WFBB) collaborates with Berlin Partner to market Germany's capital region.



Automotive

Innovation meets Perfection

To maintain its top position in the mobility sector, companies in the capital region are investing in research and young talent – an investment that pays.

Berlin-Brandenburg has developed into an important automotive industry location. The number of suppliers is on a steady upward trend and over 200 companies employ around 21,000 people. The companies here cover a broad range. Major original equipment manufacturers (OEM) exist side-by-side with the global players of the supplier sector. They range from the production of accessories and parts to the development and manufacture of entire vehicles. Production location of vehicle manufacturers and tier 1 suppliers such as BMW, Brose, Continental, Daimler, Goodyear Dunlop, Mercedes-Benz, Pierburg, Robert Bosch Automotive Steering, Schaeffler, Takata or Weber Automotive are the industrial core of automotive expertise.

In addition, a number of innovative small and medium-sized companies are also leaving their mark with special expertise.

Close collaboration between practice and research

Specialized development service providers such as IAV, INPRO, Mahle Amovis, Hella Aglaia and Carmeq. Play a particularly important role for the industry in the region. And

research and development services are an additional basis for its success. These engineering firms have frequently been spun off from scientific institutions and continue to maintain extremely close ties with universities for research and development projects and acquiring young engineering talent.

Technische Universität Berlin is the hub of research expertise in the automotive industry in Berlin. In Brandenburg, BTU Cottbus - Senftenberg is the university with the leading role. Alongside the region's other universities, non-university institutes such as the German Aerospace Center (DLR) in Berlin-Adlershof and several Fraunhofer Institutes also offer automotive-related expertise.

The strengths of the Berlin-Brandenburg region lie in the areas of drive technology, novel fuels, in road and vehicle safety as well as in intelligent mobility. This includes connected, intermodal and automated transport. Other key areas of concentration are lightweight construction and innovative production technologies.

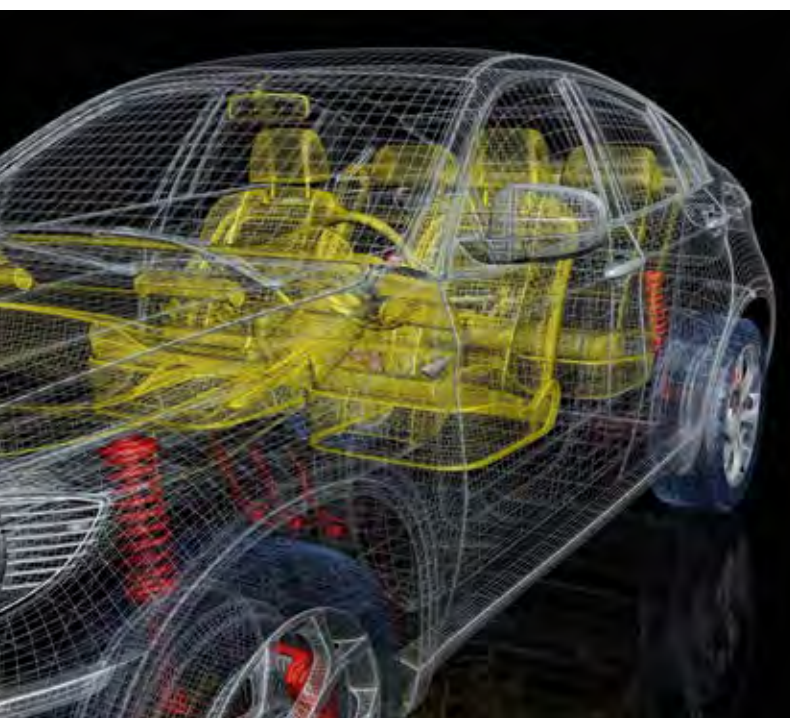
Electromobility in the capital region

One of the major goals of the companies and institutes within the cluster is to develop and to implement innovative transport systems. Electromobility opens up new perspectives and expands the playing field by adding companies that come from other sectors. Automotive engineering is electromobility's technological core area – although the range of electromobility-related themes reaches far beyond it and offers new opportunities to profit from the shift of paradigm.

Taking advantage of opportunities

Taking advantage of the opportunities requires offensive action. Against this background, Berlin Partner, part eMO Berlin Agency for Electromobility, pools the activities in this field – as very successfully done in the International Electromobility Showcase Berlin-Brandenburg.

The range of electromobile systems and components is being further extended, although science and research-savvy service providers are the foundation of the industrial added value. Information and communication technologies (ICT) supply new wind for automotive engineering innovation and the regulation of the complex interrelation between energy and transport systems.



We are your competent CAD/CAE development partner

The Adomeit Group GmbH is an independent engineering and development service provider, which has its focus on the development of components for automotive safety systems. The foundation of this innovative, future-oriented corporation is formed by longtime experience and a progressive development approach that combines CAD design and CAE simulation. 35 years of experience in automotive research and development from Dr.-Ing. H.-Dieter Adomeit and 5 years of research on new development processes and products from Dipl.-Ing., Dipl.-Kaufm. Julius Adomeit were bundled in the Adomeit Group GmbH in 2008.

Since then, our young, dynamic team develops the ideas of our customers from concept to series production readiness. Our emphasis lies on mechanical and mechatronical products. Especially in the field of safety belt systems for automobiles, we have an exceptional expertise. We are also the right contact in the increasingly important field of plastic material. Projects in which we package electronic components and design the plastic injection mould parts are also our daily work.

Besides the computer-based design and development in CAD and CAE, we are also excellently positioned regarding the production. With the help

of 3D printed parts, we can build the first prototype in one of our assembly locations in Berlin and Brandenburg, and make a first performance check. We will then bring your product to series production readiness with the gained information from the tests and we will gladly help you with the planning and execution of the series production.

Apart from the projects we do for our customers, we have developed the mobility brand, Veleon. Veleon is a tilting three-wheeled cargo and family bike. The unique tilting mechanism combines the dynamic and agile riding style of a bicycle with the load capacity and stable stand of a tricycle. It is an ideal urban bicycle, has space for up to two children and/or groceries, and has a completely suspended front axis. (www.veleon.de)

Another focus lies on e-mobility.



Services

- Product design (integration of CAD and CAE)
- Research and development
- Prototype and series production
- Know-how in automotive safety systems
- Counseling in strategic company and product planning
- Testing
- Workshop operations, concept, and product manufacturing
- Production and assembly

Contact

Adomeit Group
engineering competence

Adomeit Group GmbH
Frankfurter Allee 2, 10247 Berlin
☎ +49 30 40058889
📠 +49 30 47488688
✉ sekretariat@adomeitgroup.com
🌐 www.adomeitgroup.com





Automobile Suppliers Association

Bringing together small to medium-sized businesses in the region

aBB e.V. is precisely the right place for anyone having difficulty locating the right partnership. After all, the association brings together what belongs together. It analyses the individual interests of its members, brokers suitable contacts and lets its members share their expertise. Who can get involved? Any interested company in the Berlin-Brandenburg region. The association already has 65 members.

Making contacts and developing new partnerships is the most important, but far from being the only goal of the association. Anyone looking to source information about a particular business in the Berlin-Brandenburg automotive region can get an overview by consulting the *Competency Atlas* on the homepage. All businesses are listed, divided into different sectors of the automotive industry and are just a few clicks away.

The aBB e.V. also initiates and supports projects. Designing future-safe and efficient production is the task and aim of the network project ProProd, founded at the end of 2015. Research institutions, development partners and manufacturing businesses work together to find answers to any questions arising in the context of production processes. The activities focus on topics such as making production more flexible, design and

factory planning processes, testing procedures for components and processes, quality management, use of energy and resources, as well as information chains in production.

Another project is the EQ – an ultra-light electric vehicle for urban areas, which is based on an idea by the company Esch-Projekt. Unlike traditional electric vehicles, the low number of charging points in cities is not an issue for the EQ, as it is the only vehicle in its class that has a portable, universally-chargeable battery. The flexible all-rounder has a range of 60 to 80 kilometres and a top speed of 80 kilometres per hour. The EQ offers fast and environmentally friendly mobility from A to B. aBB has joined with companies from Berlin and Brandenburg to get the project ready for market launch.

In addition, the aBB offers support in the recruitment of specialists, e.g. through close co-operation with the careers service in the German Armed Forces.

Services

- Information on trends and requirements in the automotive industry
- Support in building new business relationships
- Assistance with brainstorming of new technologies, as well as pre-financing
- Help in staff qualification and business certification
- Initiation of inter-industry projects

Contact



automotive BerlinBrandenburg e.V. (aBB e.V.)
Verband der Automobilzulieferindustrie Berlin Brandenburg
Fontanestr. 15, 14476 Potsdam
☎ +49 33208 216255
☎ +49 30 68002077
✉ info@ac-bb.de
🌐 www.ac-bb.de



The Chair of Automation Technology

The Chair of Automation Technology of the BTU Cottbus-Senftenberg, which is led by Prof. Dr.-Ing. Ulrich Berger since 2001, is not only carrying a legacy of research and development in cutting-edge scientific and technological domains but also a legacy of education in the fields of planning, programming and experimental validation of automatised production systems. The focuses of work include model-based control engineering, prototypical development of machines and plants supported by robots, simulation-based conception and interdisciplinary research concerning the interaction of humans and machines in the operational environment. For research and education purposes, the Chair offers technical equipment and production cells oriented towards realistic production units, including a considerable robotic and machine tool laboratory as well as a CAD/CAM pool. Thus, students are educated in complex teaching and learning environments distinguished by a combination of programming environment and system simulation.

Derived from the main focuses of work, current research at the Chair of Automation Technology concentrates on the simulation and employee-related visualisation of production processes using augmented reality. Moreover, the Chair investigates hybrid manufacturing technologies in

partly or completely automatised production cells. In this regard, basic concepts of cooperative robots in flexible manufacturing cells for assembling tasks of complex components have been developed. Further issues result from the validation of PLC user programs in safety-related applications and for numerically controlled machines, with the emphasis on simulation and testing of processes with the help of 3D-simulation environments. Here, mainly the draft and validation of control programs using model-based simulations are considered. In addition to joint research projects (BMBF, BMWi) with well-known German companies, international EU projects are handled. Also, selected scholarship students of the DAAD and other organisations are involved in the Chair's research.

To support small and medium-sized enterprises in Brandenburg, the Innovation Center Modern Industry (IMI) Brandenburg was created at the Chair of Automation. The Innovation Center helps address the challenges arising from the increasing automation and digitisation of business processes. Therefore, IMI Brandenburg offers a model factory, workshops and events as well as the individual development of better and more efficient strategies for SMEs.

Services

- Advice on technical automation issues
- Technology scouting
- Preparation and implementation of technical workshop and seminars
- Assistance in preparing research and development projects

Contact



Brandenburg University of Technology
Chair of Automation Technology

Prof. Dr.-Ing. Ulrich Berger
Siemens-Halske-Ring 14
03046 Cottbus

+49 355 692457

+49 355 692387

fg-automatisierungstechnik@b-tu.de

www.b-tu.de/fg-automatisierungstechnik



Aerial photograph of CleanTech Business Park

CleanTech Business Park Berlin-Marzahn

Industrial space and mobility

The CleanTech Business Park is Berlin's largest industrial area and offers best conditions for manufacturing companies in the fields of sustainable and efficient technologies. The park is focused not only on renewable energies, recycling technologies, sustainable water technologies or green chemistry, but also on storage technologies, energy efficiency and sustainable mobility. Hence, within Berlin, the CleanTech Business Park is the ideal place for all industrial production processes in the sector of new, sustainable and efficient ways of mobility.

As part of the local industry and cleantech cluster in Berlin-Marzahn, the 90-hectare park offers a comprehensive site development, excellent transport connection, planning reliability and a lot of space to grow. Unique within Berlin is the particular core zone, specifically for major hazard installations (BlmSchG), on the park's site. Thus, within the borders of the German capital, almost all industrial production processes are possible – at CleanTech Business Park.

The park's surroundings are characterised by a strong network of regional economic and business development agencies, associations and established companies. In the immediate vicinity, the 1,200-hectare Berlin eastside commercial area and the CleanTech Innovation Center for start-ups create the ideal environment for synergies. Last but not least, the CleanTech Pavilion Berlin, located at the CleanTech Business Park's site, is the perfect place for networkers and events in the Berlin cleantech and sustainable mobility sector.



CleanTech Pavilion Berlin

Services

- 90 hectares of urban industrial space (GI)
- Comprehensive site development
- Excellent transport connection
- Individual plots of land at attractive prices
- Planning reliability (development plan is set)
- Particular core zone specifically for major hazard installations (BlmSchG)
- Broad network of regional economic development agencies, associations, and established companies

Contact



**CleanTech Business Park
Berlin-Marzahn**
c/o Bezirksamt Marzahn-Hellersdorf
von Berlin
Wolfener Str. 32-34, Haus K
12681 Berlin
☎ +49 30 902932627
📠 +49 30 902932605
✉ info@cleantechpark.de
🌐 www.cleantechpark.de



Research for a sustainable mobility of tomorrow

The DLR Institute of Transport Research supports stakeholders from politics, science and society with fundamental and applied research

The German Aerospace Centre (DLR) is a national research institution for aerospace, aviation, energy, transport and security. Three transport institutes of the DLR are located in Berlin: Institute of Transportation Systems, Institute of Vehicle Concepts and Institute of Transport Research.

At the Institute of Transport Research, we are about 80 researchers working on the development and perspectives of passenger and goods transport in interdisciplinary teams. Our vision: a modern and sustainable transport system that acknowledges the societal and economic significance of mobility and transport, and to contribute to developing new concepts for improved mobility services for people and enterprises. At the same time, we engage in the higher education system of the Berlin metropolitan region.

In the Passenger Transport department, we focus our research on mobility behaviour and markets for new mobility services, such as electro-mobility and car-sharing. On the basis of field studies and data, we analyse trends in mobility and develop models in order to evaluate new technologies and concepts.

In the Commercial Transport department, our researchers study local, national and international goods transport. We focus our analysis on the organisational and spatial structures of logistics networks and on new technologies and concepts for freight transport, which contribute to a more sustainable commercial transport system.

The interrelations between mobility behaviour, mobility service provision and the built environment are at the centre of our research in the Mobility and Urban Development department. With the aid of data analysis and models, we investigate new mobility services and analyse their interaction with the established transport systems.

Well embedded in a network of DLR research institutions, the Institute of Transport Research works on topical subjects of mobility and transport. In particular, the developments of digitalisation and automation have the potential to alter the transport system, as we know it. How these and other new developments are accepted by the society, and what environmental impact they may have, are further key questions for us. Our research provides fundamental knowledge and supports entrepreneurial, planning and policy decisions.

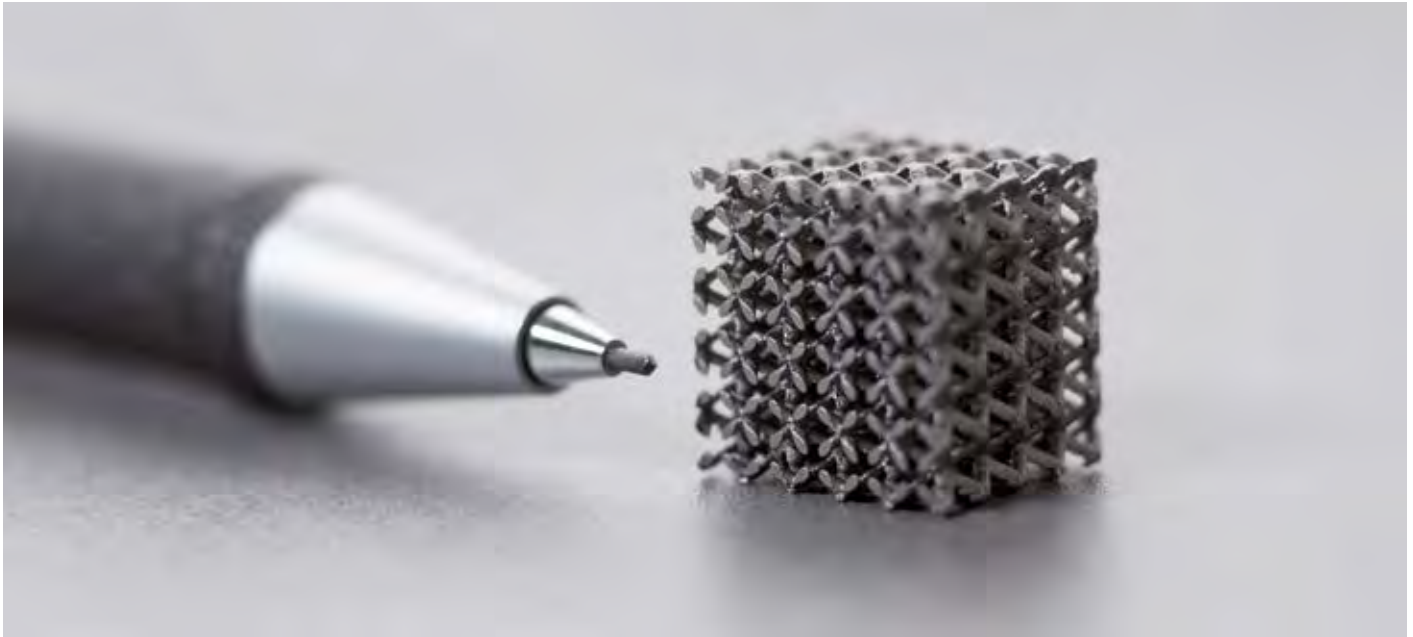
Services

- Studying the mobility behaviour of people and enterprises
- Modeling the local and national transport demand
- Assessing the potential and effectiveness of new technologies and policy measures in transport
- Analysing the acceptance of citizens towards new mobility services and technologies

Contact



Deutsches Zentrum für Luft- und Raumfahrt e. V. (DLR), Institut für Verkehrsforschung
Rutherfordstr. 2, 12489 Berlin
☎ +49 30 67055206
📠 +49 30 67055283
✉ Barbara.Lenz@dlr.de
🌐 www.dlr.de/vf



© Euro-K

First class development services

In the small energy converter sector

Euro-K develops micro gas turbine systems for mobile and stationary applications. Our range of activities includes consulting on energy technological questions with the aid of process analysis and project planning. For advanced research and development of individual components, we have access to extensive simulation and computing power for flow analysis, strength investigation and process optimisation. In parallel, we conduct real-life tests at our own test facilities and validate the results through our simulation processes.

The main subject of all projects is a micro gas turbine, which is developed to become the energy converter of the future. It features the highest combustion efficiency with the lowest exhaust gas emissions, excellent cost effectiveness through partial zero emission and optimal integration into existing process applications.

Euro-K has the experience in design and in the optimisation in the combustion technology sector. To comply with the environment requirements set by the government, we have been steadily increasing the effectiveness of combustion systems as a sub-process of the micro gas turbine. To fulfil these requirements we focus on innovative burner layouts for different fuels (gaseous, liquid or solid) and manufacturing processes to increase the effectiveness of our products.

To increase the system efficiency, we work on own recuperator concepts based on new manufacturing processes. Furthermore, Euro-K explores the possibilities of additive manufacturing, like PLA-based rapid prototyping, for first design evaluations or Selective Laser Melting (SLM) for manufacturing of integral components for micro gas turbines.



© Euro-K

Services

- Euro-K offers burner systems for different types of fuel which are characterised by integral construction. Main target is the optimisation for the required fuel. But there are also burners with multi-fuel abilities.
- The development of efficient energy converters for stationary and mobile applications focusses the targets of flexibility and life time.

Contact



Euro-K GmbH
 Wolfener Str. 32-34, Haus K
 12681 Berlin
 ☎ +49 30 12059640
 📠 +49 30 346556440
 ✉ service@euro-k.de
 🌐 www.euro-k.de



Car Park University Hospital Jena, Germany, with 1,306 parking spaces (LPh 2–5)

Planning Services for Parking

25 years of experience in planning car parks, parking concepts and automated parking systems

As engineering and planning office for car park planning, GIVT mbH is independent of manufacturers and operators. From traffic studies to final concepts for an economic operation, we develop integrated concepts for parking and parking systems throughout Germany and internationally.

Our CEO is publicly appointed and is a sworn expert for stationary traffic, parking and parking systems of the Chamber of Commerce. Therefore, he is an active member of various specialised bodies dealing with parking throughout Germany. GIVT mbH operates as a general planner, as a specialist planner or consultant for the public and

private sector, depending on the project. For the ADAC (German Automobile Club) for instance, we tested more than 200 car parks in Germany and Europe. Our focus is planning user-friendly car parks, both above and below ground, for all construction types. Our parking facilities take urban development, traffic, economic and ecological factors into account. Special know-how in the area of automated parking systems is one of our unique services.

The user-friendliness and sustainability of car parks are important for the user acceptance and functionality as a traffic building. Parking comfort is highly dependent on driving geometry. We use the newest technical, operational and safety-related knowledge as well as all relevant sets of standards, such as EAR 05, according to the (advanced) state of the art. We develop flexible parking layouts, considering different vehicle dimensions, and plan energy-saving infrastructures. Our design canon and planning principles with lots of examples are summarised in the “Construction and Design Manual Parking Structures”, which was published in 2012 by DOM publishers with editions in five languages. The second German edition is in preparation.

You can find detailed information on our range of service, planning philosophy, and parking planning on our website.



Transfer cabin of the automated parking system Augustenkarre Munich, 19 parking spaces (LPh 1–8)

Services

- Planning of car parks, both above and underground
- Planning of automated parking systems
- Traffic and parking space planning
- Renovation planning
- Operator and operation concepts
- General and specialist planning
- Certifications and assessments

Contact

GIVT Gesellschaft für Innovative
Verkehrstechnologien mbH
Pasedagplatz 3–4, 13088 Berlin
☎ +49 30 4749980
📠 +49 30 47499849
✉ office@givt.de
🌐 www.givt.de



Mediator between human and technology

As a small and medium-sized enterprise, HFC specialises in designing and configuring technical systems and software interfaces in terms of usability, product experience, acceptance and safety. Our further focus lies on research in the fields of traffic psychology and human engineering.

With an interdisciplinary team that brings together expertise from psychology, engineering, mathematics, and computer science, problems of hardware and software adaptation to humans are solved. Such include the evaluation of assistance systems in the vehicle and the investigation of fatigue measurability.

Our customers come from the automotive, railway, and aerospace industries as well as the departments of safety, medical equipment, and robotics.

The basis of our work at HFC is a highly methodological competence – not only in human scientific and technical fields, but especially in interdisciplinary collaboration. Thus, the different questions of human technological design can be handled for all domain applications. They range from the analysis of safety vulnerabilities over

development services, such as GUI design or user guidance, to studies of traffic safety or the collaboration between humans and robots.

We support product development from the first idea, assessing expectations and requirements, iteratively evaluating mock-ups and prototypes via suitable user research. We develop and provide simulators for tests in the automotive, aviation and safety domain.

Besides industrial customer projects, HFC works as R&D partner in several funded research projects, both national and EU-wide. We support partners in the proposal phase as well as in assembling strong consortia.

Since 2006, HFC successfully organises Berliner Fachtagung Fahrermodellierung (Berlin Symposium for Driver Modeling).



Pilot workload measurements for dual-threshold operations

Services

- Design and configuration of technical systems and software interfaces
- Analysis of requirements and user tasks, GUI design and evaluation in simulator and field
- Optimisation of usability, product experience, acceptance and safety
- Research and development in traffic psychology and human engineering

Contact



HFC Human-Factors-Consult GmbH
Köpenicker Str. 325, Haus 40
12555 Berlin
☎ +49 30 65763222
📠 +49 30 65763299
✉ info@human-factors-consult.de
🌐 www.human-factors-consult.de



HFC assistance system to support air traffic controller in multi airport operations



Autonomous driving is just as much part of the subjects addressed by IAV engineers as other aspects, such as engine development, lightweight design, electronics and vehicle safety © IAV

Expertise for the Whole Vehicle

IAV is one of the leading engineering partners in the automotive industry, successfully making technical innovations ready for SOP for more than 30 years

Even if it is not visible, technology by IAV can be found in nearly every vehicle. For years, the company's customer base has included nearly all automotive manufacturers and their system suppliers. Founded in 1983 as a spin-off from the University of Technology in Berlin, IAV is one of the world's leading engineering service providers, with a workforce of more than 6,500 employees. In addition to the headquarters in Berlin, the company has other operations in Germany, Europe and Asia, as well as North and South America.

Expertise for the whole vehicle on a one-stop shop basis is only available from IAV. The company is active in all areas of automotive engineering, offering a wide range of expertise particularly in the fields of powertrain and vehicle development. Needless to say, this includes topics such as digital transformation, big data and services, e-mobility, connected autonomous driving, and mobility concepts for the future. The vehicle is developing more and more into a "rolling device", communicating with its infrastructure, sending, receiving and processing data, and with this creating a completely new mobility experience with a wide range of new services. They communicate with their infrastructure, send, receive and process data and thus permit a completely new mobility experience with a wide range of new services. IAV is working intensively in these areas, "collaborating" with partners from the IT industry.

The IAV engineers are experts across the whole spectrum of powertrain development. They can develop complete engines and transmission systems and are specialists for injection systems, new combustion methods and after-treatment of exhaust gases. Electronics, vehicle safety and lightweight design round out IAV's vehicle engineering portfolio.

IAV is familiar with the demands of both the passenger car and the commercial vehicle markets.

Proprietary developments of components, procedures and tools guarantee IAV engineers their position as leaders of innovation. The company also has its own advanced engineering activities, working on an interdisciplinary basis in cooperation with universities and research institutes. For example, the EMBATT research project where IAV is collaborating with Thyssen-Krupp System Engineering and Fraunhofer IKTS to research batteries with a driving range of more than 1,000km per charge.

As a leading engineering partner, the company supports its customers in all phases of the development process – from the initial idea via simulation, prototyping, component testing and test bench investigations all the way through to road trials and further activities beyond the start of production. The company always deploys state of the art methods, first-class technical equipment and, above all, highly motivated staff. In brief: What IAV develops, moves you.

Services

- Electronics Development
- Powertrain Development
- Vehicle Development

Contact



IAV GmbH Ingenieurgesellschaft
Auto und Verkehr
Carnotstr. 1, 10587 Berlin
☎ +49 30 399789000
🌐 www.ia.v



Human mobility: What moves the society? © InnoZ

InnoZ – Mobility and Energy in Transition

Motivation human

As a research, testing and consulting company, we develop innovative system solutions together with industry, science, and public administration. In the context of mobility and societal change, InnoZ develops products and services from the idea to market launch. In our process we unite research and practice. At InnoZ, system-oriented approaches are the key: we work at the interface between mobility, telecommunications, energy, climate protection and urban development. Under real conditions, we test these approaches to develop sustainable fields of application for net-

worked mobility and energy services. Renowned industrial companies and public institutions are our partners and customers.

Platform electroMobility

Electric mobility is a catalyst for intermodal mobility concepts and services to us. Innovative approaches and integrated concepts require space, in which ideas can be developed, tested and introduced to the public, together with partners and users. With the Platform electroMobility on EUREF-Campus, InnoZ has created this space. It is a practical laboratory, exhibition centre and a forum for the exchange of scientific knowledge. Our interactive demonstrators allow visitors to experience innovation at one of the most exciting places in the capital region.

In the Germany-wide innovation competition "Outstanding Places in the Land of Ideas 2013/14," the InnoZ Living Lab for Networked Energy and Mobility was one of the 100 award winners.



InnoZ on the EUREF-Campus at Gasometer Schöneberg © Kai Abresch

Services

- Research & consulting for renowned partners and customers
- Trend, market & feasibility studies for research and industrial projects
- Development of systematic system solutions together with users and partners
- Initiation & coordination of pilot projects and funding management
- Scientific exchange, testing rooms, training and further education

Contact



Innovationszentrum für Mobilität
und gesellschaftlichen Wandel
(InnoZ) GmbH
EUREF-Campus 16, 10829 Berlin
☎ +49 30 2388840
📠 +49 30 238884120
✉ info@innoz.de
🌐 www.innoz.de



LÜTH & DÜMCHEN
Automatisierungsprojekt GmbH

Access, Time and Security

LÜTH & DÜMCHEN Automatisierungsprojekt GmbH was established in 1990 in Berlin. Its focus lies on development and production of software and hardware systems with which companies, authorities and institutions can display and secure their business processes.

Included in that are components such as access control with or without biometrics, visitor management, time tracking and time management, authorisation management, interfaces for third-party systems and image processing—for example, video surveillance, vehicle plate recognition, traffic congestion notification, metering, tracking and

parking management. The products and services developed and supplied by us are registered under the trademark/service brand SIMAGO.

The solutions provided are sector neutral, technically sophisticated and simultaneously user-friendly, highly innovative, economical and “Made in Germany.” These solutions are actively implemented in over 250 projects with more than 200,000 users and in excess of 6,000 control units.

These systems are to a certain degree unique and can protect companies and authorities from sabotage and industrial espionage, secure their business value, and also simplify their processes, making them more efficient and transparent.



➤ Services

- Consulting
- Project planning
- Software development
- Hardware development
- Research
- Realisation
- Training
- Maintenance/Service

 Contact



LÜTH & DÜMCHEN
Automatisierungsprojekt GmbH
 Borkumstr. 2, 13189 Berlin

☎ +49 30 4733999

+49 30 4733998

✉ info@simago.eu

 www.simago.eu



Metal Improvement Company, LLC

Shot peening, parylene coating, vibratory finishing, laser peening, peen forming, abrasive blasting

Metal Improvement Company: Global Player for innovative shot peening technology

Metal Improvement Company (MIC) is a full subsidiary of Curtiss-Wright Surface Technologies. MIC has 65 plants worldwide and since 2002 has offered controlled shot peening services at its Brandenburg plant near Berlin. These boundary layer strengthening processes for metallic components are primarily used in the automotive, aviation, machinery, and plant engineering industries, as well as in energy production. Controlled shot peening using stationary facilities or mobile technology at the customer's site increases fatigue resistance in components subject to dynamic stress, increasing the service life of critical parts. Cold-working and targeted introduction of internal compressive stress in the surface layers of components avoids the incidence of fatigue cracks, while preventing the occurrence of fatigue crack corrosion. This allows a significant extension in the service life of components or total systems, an increase in safety and a decrease in downtimes, thus leading to a reduction in operational costs.

Components that are suitable for processing by shot peening include gears, drive shafts, steering and chassis parts, turbine blades, engine parts, implants, structural components, and welded joints. Controlled shot peening is a procedure that can be applied to components of any size or weight.

Faced with spiraling performance demands and lightweight construction requirements, companies can acquire a significant competitive edge through the application of this innovative surface layer technology. The three-shift manufacturing system at MIC in Brandenburg enables short processing times, not just for prototypes and small to mid-sized batches, but for large batches. ISO 9001:2015 ensures a high standard of quality, and the shot peening process can be applied flexibly to meet specific customer requirements.



Services

- Vibratory finishing
- Shot peening, laser peening, peen forming
- Blast cleaning
- Dry ice blasting
- Parylene coating

Contact

**CURTISS -
WRIGHT**

Metal Improvement Company/
Curtiss-Wright
Am Piperfenn 7a
14776 Brandenburg an der Havel
☎ +49 3381 793740
📠 +49 3381 7937411
✉ micbrandenburg@cwst.com
🌐 www.cwst.de



© EUREF AG

Research Campus Mobility2Grid

Renewable Energy and Electromobility for Smart Urban Environments

The proliferation of electric vehicles provides a unique opportunity to develop integrated energy and transport systems. The Mobility2Grid Research Campus, situated within the EUREF quarter in Berlin-Schöneberg, will assess and implement innovative solutions to ensure an affordable and secure supply of electricity, heat and transport fully based on renewable energy.

Research Topics

- Integrating commercial and private electric road vehicles into decentralised energy systems
- Creating a reference quarter to showcase synergies between electromobility and power grids as well as heat distribution networks

Main Goals

- Research and development of new technology options
- Analysis and evaluation of social acceptability and political environment
- Economic uses of research results
- Development of new education and training formats

Topic Fields

- TF1 – Acceptance and Participation
- TF2 – Smart Grid Infrastructures
- TF3 – Interconnected e-Mobility
- TF4 – Bus and Commercial Transportation
- TF5 – Education and Knowledge Transfer
- TF6 – Digital Spaces
- TF7 – Operation and Commercialisation

The aim is to draw conclusions on area overarching optimisation opportunities and economic effects in the fields of automotive engineering, intelligent charging, grid integration and telematics applications.



Mobility2Grid Topic Fields

Services

- Applied Basic Research

Contact



Mobility2Grid e.V.
EUREF-Campus 9, 10829 Berlin
☎ +49 30 78898552
☎ +49 30 78898553
✉ geschaeftsstelle@mobility2grid.de
🌐 www.mobility2grid.de

**The fastest road to success
from A to Berlin-Brandenburg.**



www.mobility-bb.com

Mission Oriented Research for Traffic and Logistics

Finding steadily improved solutions for problems of transport, logistics, network flow management, disaster relief management, collision avoidance systems, mobile self-organising ad-hoc nets, etc. is a special challenge for O&S Consultancy due to the enduring demand to economise time and energy consuming systems.

Unfortunately, the optimal resolution to these problems mostly depends on the problem size. Thus, industry and business look for new algorithms that provide not necessarily optimal but very good results in real time, something that corresponds to the imperative call for developing economically efficient, ecologically sustainable system solutions to known and new issues.

Especially in the field of transportation and logistics, the current methods are either no longer adequate or are not yet efficient enough. Take the Asymmetric Multi-Stopover Problem for fleet management, courier services and taxi companies: "Find the shortest or quickest tour from the start to the destination, so that every point of a given set of stopovers is encountered!". Moreover, additional demands like dual-criteria optimisation with respect to routing cost (length or time) and traffic intensity related trace costs are on the agenda.

O&S Consultancy develops state-of-the-art prototype applications on the basis of Visual C++ that are being tested on large random graphs serving as traffic nets, where the solution candidates are provably depicted, enabling the verification of the calculated layouts.

Our main objective is to provide such solution algorithms that are highly efficient, i.e., they have to cope with an excellent ratio with regard to solution time and solution quality – indeed, a difficult challenge regarding the NP-hardness of the problems.

O&S Consultancy can refer to a long successful development tradition that comprises knowledge in theoretic and applied computer science, as well as skills and competence in designing efficient algorithms. We are engaged in mission-oriented research, i.e., we yield consultancy and development for SMEs: beginning with problem analysis and problem partitioning, we design competing prototypes on the basis of a well-experienced pool of basic algorithms and deliver a software prototype after programming and exhaustive testing.

R & D

for

- Navigation
- Sensor Nets
- Flow Mgmt
- Disaster Mgmt
- Cable & Pipes
- Plant Layout
- etc.

Services

- Mission-oriented research
- New solution methods for transport, logistics, network flow management, disaster relief management, collision avoidance systems, mobile self-organising ad-hoc nets, etc.
- Development, programming, prototyping

Contact



O&S Consultancy
Hohenschönhauser Str. 1
10369 Berlin
☎ +49 30 91689942
☎ +49 30 97105361
✉ info@os-consultancy.de
🌐 www.os-consultancy.de





Pierburg GmbH

Whether EGR systems, valves, actuators or pumps – Pierburg is a synonym for competency and innovation in the area of reduced emissions and consumption

With almost 3,000 employees worldwide, Pierburg specialises in emission control and air management systems, throttle bodies, as well as solenoid valves. Its customers include all the renowned automotive names. The five business units – Actuators, Automotive Emission Systems, Commercial Diesel Systems, Pump Technology, and Solenoid Valves – develop engineering solutions for motor vehicle manufacturers around the globe. Pierburg GmbH is a subsidiary of Rheinmetall Automotive with around 11,000 employees generating annual sales of some €2.6 billion at more than 40 locations worldwide.

With a tradition stretching back over a hundred years, Pierburg is a brand that stands for reliable partnership and future-oriented technology. As a development partner of the automotive industry, Pierburg researches engine technology for the future and develops innovative solutions that are ready for mass production. Our partners trust in the know-how of our personnel and our passion for developing and manufacturing mechatronic components, modules, and systems for engines. We meet every challenge and, through creativity and innovative power, we enable the drive of tomorrow. Our five business units develop solutions for the great challenges of the industry, such as downsizing and emission reduction with simultaneous optimisation of performance. Our comprehensive product portfolio encompasses a variety of EGR systems, electric motor throttle bodies, control valves and exhaust gas flaps, solenoid valves, actuators, and valve train systems, as well as oil, water and vacuum pumps for passenger cars, commercial vehicles, and off-road applications from light to heavy-duty.

The Pierburg plant in Berlin is the headquarter of our Business Unit Actuators with the global project and development responsibility and production facility.



Services

- Specialist in the reduction of CO₂ and other emissions
- Competency in exhaust gas recirculation, actuator technology, thermal charging
- Actuators
- Throttle bodies and control valves
- Exhaust gas recirculation systems

Contact



Pierburg GmbH
 Scheringstr. 2, 13355 Berlin
 ☎ +49 30 46050
 📠 +49 30 46055440
 ✉ info@kspg.com
 🌐 www.rheinmetall-automotive.com



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Integrated Transport Planning

A department of Technische Universität Berlin

The department researches the various aspects of cross transport modes and their interaction with the environment, technology, society, politics, and business. For transport teaching and research, it has a central, integrating function. Transport planning is thematised as a political process with the aim of establishing concepts for sustainable transport development.

Due to its complexity, transport is modelled by interdisciplinary, intersectoral analyses in scientific scenarios for purposes of strategy development and activity assessment. The decision-making patterns of traffic participants and players are empirically studied during special field research and the policy-related implementation of transport activities is supported by the evaluation procedure.

A demand-oriented perspective, in which consumers are viewed as engines for sustainable development and environmental policy players, guides this research. It is based on three areas of concentration:

- (1) Subject research and mobility routines as the object of traffic cause research. People's motives for acting the way they do in traffic are analysed. The special focus here is on repeating patterns of behaviour and the issue of how mobility routines can be influenced.
- (2) Futurology and invention generation. The task here is to forecast societal and technological trends and derive the requirements profile of the traffic participants of the future.
- (3) International mobility and transportation research. The department studies global trends of traffic development and traffic planning concepts. As part of research projects, it evaluates the acceptance and political implementation of innovative transport services.

Hence, the work of the department is guided by the triad: People – Mobility – Strategies.

Services

- Mobility research from the user's viewpoint
- Requirements profile of traffic modes and systems users
- Scientific analyses of transport and traffic as a political field
- Mobility report drafts at the municipal level
- Scenario development and invention generation

Contact



Technische Universität Berlin
 FG Integrierte Verkehrsplanung
 SG4, Salzuffer 17–19, 10587 Berlin
 ☎ +49 30 31425145
 📠 +49 30 31427875
 ✉ sekretariat@verkehrsplanung.tu-berlin.de
 🌐 www.ivp.tu-berlin.de



Custom designed Test- & Measurement Equipment

Powerful & designed to customer specifications

Since 1972, Witt IndustrieElektronik designs customer specific products in the areas of railway electronics, industry electronics, and software development especially for measurement and test equipment and specialised electronic controls. The built products are typically designed to be used in disturbed environments – i.e. the surroundings are noisy, dusty, hot, cold, wet etc. Witt Industrie Elektronik has produced more than 400 systems. Presently, there are more than 5.000 installations of those products – to the full satisfaction of the customers.

A small, highly motivated and experienced team develops the products based on the customer's specifications. The satisfaction of our customers and the proper and reliable functioning of the systems are the main criteria to measure the success of the project. When developing customer systems, we are using standards and re-usable modules to speed up the development process and to save resources.

Based on the mix of relevant and up-to-date know-how, the experience of our experts and the cooperation with our customers we execute all our projects successfully. At the same time, it is possible to utilise a wide range of standardised solutions.

Starting with handheld devices up to automatic systems which are fully integrated into the production process, these systems are being developed by our experienced engineers and technicians based on the demands of our customers. This includes a testing period and if requested also the implementation into the production environment. In addition to systems for production we also develop products for research and development departments.

Numerous completed projects show that Witt IndustrieElektronik is successful, efficient, and reliable. We execute projects for our customers based on our extensive know-how, a clear planning and project management as well as an efficient combination of experts from the relevant specialisations. Our projects are characterised by exact, complete planning, timeliness, compliance with – even short-termed – datelines and cost. We deliver a persistently high quality in all activities. This made us a preferred partner for our clients. Satisfied clients and a long lasting, cooperative partnership are our best references.

Services

- Test and measurement systems
- Quality management systems
- Custom-designed industrial electronics
- Formation, aging and measurement equipment for battery cells

Contact



Witt IndustrieElektronik GmbH

Weststr. 1, 13405 Berlin

☎ +49 30 7948840

📠 +49 30 7954499

✉ info@witt-online.com

🌐 www.witt-solutions.de

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excellence in mobility



Logistics

A World of Goods Flows – “The Future is Intermodal”

Berlin-Brandenburg already has a top position in this sector and all signs are pointing to growth

Dynamic Berlin-Brandenburg is one of Germany's leading logistics regions. Today, the location boasts a logistics infrastructure that guarantees an optimal supply to the entire metropolitan region. Strategically situated along three of the nine designated trans-European corridors, the region is connected to all European and Asian growth markets.

The logistics sector in the capital region has developed into an impressive success story in recent years. With a total annual demand of 385,000 to over 400,000 square meters, Brandenburg and Berlin have established a position for themselves as one of the top German logistics regions. The Berlin-Süd transloading center (GVZ) in Großbeeren once again ranks as number 3 among all German GVZs. Companies such as Amazon, Rossmann and Zalando are expanding in the region.

Active logistics locations

The most significant transloading centers in the region are GVZ Berlin-Süd (Großbeeren), Berlin-West (Wustermark/Brieselang), and Berlin-Ost (Freienbrink) as well as trimodal City GVZ Berlin-Westhafen in the center of Berlin. They provide outstanding logistics location factors and have brilliant development outlooks. These GVZs primarily function as suppliers to high density areas, but due to their proximity to the region's traditional industrial locations such as Siemensstadt and Ludwigsfelde, they are ideal for industrial contract logistics providers and other specialized logistics services.

The major airport of the future, BER, and the simultaneous development of the area surrounding the airport also hold great potential. The location expansion (Dachser) and inward investment (Unitax and Parexel) of renowned logistics companies at Schönefeld are also clear signposts for growth. And as a result of the commitment of logistics companies with international experience in seaport hinterland

and Eastern European transport, logistics expertise is also taking root in parts of Brandenburg that are far away from Berlin, such as Falkenberg/Elster (BLG Railtec GmbH) and Wittenberge (Meyer & Meyer Logistikzentrum Wittenberge GmbH & Co.KG).

Potential in the region

With its first class universities, the capital region also leads in scientific expertise. The two universities with a special focus on logistics are Technische Universität Berlin with its four logistics chairs, e.g. for transport, for retail or for manufacturing logistics and Technical University of Applied Sciences Wildau with the Transport Logistics research group and Brandenburg Technical University (BTU) Cottbus-Senftenberg, Brandenburg University of Applied Sciences, European University Viadrina in Frankfurt/Oder, the Berlin School of Economics and Law (HWR), Hochschule für Technik und Wirtschaft Berlin (HTW Berlin) and Beuth University of Applied Sciences Berlin also offer certified logistics expertise.

The employment and skilled specialist situation in Berlin-Brandenburg is also very positive. A current study by the Fraunhofer Center for Applied Research on Supply Chain Services highlights the importance of logistics, and companies also have optimistic outlooks. They confirm that the logistics sector will continue on its course of dynamic development. Logistics companies are looking forward to positive growth in e-commerce (31.75%), transport to Eastern Europe (30.2%), the BER airport (24.3%) and the space available for inward investment in the logistics area (23.5%).

Networking successfully

LNBB – Logistics Network Berlin-Brandenburg– plays an important role in developing this focal area. It networks companies in the production, trade and services areas and provides them with a joint platform for current issues relating to infrastructure, logistics solutions and business models.

BASF Schwarzheide – We create chemistry

The chemicals location in Brandenburg:
Extensive and excellently connected

The BASF Schwarzheide GmbH production site in Lausitz is part of the BASF Group.

BASF stands for chemicals that connect – for a sustainable future. The company combines economic success with environmental protection and corporate responsibility.

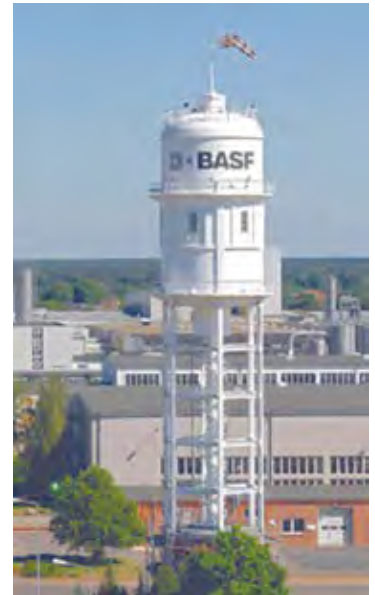
The Schwarzheide site focuses on the field of specialty chemicals. Its portfolio includes polyurethane basic materials and systems, crop protection products, water-based coatings, engineering plastics, foams, polyurethane dispersions and Laromer brands. Moreover, the site in the south of Brandenburg has developed into an international logistics hub, thanks to its outstanding logistics links. It has a direct connection to the federal motor highway as well as an excellent rail connection via the Lower Silesian magistral to ports on the North Sea and the Trans-European Corridor III, with access to Eastern Europe and Asia. The renovation of the Ruhland train station and the railways at the Horka border crossing means that the region is becoming even better connected to the international rail network.

The site offers companies the chance to benefit from the multi-faceted synergetic effects of a progressive and specialised chemicals location. A dozen manufacturing companies and other service providers have already settled there.

They are able to make use of a wide range of services in the fields of technology, analytics, and logistics. Newcomers to the location will also be offered additional services. They range from consultation to support for approval processes and the coordination and realisation of entire construction projects. At the Schwarzheide location, companies are offered everything from individual services up to complete service packages.

In terms of logistics, these services range from internal rail and road transport to the acquisition of raw materials, packaging of finished products, storage & handling, right up to the management of all modes of transportation. The companies that have already relocated to the location include highly efficient logistics service providers.

STR Tank-Container Reinigung GmbH – a subsidiary of Bertschi AG – operates an intermodal transport terminal with a link to the European KV grid, and offers storage spaces that meet all of the requirements of a chemicals site. The chemical logistics specialist Talke operates a logistics centre at Schwarzheide, and offers special storage solutions for hazardous materials. In October 2016, Waggonwerk Brühl GmbH opened a branch at the Schwarzheide location. The VTG subsidiary offers both a stationary repair workshop and a mobile maintenance service for railcars.



Watertower of the BASF
Schwarzheide GmbH



Aerial view BASF Schwarzheide GmbH

Services

- Packaging services are available for solid and liquid products in packaging such as barrels, IBC, bags, Big-Bags, or transport containers, such as tank vehicles and containers, silos, and railcar containers. This is carried out in either dedicated or multi-purpose facilities.
- The services in the area of railway logistics range from the performance of industrial and connecting railway services, to vehicle deployment control, repair and maintenance of rail vehicles and internal railway infrastructure.

Contact



BASF Schwarzheide GmbH
Schipkauer Str. 1
01987 Schwarzheide
☎ +49 35752 62768
☎ +49 35752 658452
✉ juergen.mattler@basf.com
🌐 www.basf-schwarzheide.de



Efficient logistics service provider in Berlin

With 120 staff and a turnover and transport volume of around 4,000,000 tons per year, BEHALA is a major logistics service provider in the Berlin Brandenburg capital region. Its port locations include the trimodal freight transport centres of Westhafen in Berlin-Mitte and Südhafen in Spandau, as well as the port of Neukölln.

BEHALA's core competence is the handling and storage of bulk freight, general cargo, and heavy items weighing up to 350t and 500t at its tandem hub. BEHALA also develops project-based logistics concepts for intermodal transport according to customers' requirements. In its container terminal at trimodal City-GVZ Westhafen,

BEHALA handles daily trains from Germany's sea ports and the Ruhr region to supply the city. It handles around 130,000 TEU a year here. In all port locations, BEHALA rents out logistics premises (halls, bonded warehouses and offices).

For many years, BEHALA has been committed to electric mobility for freight transport, and very successfully deploys a 100% electric-powered tractor-trailer unit, small vans, cars and railway shunting equipment.

BEHALA is also actively involved in research and development. With its scheduled water-based service for heavy cargo traffic, and the construction of a ro-ro barge specially adapted for Berlin's waterways, BEHALA has developed an innovative and environmentally friendly logistics solution for the future. With its flagship e4ships project, BEHALA has plans for ELEKTRA, a push barge with a hybrid drive, in partnership with TU Berlin. Hydrogen-operated fuel cells and accumulators are expected to supply power to the ship's electrical system and 400 KW drive in order to then be able to use ELEKTRA with URSUS convoy on journeys to sea port terminals.



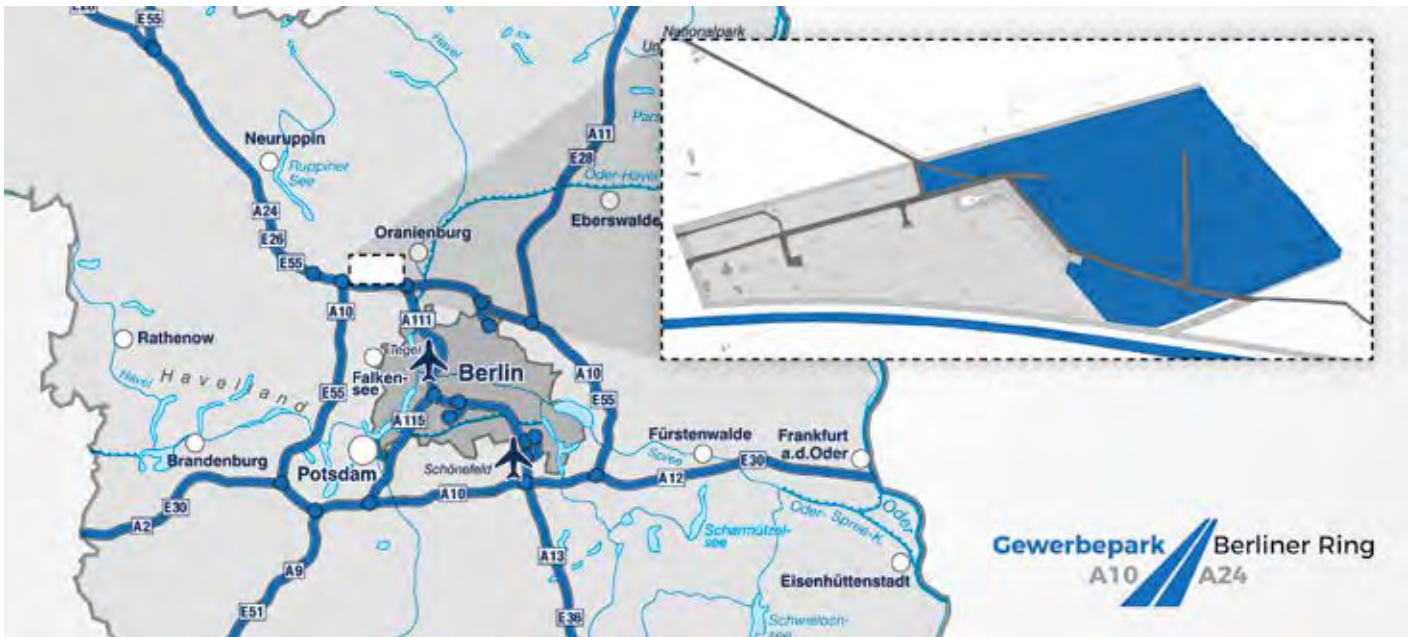
Services

- Logistics services at trimodal ports
- Handling of bulk freight, general cargo and heavy items up to 500 t
- 24/7 trimodal container terminal
- Innovative logistics concepts
- Attractive logistics premises in a central location
- Train operating company and rail infrastructure company (TOC and RIC)

Contact



BEHALA – Berliner Hafen- und Lagerhausgesellschaft mbH
Westhafenstr. 1, 13353 Berlin
☎ +49 30 39095243
☎ +49 30 39095139
✉ vertrieb@behala.de
🌐 www.behala.de



Business Park Berliner Ring – Site for industry and commerce

More than 50 ha of industrial and commercial property are available for the establishment of businesses in close vicinity to the northern city limits of Berlin

Located in Oberkrämer the business park Berliner Ring (A10) offers excellent conditions for commercial and industrial entities. The proximity of major traffic routes ensures an outstanding transport connection. A legally-binding development plan and flexible conditions establish versatile settlement opportunities. The state of Brandenburg provides attractive public subsidies under certain premises for businesses intending to settle in the area.

The business Park Berliner Ring (A10) is located directly at the highway A10. Businesses therefore

benefit significantly from well-linked transport ways. The highway A24 connects Berlin and Hamburg, the A111 establishes a quick connection to the centre of Berlin. Directly accessible from the A10, both slip roads are situated close to the business park. Furthermore, the highways A9, A2, A11, A12 and A13 exit from the A10. Lastly, the domestic port Velten is located only a few kilometres southeast of the business park.

Further advantages businesses derive are a safe framework and flexible conditions in the business park. The development plan ensures reliable planning activities and a quick execution of the respective settlement. Planning and implementation of development measures can be adapted to the business' needs. The layout of the industrial (GI) and commercial (GE) parcels are flexibly customisable. A close cooperation with municipality and county has been established. Both government entities support the business park development with great effort.

Businesses intending to settle in Brandenburg may benefit from various public subsidies. Primarily investments of the following clusters are being subsidised: energy technology, logistics/traffic, creative industry, health industry, food industry, optical industry and others.

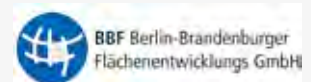


Location of the business park Berliner Ring (A10) directly at the highway

Services

- 50 ha of industrial (GI) and commercial (GE) property
- Developed parcels with attractive prices
- Ideal transport ways:
Situating directly at highway A10, between A24, A111 and close to domestic port Velten
- High planning reliability due to legally-binding development plan
- Flexible parcel sizes and -layouts from 3000 m² area
- Customised parcel development executable
- Application for attractive subsidies possible

Contact



BBF Berlin-Brandburger
Flächenentwicklungs GmbH
Am Studio 20A, 12489 Berlin
☎ +49 30 67798790
☎ +49 30 677987929
✉ info@bbf-online.com
🌐 www.bbf-online.com



C. Spaarmann since 1836

One history with future

No destination too far

Just an hour's drive from Berlin, on the A15, ten kilometers from the Polish border, a gateway to the Orient is now open for the many companies from all over Europe involved in East-West trade.

C. Spaarmann Logistics GmbH has its company headquarters in Forst (Lausitz), to the southeast of Brandenburg. The international transport company, celebrated its 180th anniversary last year: a novelty in the rapidly developing world of transportation. The firm, which started out as a customs forwarding agent, has had to repeatedly adapt and expand its range of services, especially over the last 25 years, in order to respond to international competition. With 130 employees worldwide and offices in Duisburg, Hamburg, and Frankfurt (Oder) as well as in Poland, the Czech Republic, Russia, Ukraine, Azerbaijan, Uzbekistan, Kazakhstan, and China, C. Spaarmann Holding is now ideally organised and networked on an international scale.

No project too large

Brewery equipment to Tashkent? Combine harvesters to Kazakhstan? No problem. A 250-ton excavator from Colmar in France for a nickel mine

in Siberia? A challenge. Complete factories in Turkey and Iran? Coordination and documentation of the entire supply chain – perfect teamwork.

Mining equipment to Chile or Indonesia, professionally planned and packaged in one of our hall stocks, well prepared for its long journey. Providing you with all necessary transport documents as well as customs office on-site – your benefit. Unique interaction of complex processes. New trading and transport routes to China: present and future.

Everything from a single source

If cargo transport, project loads, rail or container shipments, high-value goods or changing delivery requirements. Air and sea freight, internet-based customs clearance, special insurance and comprehensive advice, individually or as part of a major project. Our dedicated, long-time employed and highly-motivated staff around the world guarantees maximum reliability and safety, even for the most challenging tasks.

Services

- International transports
- Project logistics
- Heavy cargo and over-size shipments
- Air and sea freight
- Customs clearance
- Warehouse logistics
- Insurance and consultancy
- Trade

Contact



C. Spaarmann Logistics GmbH
Kurt-Rüdiger-Müller-Str. 1
03149 Forst (Lausitz)
☎ +49 3562 690110
☎ +49 3562 690510
✉ info@spaarmann.de
🌐 www.spaarmann.de



COLOSSUS

LOGISTICS

Customised logistics solutions

Individual logistics and transport solutions for the capital region and beyond

COLOSSUS Logistics is an owner-managed company specialising in large capacity and heavy load logistics. We stand for individual and competent logistics and transport solutions and take over all steps of the logistic process with our own staff and equipment.

At the company location in GVZ Berlin West, directly in the port of Wustermark, Colossus develops logistics concepts for in-house transports as well as for larger projects in cross-company cooperation.

We have about 40 and a vehicle fleet of more than a dozen heavy-duty trucks of various sizes which is why Colossus Logistics is one of the largest providers in Berlin-Brandenburg.

The company carries out the transport, process planning and organises the interface coordination of involved business partners.

Colossus is the executive partner of HavelPort Berlin GmbH and is actively involved in port-free services, multimodal transport, and value added services in general freight and container management.

Colossus Logistics has an AEO-S-certified heavy load storage in Berlin with an area up to 11,000 m² and gantry crane systems up to 150t. In a central location, logistic services such as stuffing of containers, seaworthy packaging of cargo, storage, and completion or picking of assemblies are carried out.

A further area of activity has emerged in recent years from the “transport” and “sea container trading”, which are successfully established on the market: At the request of customers, individual and mobile container building solutions are created from new and used sea containers.

For some of these containers, the logistics for the mobile locations will be organised and executed by Colossus after completion.

In order to complete the entire range of logistical services, Colossus develops individually designed vehicles, transport, and loading facilities in cooperation with partners. Colossus provides the framework for a comprehensive and reliable partnership to optimise the logistics processes of our customers and business partners.

Services

- Logistics concepts
- Heavy duty transport
- Warehouse logistics
- Industrial packaging
- Vehicle and device construction
- Sea container depot and trade
- CSC-inspection of sea container
- Individual modification of container

Contact

COLOSSUS

LOGISTICS

Colossus Logistics
 Inh. Tanja Pietack
 Hafenstr. 10, 14641 Wustermark
 ☎ +49 33234 24990
 📠 +49 33234 249999
 ✉ klaus.pietack@colossus-logistics.de
 🌐 www.colossus-logistics.com



eCom Logistik located in Falkensee near Berlin

Fulfilment services for industry, retail and e-commerce

Modular and all under one roof

As a logistics service provider, eCom Logistik GmbH & Co. KG offers high-performance fulfilment for industry, stationary trade and e-commerce. As specialists for small-scale and needs-based non-food logistics, our team of experts manages our customers' supply chains from goods procurement through to returns management. All of our services can be combined individually and are precisely tailored to fit the business processes of our customers.

eCom Logistik GmbH & Co. KG is a medium-sized company in the Pelikan group with approximately 200 employees.

With more than 100 years of experience in the logistics field, eCom Logistik precisely tailors the supply chain to fit the customer's needs and to maximise efficiency, guaranteeing an optimal flow of goods right through to the recipient. The review, improvement and documentation of processes are standard practice; ISO certifications 9001 and 14001 have been proof of this for more than 20 years. As an "Authorised Economic Operator" (AEO certification), eCom Logistik can benefit from numerous concessions and simplifications in customs controls and procedures on behalf of its customers.

Located in Falkensee (Brandenburg), just outside Berlin and with good transport links, eCom Logistik operates an ultra-modern logistics centre with a fully automatic high bay and crate warehouse, around 49,000 pallet slots and 72,000 containers, as well as a total of 135,000 m² of storage and service space. This allows customers maximum flexibility through freely scalable capacity of logistics services.

eFulfilment for e-commerce:

eCom Logistik understands the logistic processes of online trading and targets the needs of its customers with modular logistic services. The customer services department supervises all projects from the offer phase, through questions about billing and individual customer reports, right through to claims. Even data exchange between logistics and the inventory management system is guaranteed. Links with all kinds of customer systems can be achieved with the support of eCom Logistik's own IT-department.

Services

- Procurement logistics incl. import customs clearance, product-compliant storage in a fully automatic high-bay and boxes warehouse or in a storage area
- Order picking with fast in-house lead times and zero-error picking, distribution logistics with automatic loading technology and export customs procedures
- Value-Added services with packaging of products in blister packs and enhancement of products, display construction, and packaging in standard formats or customer-specific displays

Contact



eCom Logistik GmbH & Co. KG
 Straße der Einheit 142-148
 14612 Falkensee
 ☎ +49 3322 260
 📠 +49 3322 265148
 ✉ kontakt@ecomlogistik.de
 🌐 www.ecomlogistik.de



GEODIS – We logistic your growth

The GEODIS Berlin branch introduces itself

GEODIS is a Supply Chain Operator ranking among the top companies in its field in Europe and the World. GEODIS, which is part of SNCF Logistics, which in turn is a business line of the SNCF Group, is the number one Transport and Logistics operator in France, and ranked number four in Europe.

Their international reach includes a direct presence in 67 countries and a global network spanning over 120 countries. With its five lines of business (Supply Chain Optimisation, Freight Forwarding, Contract Logistics, Distribution & Express and Road Transport), GEODIS manages its customers Supply Chain by providing end-to-end solutions enabled by our people, infrastructure, processes and systems.

GEODIS has 24 sites at strategically important locations throughout Germany, which have been awarded ISO 9001, ISO 14001 and OHSAS 18001. Currently, GEODIS services a total warehousing surface of more than 220,000 sqm where a wide range of industry sectors are served.

GEODIS offers flexible, adaptable storage and property solutions to meet all your needs, whatever your situation and type of goods. You can opt for dedicated platforms or benefit from the

advantages related to shared surfaces, resources and equipment. Thus you better control your logistical costs.

The outbound logistics from your production sites or warehouses is of crucial importance as it impacts your customers' satisfaction. GEODIS supports you with a full range of services, including high value-added operations, which enable rapid reactions to changes in the market and to make your logistics more reliable, all the way to the final delivery point. You will optimise not only the management of your stocks, but also the distribution of your products, while better controlling your logistics costs.

Reverse logistics is a matter of considerable strategic importance when we consider that the costs entailed by return flows can make a significant dent in your profits, sometimes to the point of making an initial transaction unprofitable. With its expert know-how in repairing and remarketing mid-life products, and in dismantling and recycling end-of-life products, GEODIS can help you optimise your return flows and reduce your costs.

Services

- Warehouse for national & international distribution
- Technical centre for repair & aftersales services
- End-of-life product management
- Warranty Management, DoA handling, SWAP service
- System configuration of HW & SW
- Product return management
- Cycle count management
- Waste disposal management

Contact



Geodis Logistics Deutschland GmbH
Niederlassung Berlin
Hans-Grade-Allee 2
12529 Schönefeld
☎ +49 30 263673 1000
☎ +49 30 263673 1001
✉ info-glde@geodis.com
🌐 www.geodis.de



IT'S ALL ABOUT TIME

GO! Express & Logistics is on the go for you around the clock. Regional, national and international – from document to container

GO! City & Region

Whether it's urgent documents or a delivery of goods to your branches – every minute can count in regional transport. Right now, one of our 200-plus couriers is probably in your vicinity to pick up your shipment and bring it directly to the recipient. Via bicycle, car, station wagon, van or truck – at GO! all of your shipments are in good hands.

GO! National

The GO! network links over 70 stations Germany-wide, connecting you to your customers and suppliers. Everything we pick up by 7 p.m. is already at its destination the next morning: at all business centres by 10 a.m. and everywhere else by noon. And we can be even faster, deliver on the weekend, and provide extra services as required.

GO! International

For international shipments you need a partner that is familiar with the great, wide world. GO! has its own stations in Denmark, Luxembourg, Austria, Poland, Switzerland and the Czech Republic, and is part of a global network of proven partner companies.

With our partners, we can provide overnight delivery to all European business centres. And the rest of the world in 48 hours to a maximum

of 4 days. We would also be happy to take your shipment through customs and will advise you in advance of the points you'll have to observe.

GO! Forwarding and warehousing

Regardless of whether you have a single package, 10 euro pallets, or require a 40-ton container, GO! will make sure that your shipment arrives on time. And if you'd like to conserve your own capacity, we will manage the warehousing and commissioning. To do this, we link your inventory control system to our EDV – you always have an overview.

GO! Online service

From start-ups to established companies – GO! supplies logistics for eCommerce. GO! makes it possible to order until midnight and guarantee next-morning delivery.


See how we do this under: www.pacster.com

Services

- **GO! CITY & REGION**
In Berlin and the capital region at a moment's notice
- **GO! NATIONAL**
Picked up today – delivered tomorrow
- **GO! INTERNATIONAL**
We'll go to the end of the world for you
- **GO! FORWARDING**
Piece goods, pallets, containers & entire loads
- **GO! WAREHOUSING**
Storage, commissioning & shipment
- **GO! ONLINE SERVICE**
Logistics for eCommerce

Contact



GO! General Overnight & Express
Logistik GmbH
Wohlrabadamm 14, 13629 Berlin
 www.general-overnight.com/berlin

Transport and logistics from a single source

Reliable, competent and experienced through tradition

Hagemann is a regional, medium-sized, family-run haulage and logistics company with 150 employees and a reputation spanning over 60 years as a reliable and competent company from the Berlin-Brandenburg area. We operate four large logistics centres here and also provide in-house logistics for various clients, among other activities. In this, we base our services consistently on the individual and specific challenges that our clients face.

In this context, we offer you:

- Drive-in rack storage
- Individual block storage areas
- Conventional rack storage areas
- Outside storage

Prestigious reference customers in industry and trade consistently applaud our high standards of quality and service, and confirm our immense flexibility as well as the comprehensive expertise of our employees.

We apply high quality standards and hold certifications as regulated agents according to LBA and DIN EN ISO 9001:2008, among others.

We operate our own vehicle fleet with 50 latest-generation trucks (Euro-6 compliant), and are therefore in a position to offer our clients integrated, customer-specific solutions for logistics and transport from a single source.

We are specialists for nationwide and European transport of full and partial loads. We mainly use vehicles from our own fleet to fulfil our contracts, but we do also source vehicles from our established pool of affiliates. We ensure that our drivers, as well as those from our established pool of affiliates, speak German. Our vehicles are of course equipped with a GPS location system to guarantee smooth tour monitoring.

The blend of standardised processes, short communication paths, and modern, technical equipment ensures the high-quality of our transport services and allows us to avoid costly and environmentally-damaging empty runs.



Services

- Manufacturing and consumer goods logistics
- In-house logistics
- Job processing
- Packaging
- Fulfillment
- Direct transports Germany and Europe-wide
- Full and part load services
- 24/7 JIT-delivery to supply production lines and to pick up waste
- Import/export handling with customs clearance
- Management of tax and bonded warehouses

Contact

HAGEMANN
LOGISTIC

HAGEMANN Logistik & Service GmbH

Kanalstr. 8, 16727 Velten

☎ +49 3302 366105

☎ +49 3302 366177

✉ w.ringleb@hls-berlin.de

🌐 www.hagemann-logistic.de

HAGEMANN

Kanalstraße 8
14727 Velten

Tel.: 03304/366-0

Fax: 03304/366-177

info@hagemann-logistic.de

www.hagemann-logistic.de





Connect Metropolises – HavelPort Berlin is introducing itself

HavelPort Berlin covers the increasing demand for multimodal transshipment and port services in the metropolitan area of Berlin-Brandenburg

Consolidate logistics expertise

HavelPort Berlin is located west of Berlin on the Havelkanal at the freight transport centre Berlin West. HavelPort Berlin GmbH, which was founded in 2013, has been able to prove its logistical expertise in the course of the positive economic development of Berlin, with considerable company growth rates, and has accumulated know-how along the entire logistics chain.

The HavelPort is optimally positioned in the areas of containers, bulk goods, as well as heavy goods and project loading from transportation to handling, warehousing, and value-added services. In addition, the inland terminal offers all port logistics services such as storage, stuffing, container cleaning, and repairing.

Optimal connection

The inland port has the best conditions for transports to and from the metropolitan area Berlin. Combined with the Multimodal Terminal Berlin and the adjacent marshalling yard HavelPort is an ideal hub for nearly all types of goods and modes of transport. It relieves the roads and the hinterland traffic will be strengthened.

Water: Due to its direct location on the Havelkanal, the terminal is ideally connected to the comprehensive European network of inland waterways, without fluctuating water levels.

Road: HavelPort can be reached via the A10 federal highway as well as the four-lane federal road B5.

Rail: The HavelPort is connected to the DB rail network via the neighbouring Multimodal Terminal Berlin. The terminal has two tracks, each is 610 m long.

The inland port has a total size of 28,250 square metres. The 390-metre-long quay offers three berths for ships with a length of up to 110 metres, and a width of 11 metres with a permanently available depth of 2.50 metres.

Services

- Handling of container, project cargo, bulk and heavy goods
- Stuffing
- Storage
- Container repair and cleaning
- CSC inspection of sea container

Contact



HavelPort Berlin GmbH
Hafenstr. 12, 14641 Wustermarke
☎ +49 33234 20698
📠 +49 33234 20824
✉ info@havelport.de
🌐 www.havelport.de



Mobility rethought – wide view by proximity

Mobility rethought

Wide view by proximity

Interlink GmbH, headquartered in Berlin, and a subsidiary in Schwedt/Oder, was founded in 2004.

We consult various customer groups in all areas of rail and road-bound public transport. These include, among others, transport companies, transport associations, authorities, ministries, local authorities, political institutions and tourism-related businesses. Depending on the order and the requirements, our own five-member team has a network of companies, planners, lawyers, buyers, financiers, generalists and pragmatists at its disposal.



Using new technologies and innovations – Interlink shows what is already possible today.

Our diverse range of services combine pragmatic problem solutions and innovative process links.

In addition to the core questions on public transport planning, Interlink also offers new approaches and links to mobility services with company-relevant topics, as well as providing advice on future-oriented innovations, such as autonomous bus transport.

We plan and support new concepts right up to implementation and are available as competent partners in all questions of communication.

Together with our partners, we have already participated in international projects and have experience in handling EU funding applications.

Further information and a selection of references can be found on our homepage.

Let us know what we can do for you and please feel free to contact us.

Services

- Public transport planning – supply planning, cost-effectiveness studies, student transport
- Mobility solutions for rural areas – mobility concepts, flexible operating forms, kombiBus & LandLogistik
- Linking of mobility – logistics, tourism, real estate, health
- Communication – marketing, networking, project management, citizen dialogues, workshops, moderation

Contact



Interlink GmbH
Wallstr. 58, 10179 Berlin
☎ +49 30 20913972
📠 +49 30 20913973
✉ mail@interlink-verkehr.de
🌐 www.interlink-verkehr.de



Intermodal Terminal Frankfurt (Oder) | (Source: KuhnertMedien)

Freight village Frankfurt (Oder)

East-West logistics hub in the German-Polish economic area

As part of the German Capital Region Berlin-Brandenburg, Frankfurt (Oder) is a dynamic city located in the immediate vicinity of the German-Polish border. The city – with its international atmosphere – offers an interesting economic and cultural life for its inhabitants and guests. Frankfurt (Oder) and its Polish neighbouring city Słubice form an international work and living place, providing ideal locations for meetings, economic exchanges, and communication.

An outstanding infrastructure, the proximity to Berlin and the central position on the North Sea-Baltic Corridor are characterising Frankfurt

(Oder)'s attractiveness as an ideal logistics location. The city offers numerous fully developed sites for investments and relocation just next to the motorway A12/30. Developed on the basis of a multi-location concept, the city connects the two transport modes, road and rail within the Freight Village (GVZ) Frankfurt (Oder).

Via the intermodal terminal Frankfurt (Oder), companies can access an outstanding network of multimodal traffic connections between the Dutch and German overseas ports and the major Polish economic centres. In accordance with China's strategy for building a new Silk Road as a Eurasian land bridge, seaport hinterland locations with a state of the art infrastructure like Frankfurt (Oder) will move more and more into the spotlight of international rail operators, shippers, logisticians and railway undertakings.

These companies will obtain considerable support and preconditions for a variety of development fields for new traffic, usage of public railway infrastructure, value added services in intermodal transport as well as for the establishment of a consolidation point for overseas and continental transports. Furthermore, Frankfurt (Oder) is especially predestined for the realisation of investment projects in the fields of: warehousing, cross-border e-commerce and spare part logistics.



Current and planned train connections at the intermodal terminal Frankfurt (Oder)

Services

- Business location services – confidential & free of charge
- We make individual investment location offers
- We open doors to local and state authorities
- We guide you through approval procedures
- We offer state grants application services
- We build bridges to cooperation partners
- We act as single point of contact for investors
- www.icob.de

Contact



Güterverkehrszentrum Frankfurt (Oder) c/o Investor Center Ost-brandenburg GmbH
Im Technologiepark 1
15236 Frankfurt (Oder)
☎ +49 335 557 2206
☎ +49 335 557 1310
✉ rehse@icob.de
🌐 www.gvz-ffo.de



A Powerful Partner

IPG stands for service in Berlin-Brandenburg logistics locations

IPG is a company with a wide range of products for site and transport infrastructure development for public and private customers. It is responsible for the development and marketing of the freight transport centres Berlin Süd Großbeeren, Berlin West Wustermark and Berlin Ost Freienbrink, as well as the industrial parks in Premnitz and Ludwigsfelde (development project “An der Eichspitze”).

For the operation of their connecting trains or public track systems, IPG supplies railroad engineering professionals and collaborates with regional railroad transport companies. On issues

of public transport development, logistics, freight transport and the development of transeuropean networks in Berlin-Brandenburg (North Sea – Baltic, Scandinavian – Mediterranean, Orient – East Mediterranean), IPG is the agent for the Ministry of Infrastructure and Country Planning of the state of Brandenburg.

Consulting services related to the JadeWeserPort, Mühlberg/Elbe, Wittenberge and Wustermark port facilities and the theme of port hinterland transport have also increased the level of expertise flowing into our services for waterway transport modes.

For public customers, the IPG is a reliable partner in regard of financing projects with public funds. The range of services, in this case, includes the entire spectrum of the application, management, and billing including the use of funds.



© IPG

Services

- Municipal consulting/funding management
- Development of commercially zoned areas, revitalisation of unused industrial sites
- Transport-related/urban planning concepts and research projects
- Planning, construction project supervision, operation of railroad infrastructure
- Development of train station buildings/environments
- Marketing of industrial and commercial areas

Contact



IPG Infrastruktur und Projektentwicklungsgesellschaft mbH
Burgstr. 30, 14467 Potsdam
☎ +49 331 200840
☎ +49 331 2008470
✉ info@ipg-potsdam.de
🌐 www.ipg-potsdam.de



For Sustainable Public Transport

We strengthen states and municipalities

KCW is the leading strategy and management consultancy for rail- and road-bound public transport.

Independent, individual, interdisciplinary

We are independent and counsel the public sector exclusively. Our clients are municipalities, public-transport entities, transport associations and ministries from all over Germany and Europe.

Our clients especially appreciate our interdisciplinary consulting. 60 consultants with a background in economy, law, engineering and social sciences work in our offices in Berlin and Hamburg. Our excellent teamwork enables us to create integrated, long-term sustainable solutions, meeting and exceeding our client's expectations.

Demanding consulting for us means providing solutions, which are client-tailored for the individual needs of each client. Making that possible, we do not only employ natural and proven strategies but also take on a broader perspective, thinking ahead of our clients.

Where and how can we support you?

We accompany your fundamental strategic decisions with issues such as how your market or company should develop.

We support award processes and contracts of all kinds for public transport.

We work operationally, for example in the range of performance control. Our transport planning for public transport is demanding, holistic, and moderating. We also offer interdisciplinary mobility consulting and market analysis in the area of bicycle and pedestrian traffic.

Many of our topics are located in the area of infrastructure, whose preservation, renovation, and development presents a great challenge to municipalities in an era of tight budgets.

In addition to appraisals and expert reports of all types, our focus is on moderation and process support. Of great importance to us is to work together with all of the stakeholders to develop long-term, economically sustainable and reasonable solutions.

We are excited about our work at KCW – let yourself be inspired by our services and get to know us!

Services

- Strategic and organisational consulting
- Economic analysis and forecasting
- Consideration of the relevant legal, social and ecological demands
- Support for operational and planning-related issues
- Implementation support, controlling and quality management
- Tariff and sales concepts

Contact



KCW GmbH
Bernburger Str. 27, 10963 Berlin
☎ +49 30 408176860
📠 +49 30 408176861
✉ info@kcw-online.de
🌐 www.kcw-online.de



The Zippel Group

Your partner for individual logistic solutions

With 3,000 block trains a year and a fleet of 200 trucks, the Zippel Group connects the major economic centres of Germany and Europe with the German sea ports – in an environmentally friendly manner.

Excellent transport conditions, thanks to innovative concepts, lean management and high-quality standards when selecting our strategic partners, form the basis of our work – 24 hours a day, 7 days a week.

Container shipments

Zippel's road/rail transport concept involves dispatching over 200 container and conventional truck shipments a day, and approximately 12 of its



own block container trains a week, from the sea ports of Hamburg and Bremerhaven to Berlin and Schkopau (Leipzig).

General cargo & groupage

Zippel's day-to-day business includes shipments of general cargo, as well as partial and full loads. Its trained, qualified staff will dispatch and transport your goods to your specified location reliably and quickly, or collect your goods on your behalf.

Warehousing

Zippel Logistik's warehousing service at its Dummerstorf site near Rostock involves managing a total of 8,000 m² of covered storage with 21 gates, divided into block and high bay storage as well as order picking and handling areas. 16,000 m² of heavy cargo space in the bonded warehouse and 10,000 m² of car parking and storage space on the premises are also available.

Zippel's temperature-controlled external warehouse has a further 4,500 m² of storage space and can also store sensitive and hazardous goods.

Services

- Container shipments
- General cargo, partial and full loads
- Warehousing

Contact



Konrad Zippel Spediteur
GmbH & Co KG
Westhafenstr. 1, 13353 Berlin
☎ +49 40 2530450
☎ +49 40 25304562
✉ info@zippel24.com
🌐 www.zippel24.com



Kuehne + Nagel Office Berlin

Tailor Made Logistics Solutions

Founded in 1890 by August Kuehne and Friedrich Nagel in Bremen, Germany, today, Kuehne + Nagel is one of the most successful logistics providers with more than 1,300 offices in over 100 countries and approximately 70,000 specialised employees. Whether on land, by sea and air, or with complex processes in warehousing: we find the best route for your goods and enable you to optimise your supply chain with integrated IT-based logistics solutions.

With more than 9.5 million square metres of warehouse and logistics space, we are one of the worldwide leading contract logistics service providers. We enable you to increase efficiency, minimise process lead times and to reduce costs system-wide. Our integrated services include all aspects of logistics planning, control and execution.

The service portfolio of Kuehne + Nagel's Berlin office includes Contract Logistics, Airfreight and Seafreight. At our brand new logistics campus in Berlin-Grossbeeren we offer the complete service portfolio of logistics services as well as value added services. Our core competencies include logistic fulfilment (pick & pack) and co-packing (POS-Displays/promotion material) of various

product portfolios. In addition, we offer bonded warehousing facilities along with comprehensive customs brokerage services.

We offer:

- Complete logistics portfolio, including customs clearance
- Integrated supply chain solutions
- Worldwide uniform IT systems
- Pooling solutions
- Licences for warehousing and distribution of pharmaceutical products
- High quality with an individual approach

Contract Logistics solutions tailor-made to the following industries:

- Automotive
- Retail
- FMCG
- High-tech and Consumer Electronics
- Industrial goods
- Pharma and Healthcare

As an additional service, we offer extensive packaging solutions. In Germany, these are primarily provided by our fully-owned subsidiary Cargopack.

Services

- Contract logistics
- Warehousing
- Value added services
- Pharma
- Seafreight
- Airfreight
- Automotive
- Integrated logistics
- Shared warehousing
- Onsite
- Production

Contact



Kühne + Nagel (AG & Co.) KG
Niederlassung Berlin
Am Lilograben 14
14979 Großbeeren
☎ +49 3378 809-0
☎ +49 3378 809-105
✉ info.berlin@kuehne-nagel.com
🌐 www.kuehne-nagel.de

Logistics Network Berlin-Brandenburg

Shaping and promoting the development of logistics

For more than 10 years now, the Logistics Network Berlin-Brandenburg (LNBB) has reinforced the capital city's status as a logistics and economics hub. It is a major component of the innovation cluster of transport, mobility and logistics, and provides highly visible marketing for logistics in Berlin. Companies from the production, trade, and service sectors value LNBB as a central point of contact for all issues regarding process consultation, infrastructure, logistics solutions, business models, and funding options.

The strength of the LNBB lies in its integrated view of logistics, which comprises two aspects. First, there is the external, visible aspect, which takes the form of a logistics industry with the corresponding providers of logistics services and infrastructure, which towers like the tip of an iceberg. Second, there is an invisible aspect which can be seen in the necessary functional structures of all corporate sectors and areas of life. These hidden logistics services are hard to quantify, but account for a significant portion of the overall economic output of logistics.

One other strength — among others — lies in its ability to bring together not only members from the logistics and freight industries, but also from the

administrative and research sectors. In doing so, the LNBB networks the economy, the sciences, and policymakers in ways that are recognised regionally and supra-regionally, such as logistics lunches or meetings between policymakers and economic actors, as well as regular meetings on pharmaceutical logistics and logistics hubs organised in collaboration with economic promotion associations.

The LNBB's main issues and focal areas include the urban-rural metropolis, life sciences (health and pharmaceutical sectors), industry/production, e-commerce & trade, and infrastructure as a comprehensive framework.

Its trans-area functions include digitisation, safety & protection, traffic & transportation chains, as well as the training & qualification sectors. The Logistics Network also initiates new projects, such as the development of innovative technologies and their use, e.g. for Industry 4.0.

The LNBB is active at a federal level via the working group of the logistics initiatives in Germany, but also maintains international networks, such as with Eastern Europe.



Services

- Joint projects for business and location development, as well as location marketing
- Process consultation and discussions on innovations, as well as best practice examples
- Administration of R&D projects which are jointly financed by the public and private sectors
- Joint appearances at expos, conferences and events
- New national and international business contacts

Contact



LogistikNetz Berlin-Brandenburg e. V. (LNBB)
an der TH Wildau
Hochschulring 1, 15745 Wildau
☎ +49 3375 508409
📠 +49 3375 508275
✉ office@logistiknetz-bb.de
🌐 www.logistiknetz-bb.de



Christian Gaebler, at that time Secretary of State, Senate Department for Urban Development and the Environment (third left), and Kathrin Schneider, Ministry for Infrastructure and Agriculture of Brandenburg (forth left), with representatives of LNBB at the Politik-Wirtschaft 2015 Event;

© Dr. Günter Teßmann



About Logwin AG

With a close network of branch offices and partner companies, Logwin has representations in all the world's major economic regions. We are located where our customers need us and deliver complete transport and logistical services along all product streams. 4,200 personnel work together daily to ensure every service is delivered in the proper way. Locally, internationally, expertly, and with dedication. This is what sets Logwin apart.

We are located in Berlin as well at:

Logwin Solutions Deutschland GmbH
Buckower Chaussee 55/58
12277 Berlin
Phone: +49 30 7007-780
Fax: +49 30 7007-78160
berlin.buckower@logwin-logistics.com

Logwin Solutions Deutschland GmbH
Telegrafenberg 12-14
13599 Berlin
Phone: +49 30 3380-9631
Fax: +49 30 3380-9640
berlin.telegrafenberg@logwin-logistics.com

Logwin Solutions Network GmbH
Am Zeppelinpark 25
13591 Berlin
Phone: +49 30 3970-7311
Fax: +49 30 3970-7124
berlin.lsn@logwin-logistics.com



Services

- Air freight
- Sea freight
- National transports
- Warehousing
- Value added services
- Supply chain management
- International transports

Contact



Logwin Air + Ocean
Deutschland GmbH
Frachtgebäude Flughafen Tegel
Raum 12 + 13, 13405 Berlin
☎ +49 30 41012735
✉ +49 30 41012700
✉ airocean.berlin@logwin-logistics.com
🌐 www.logwin-logistics.com



Image by Andre Zelck, © Nagel-Group

Connecting the world of food

The Nagel-Group, with headquarters in Versmold/ East Westphalia, is a family-run European business specialising in food logistics. The corporate group employs more than 12,000 staff at over 120 sites in 16 European countries. Every day, it transports around 100,000 food shipments of all sizes and temperature classes throughout Europe. Its unique network makes it the German market leader and one of Europe's leading providers of temperature-controlled logistics services.

Be it frozen produce, meat, dairy products, coffee or confectionary, – day after day, the Nagel-Group helps consumers throughout Europe find the right

goods at the right time and in the right quality at the point of sale, on behalf of trade and industry. The Nagel-Group therefore makes a significant contribution to the success of its customers'. Its service portfolio ranges from procurement logistics, transport and distribution, through warehousing, order picking and packaging, to value-added services such as display construction, labelling and customs clearance.

Food of all temperature classes (from ambient to frozen) is transported. The entire range of shipment sizes make their way through the Nagel-Group's European network, from parcels, through general cargo, partial and full loads, to tanker shipments. A secure and highly-efficient IT landscape completes its portfolio.

Connecting the world of food®



Image by Andre Zelck, © Nagel-Group

Services

- Temperature-controlled food logistics
- Transport/distribution
- Warehousing
- Order picking, packaging, value-added services

Contact



Nagel-Group I Kraftverkehr Nagel
GmbH & Co. KG
Kurt-Nagel-Str. 4-6
14641 Wustermark
☎ +49 33234 210
☎ +49 33234 21122
✉ berlin@nagel-group.com
🌐 www.nagel-group.com



Logistics and industrial centre Lausitz, Containerterminal © Studio 2.0

Logistics and industrial centre Lausitz

Space for developments

The logistics and industrial centre Lausitz is located directly on the BAB 15/E 36 and is therefore perfectly connected to the trans-European transport corridor Hamburg-Berlin-Breslau-Krakow-Kiev. It offers large-scale GI (industrial park) locations with 24h operating permits and a railway siding. As an ideal location for settlements in the areas of logistics and production, it has special competence advantages through existing logistics companies, service providers and the customs authorities present on site.

The logistics and industrial centre in Lausitz has 25.2 ha GI (industrial park) area and 5.2 ha GE/GEE (business park/business park with restrictions) area as well as a further 39 ha optional space available for company settlements. Specialised logistical services companies operating throughout Europe offer comprehensive customs services and competent service on site.

More than 50 companies, for example from the sectors metal processing, cable technology, hall construction, advertising technology and plastics processing, already use the advantages of the location.

In particular, the existing infrastructure offers – combined transport terminal, railway station Forst with loading platforms, an approach for trucks and loading ramp as well as a diverse range of services and the professional backing and support of the economic development agency of the city of Forst (Lausitz) ensure continuous growth of the logistics and industrial centre Lausitz.

The economic development agency of the city of Forst (Lausitz) provides consultation on all locational matters – free of charge, confidentially and competently.



Logistics and industrial centre Lausitz
© Profi-Foto-Kliche

Services

- Settlement management
- Subsidies advice and acquisition
- Economic contacts and contacts with investors
- Large-scale GI (industrial park) location right off the motorway
- Combined transport terminal
- High-quality areas ready for building in the range of 2,000 m² to 350,000 m² and with variable layouts are available both with and without railway siding
- Attractive property offers

Contact



Stadt Forst (Lausitz)
Stabsstelle des Bürgermeisters
und für Wirtschaftsförderung
Lindenstr. 10–12
03149 Forst (Lausitz)
☎ +49 3562 989247
☎ +49 3562 989103
✉ s.steiniger@forst-lausitz.de
🌐 www.forst-lausitz.de



SGKV at a glance

The German Promotion Centre for Intermodal Transport

The German Promotion Centre for Intermodal Transport (SGKV) is a non-profit research organisation founded 1928 with the purpose to strengthen intermodal transport and to make intermodal structures more transparent. Grounded in its members' origins in practice, administration and science, the SGKV provides a neutral platform for knowledge and communication, for all who want to use, explore and develop the combined transport (CT).

Practical research

The SGKV acts as an independent research organisation with the purpose to combine the variety of advantages of the different carriers and the interests of the actors in combined transport issues. As a comprehensive platform, it aims to become more cargo transports of the future environmentally friendly, efficiently and sustainable on a scientific basis. Other main topics are the economic-oriented research, national and international preparation of standards as well as the representation of the interests of the combined transport at the national, intergovernmental and supranational levels. Furthermore, the SGKV advises the German Ministry of Transport (BMVI). Thereby, our office located in the Westhafen of Berlin can revert to the expertise of around eighty members of the logistics sector.

Main principles of the SGKV

As a neutral and open point of contact for the needs of the CT, the association has devoted itself to eight principles:

- Make optimum use of intermodal carriers according to strengths and weaknesses
- Make intermodal structures more transparent
- Ensure scientific objectivity to strengthen the CT
- Research and development of infrastructures for CT
- Support international cooperation and facilitate an European CT
- Promote sensible innovations for a standardised development of CT
- Provide information about CT and impart knowledge between politics, economy, and science
- Initiate purposeful and practical research for further development of the CT

Services

- Practice research, consultancy and knowledge transfer in CT
- Expertise for political representatives, especially the German Ministry of Transport (BMVI)
- Evaluation of terminal applications according to funding guidelines (DE, CH)
- Information and investigation for members
- Representation of the BIC as a National Registry Organisation for GER & AUT
- Transparency in CT, Intermodal Map, statistics
- Supporting young talents
- Contribution in standardisation committees

Contact



Studiengesellschaft für den Kombinierten Verkehr e. V. (SGKV)
Westhafenstr. 1, 13353 Berlin
☎ +49 30 20613760
📠 +49 30 206137617
✉ sgkv@sgkv.de
🌐 www.sgkv.de



Education With a Future

Brandenburg University of Applied Sciences is a young, modern institution with future-oriented, practice-related teaching and research

Brandenburg University of Applied Sciences (THB) is a modern university offering top quality research and teaching. Every day, approx. 2,600 students and 200 employees contribute to our excellent reputation under the direction of the president, Dr. Burghilde Wieneke-Toutaoui. FHB benefits from both regional and international renown. Our profile features information sciences and media, as well as technology and business.

The Economics department teaches students the basic knowledge and methodical organisational abilities required to analyse the complex problems of practical operations, design novel services, and processes and safeguard companies' permanent economic success. In addition to the core qualifications for business management and state-of-the-art IT knowledge, we also teach social competencies such as moderation leadership, the ability to work in a team and project management.

The professorship of Wolf-Christian Hildebrand focuses on logistics and supply chain management and is anchored in the Economics department. It is embedded in the themes of value creation system design, process analysis, production potential design, technology and innovation management.

The students work on logistics themes against a background of technical, process related and organisational requirements and sets of objectives, and evaluate the options for action based on their economic impact. Capturing user needs is the key boundary condition for designing efficient, environmentally friendly logistics processes.

Additional example for project themes we have implemented are the new concept development of and process design for warehouse layouts and material flow systems with RFID integration in the operational processes, analysis of alternative intermodal transport chains for inbound and outbound logistics at company locations, investigations of rail-related freight costs in opaque markets, reorganisation and optimisation of the exchange of services and creation of educational-market-related analyses and studies with a focus on logistics.

Services

- Teaching, research and consulting services
- Corporate logistics
- Traffic and transport logistics
- Analysis and concept development for intermodal transport chains and port hinterland transport
- Conducting economic feasibility studies and process cost calculation
- Preparing vocation related studies

Contact



Technische Hochschule
Brandenburg
Fachbereich Wirtschaft
Prof. Dr.-Ing. Wolf-Christian Hildebrand
Magdeburger Str. 50
14770 Brandenburg an der Havel
☎ +49 3381 355273
✉ +49 3381 355199
✉ wulf-christian.hildebrand@th-brandenburg.de
🌐 www.th-brandenburg.de

Research Group Transport Logistics at the TH Wildau

With currently about 400 parallel research projects, the south east location of Berlin Technische Hochschule Wildau (FH) is to be found among the top 5 of the research-based universities in Germany. In the third-party funding per professor, the TH is even the first place.

Among the partners of the TH Wildau include 148 facilities in 60 countries. In addition, the university in 30 networks of competence is involved. The logistics degree programme, for example, was exported to Kazakhstan, Georgia and the United Arab Emirates.

The strong focus on practice, Research Group Transport Logistics (FGVL) is a highly-demanded partner of the business. Its portfolio includes industrial projects, the development of logistics ICT systems and system-wide logistics solutions. So, the FGVL developed for example IT solutions for bus terminals, advises industrial companies in the redesign of their production logistics and supported by GIS analysis and optimisation location decisions.

The introduction of new technologies such as the world's greatest, street-legal electro truck or developing an innovative mini-harvester for the wood industry is part of the research spectrum of the group.

The FGVL is also active in the field of political consulting. This includes the participation in the European network and individual projects (mainly with Eastern and Northern Europe) and the policy consulting in the field of freight transport and logistics. Thus, the research group is an important partner in Interreg projects as Scandria, but also at the national level, it is active, such as the much-publicised study "Logistics in East Germany" for the BMWi.

Even current challenges in Europe and the world are the subject of the work: Here, the research group is active both in politics and in technology-heavy projects. So, both electric mobility solutions for freight transport in the city, as well as IT solutions for passenger transport are developed. But urban planning strategies for the sustainable design of urban space to be explored by the group.



Prof. Dr.-Ing. Herbert Sonntag,
Head of Research Group Transport Logistics

Services

- Analysis and design of logistics processes, cost-benefit considerations
- Development and implementation of electromobile solutions
- Intermodal transport: Strategic and operational development, ICT
- Development of IT solutions for passengers
- Renewable energy logistics
- GIS analysis and location optimisation
- Environmental assessment of logistics chains

Contact



Wildau, Forschungsgruppe
Verkehrslogistik
Hochschulring 1, 15745 Wildau
www.th-wildau.de/forschungsgruppen/verkehrslogistik/home.html



Fields of Research of the FGVL



Chair of Logistics at Technische Universität Berlin

Interdisciplinary connection of management and technology into a holistic view of logistics

The Logistics Department at TU Berlin represents more than 30 years of excellence in research, teaching, training and services. Its many collaborations with renowned companies enable an intensive interaction between science and practice so that results and solutions are developed that meet the needs of both parties. Closely associated with the department is the Logistics Department at the Chinese-German University College at Tongji University in Shanghai. Each year, 200 students at the TU Berlin attend courses offered by this important research and teaching institution.

The Chair of Logistics of Technische Universität Berlin teaches and investigates holistic customer-integrated logistics networks in a wide spectrum of economic, technical and information technology subjects. The field of research is application-oriented and practical. The diversity of strategic and operational topics is combined in central fields of research, such as production logistics (e.g. MX Award, <http://dev.manufacturing-excellence.de>), sustainable logistics, humanitarian logistics and transport logistics and management.

Transport logistics clearly is an important core area: evaluation of complex relationships between digital transformation, transport and sustainability is a key topic, e.g. the minimisation of increasing traffic load caused by e-commerce. In the area of e-mobility, the chair of logistics is integrated into

the EUREF-Campus and conducts research e.g. in the project Mobility2Grid (<http://mobility2grid.de/>).

The achievements in the area of transport logistics have been rewarded by the Hochschulpreis Güterverkehr und Logistik 2014 (University prize freight transport and logistics 2014) and the German High Tech Champions Award 2014 for the research project Smart e-User. In addition to core areas and individual highlights of the different departments at TU Berlin, a unique and holistic research portfolio is achieved by integrated research.

The broad range of course offerings at the Chair of Logistics provides various logistical topics. In addition to basic courses in logistics, students are able to attend several lectures facing specific logistic topics like retail logistics, production logistics, and transport logistics. A variety of teaching methods is used to ensure a first-class education in logistics including lectures, exercises, laboratory tutorials, case studies, business games, group works and field trips. Logistics is an engineering specialty in the programme of industrial engineering and management, which is the largest degree program at TU Berlin. The engineering specialty of logistics is the second strongest engineering specialty in the master programme of industrial engineering and management.



Prof. Dr.-Ing. Frank Straube, Chair of Logistics © Tristan Vankann/fotoetage

Services

- Academic education
- Scientific research

Contact



Technische Universität Berlin,
Institut für Technologie und
Management, Fachgebiet Logistik
Sekretariat H90
Straße des 17. Juni 135
10623 Berlin
☎ +49 30 31422877
☎ +49 30 31429536
✉ sekretariat@logistik.tu-berlin.de
🌐 www.logistik.tu-berlin.de





Temperature-controlled transport – Safe and sustainable

Safe transport of medicines on international routes

TRANSCO Berlin Brandenburg GmbH from Ludwigsfelde has managed the transportation of pharmaceuticals for 25 years. As a specialist for the temperature-controlled transportation of sensitive pharmaceutical goods, the company offers its logistics services all over Europe. In addition to transportation in Europe, TRANSCO also focuses on routes to Eurasia, which are a challenge with regard to customs and security. One other specialty of the logistics company is the transportation of active pharmaceutical ingredients and narcotics. TRANSCO provides both unimodal transportation by truck, as well as intermodal transportation with trucks and planes or trucks and ships. When doing so, the freight forwarder from Ludwigsfelde collaborates with qualified logistics partners worldwide in order to ensure the safety of the goods along the entire delivery chain. The transportation of sensitive freight must satisfy demanding EU standards, in particular, the Good Distribution Practice (GDP), which stipulates that transportation must take place at storage con-

ditions. TRANSCO is a pioneer on the German market in its implementation of the EU GDP directive: It is the first pharmaceutical freight forwarder in Germany to receive the coveted GDP certificate from the TÜV Rheinland technical certification association. TRANSCO works for renowned pharmaceutical manufacturers - from biochemical laboratories to SMEs and major conglomerates.

In the field of air freight transport, TRANSCO's new subsidiary, TRANSCO AIR GmbH, founded in 2016, is able to offer professional packaging solutions for the entire temperature spectrum, ranging from -196 °C (liquid nitrogen), to a controlled temperature of +35 °C.

TRANSCO AIR provides optimal technical and economical solutions for safety in transporting temperature-sensitive products by air. Personalised solutions can be developed that cater to the needs of individual temperature or transportation tasks and can be made available to customers across Europe at short notice.



Services

- Pharmaceutical transports
- Vehicle fleet
- International conveyance
- Customs clearance
- Consultancy
- Airflight
- Packaging for temperature-controlled transport

Contact



TRANSCO
Berlin Brandenburg GmbH
Brandenburgische Str. 51/53
14974 Ludwigsfelde
☎ +49 3378 519300
☎ +49 3378 5193019
✉ info-berlin@de.transco.eu
✉ air@de.transco.eu
🌐 www.transco-logistik-berlin.com
🌐 www.transco-air.com



In Berlin-Schönefeld, UNITAX runs a 20,000-m²-large logistics facility for pharmaceutical products

Logistics that work – UNITAX-Pharmalogistik

UNITAX stores and transports sensitive pharmaceutical and medical-technology products – securely, reliably and in temperature-controlled conditions

The market for pharmaceutical products is large and international. Pharmaceuticals travel long distances before they arrive at pharmacies, clinics and with patients. To ensure their quality, manufacturers, distributors and logistics service providers have to comply with strict conditions.

UNITAX-Pharmalogistik meets all the requirements for the responsible handling of medical products and drugs. In February 2015, UNITAX was the first German service provider to the pharmaceutical industry to be awarded an official GDP (Good Distribution Practice) certificate in recognition of its compliance with the strict guidelines of the EU Commission.

UNITAX is certified according to GMP (Good Manufacturing Practice) and GSP (Good Storage Practice) and complies with the specifications of the German Ordinance on the Production of Pharmaceuticals and Active Substances (AMWHV) and the German Medicines Act (AMG) for human medicine and veterinary medicines.

Founded in 1991 by André Reich, the family-owned company currently employs 135 people at its sites in Berlin-Schönefeld (headquarters), Berlin-Adlershof and Nuremberg.

Transport

UNITAX offers officially-audited, temperature-controlled transport processes (GDP). For distribution, we use more than 40 company-owned specialist pharmaceutical vehicles.

Storage

We store raw materials, medicines, water-polluting substances and narcotics in defined climate areas (ambient: 15–25 °C, cold: 2–8 °C and -20 °C) that are subject to special security measures. In Berlin, we have more than 20,000 m² and in Nuremberg more than 9,000 m² of warehouse and logistics space available.

Manufacturing

As a GMP-certified pharmaceutical logistics provider with its own manufacturing authorisation in accordance with Section 13 AMG, we accept processing work such as repackaging, labeling, banding, coding, folding and printing variable data.

Cleaning

In pharmaceutical logistics, bulk containers and pallets must meet high standards of hygiene. We ensure the cleanliness of the transport means using a modern cleaning system and documented processes.

Services

- Transport: national and international, temperature-controlled in specialist pharmaceutical vehicles
- Storage: defined climate areas, special narcotic drug warehouse
- Manufacture: Packaging, serialisation
- Cleaning of the transport means
- New: Sampling – analysis of active substances and drugs

Contact



UNITAX-Pharmalogistik GmbH
An den Gehren 1
12529 Berlin-Schönefeld
☎ +49 30 338438100
☎ +49 30 338438139
✉ info@unitax-berlin.de
🌐 www.unitax-berlin.de



Wireless Logistics Monitoring for Digital Supply Chain

Wireless, autarkic, mobile – VIRTENIO puts sensor data for process analysis, live optimisation and quality verification in the cloud

For logistics and transport applications, VIRTENIO uses secure, wireless technology to put sensor data in the cloud. VIRTENIO technology transmits relevant information from poorly accessible locations or mobile objects live and encrypted to the web, making it available from anywhere in the world via app or browser. With VIRTENIO technology, customers can detect damage, boost quality, reduce costs and improve process understanding – 24/7!

To do this, VIRTENIO offers the Preon-Solutions toolkit for wireless remote monitoring. It enables customers to combine the components required for their own modules and needs with a simple and compatible complete solution. In addition to wireless sensor devices (PreonCubes), the toolkit contains mobile radio and satellite gateways (PreonGates). Additionally, VIRTENIO also provides live web portal, email alerts and reports in the form of the PreonLive supplementary services.

With VIRTENIO technology, valuable cargo, sensitive products and shipments requiring verification can be monitored with regard to environmental conditions such as temperature, humidity, illumination level, CO₂ concentration or air pressure. The products can also capture information on location, GPS position, and shocks in real time. This makes

it possible to allocate damage responsibility, verify quality conditions or exertion of influence during transport.

VIRTENIO was founded in 2010 as a spin-off of Technische Universität Berlin. For its products, the company relies on profound know-how resulting from many years of research and development experience. As well as being a young, award winning ICT company, VIRTENIO is a member of associations such as the AMA and BITKOM, is supported by Global Supply Chain Network (BVL), participates in a joint research project and is active in a variety of task forces.

VIRTENIO is particularly interested in innovative partners with whom it can collaborate on specific projects and use cases, as well as technology-oriented, start-up-savvy minds for actively creating further growth together.

Services

- Digitising of supply chain
- Automatic, wireless remote monitoring for logistics and transport applications
- 24/7 logging of temperature, relative humidity and illumination intensity, CO₂ concentration, air pressure, location, GPS position and shocks
- Multi-hop radio communication between measuring devices
- OEM radio components for system integrators
- Development and customisation services

Contact



VIRTENIO GmbH
Bismarckstr. 10-12, 10625 Berlin
☎ +49 30 577088520
📠 +49 30 577088529
✉ info@virtenio.de
🌐 www.virtenio.de



Source: thinkstock.de

Consulting for Your Success

Wagener & Herbst provides consulting targeted to increasing efficiency, activating potential and developing sustainable solutions

At Wagener & Herbst, our expert consultants use their know-how to develop customised solutions to operational efficiency and logistics problems for our customers. We adapt the proven tools we use to suit our customers' unique situations.

As a consultant for logistics, transport, and services, we are successful in the following areas of expertise:

LOGISTICS AND TRANSPORT CONCEPTS

- Optimisation of procurement, warehousing and distribution logistics
- Multi-modal transport chain design
- Site development concepts and location marketing
- Microeconomic and macroeconomic assessment of infrastructure investments in Germany and abroad

ORGANISATIONAL AND PERSONNEL DEVELOPMENT

- Development and implementation of corporate strategies
- Feasibility studies and corporate/business plans
- Analysis and optimisation of expansion and process organisation
- Reorganisation and cost reduction

- Development of customer-oriented and process-oriented organisational forms
- Programmes for increased earnings
- In-house personnel development
- Project-related training sessions

MANAGEMENT SYSTEMS

- Integrated management systems (quality, occupational health and safety and environmental protection)
- Support during concept development and implementation of TQM as per the EQA model
- Set up and implementation of quality management systems in compliance with ISO 9001 DIN EN and environmental management systems as per DIN EN ISO 14001
- Supervision in the role of external quality management representative
- Service quality in passenger transport in compliance with DIN EN 13816

OUR CONSULTING CONCEPT

Our consulting concept is oriented to the criteria for an excellent company. It features an integrated, implementation-oriented approach:

Objective identification → Analysis → Solution variants → Preferred variant → Implementation

Services

- Logistics and transport concepts
- Organisational and personnel development
- Management systems

Contact

WAGENER & HERBST
Management Consultants GmbH

Wagener & Herbst Management
Consultants GmbH
Persiuspeicher
Zeppelinstr. 136
14471 Potsdam
☎ +49 331 27504-0
✉ info@wagener-herbst.com
🌐 www.wagener-herbst.com

**For high-flyers with
their sights set on
the stars.**

www.mobility-bb.com

THE GERMAN CAPITAL REGION
excellence in mobility



Aerospace

The capital region: competence center for aviation, aerospace and drones

The capital region is Germany's third-largest aerospace competence center. Here, the technical excellence extends to more than just the traditional area of aviation that was founded by Otto Lilienthal over 120 years ago, but also to aerospace and the relatively recent discipline of drone technologies.

Leading European location in areas of the aviation industry

Brandenburg especially is home to major players in the aviation industry. In this respect, the region is particularly specialised in the fields of:

- engine development and manufacturing,
- light aircraft construction, and
- aircraft maintenance and repair.

The region is among Europe's leading locations in the development and manufacture of engines. Prime contractors that shape the market like Rolls-Royce Germany and MTU Maintenance, as well as Lufthansa Bombardier Aviation Services with its focus on the maintenance and refurbishment of business jets, are situated here.

The market movers in the Berlin aviation sector primarily possess expertise in:

- the use of renewable energies for air transport,
- software development for aircraft and aviation infrastructures,
- the development and production of electroacoustic components used in aviation.

Numerous small to medium-sized enterprises (e.g. aireg - Aviation Initiative for Renewable Energy in Germany e. V., PACE Aerospace Engineering and Information Technology GmbH, Holmco Holmberg GmbH) and prestigious research and education institutions (e.g. TU Berlin) are represented here.

Regional drone technologies are taking the market by storm

Unmanned aerial systems for civilian purposes now complement the more established activities, and this market segment is characterised by a wide, dynamic range of applications and services. Over 60 actors in the areas of research (e.g. TH Wildau, BTU Cottbus-Senftenberg, the European Aviation Security Center), development (e.g. sitebots GmbH, service-drone.de GmbH), and application



(e.g. Airteam, FLIGHTCOPTER Flying Camera Systems GmbH, 360° inspections GmbH) have contributed to the capital region becoming one of the leading locations for unmanned aviation.

Future vision: Berliners fly to the moon

The segment of microsats has traditionally shaped the regional aerospace sector. Three regional players manufacture complete small satellites: Astro-Feinwerktechnik GmbH, Berlin Space Technologies and TU Berlin. TU Berlin has more satellites in orbit than any other university in the world.

A growing number of Berlin-based start-ups are conquering this young market under the heading 'New Space'. For instance, Part-Time Scientists in co-operation with AUDI plan to send two rovers to the moon to visit the landing site of Apollo 17 in 2018 alone.

Over 30 companies, training centres (e.g. beSpace GmbH) and research centres (e.g. DLR) at home in the capital region are reaching for the stars. Their diverse expertise and specialisations create an integral, interdisciplinary, and regional competence center for aerospace technologies and applications.

Berlin-Brandenburg Aerospace Alliance: A powerful aviation and aerospace network in the region

On a regional level, the industry network BBAA (Berlin-Brandenburg Aerospace Allianz e. V.) has joined with cluster management to continue strengthening the region in selected areas of aviation and aerospace. Seeking to bolster competitiveness in the various areas within green aviation, BBAA coordinates and supports established R&D cooperation specifically in the fields of more energy-efficient aircraft, fuel-efficient propulsion systems, and the use of lightweight materials.

YOUR PARTNER FOR SERVICES WITH DRONES

“A maximum of cost efficiency combined with high security and high resolution images”

360° inspections GmbH provides planned and event-driven inspections by multicopters, specific camera technologies and sensors for all types of buildings such as residential and industrial buildings, bridges, towers, chimneys, masts, dams, etc.

The service portfolio also includes the inspection of wind power plants (onshore/offshore) and the inspection of power lines. In addition, 360° inspections offer not only project planning, tracking, and post-processing of the visual material but also expert reports and the implementation of maintenance plans.

Stefan Opitz, managing director: “Our customers pay high amounts for the maintenance of their property in order to make sure that the traffic safety is maintained and energy losses are minimised. Conventional inspection methods are in most cases time- and cost-intensive. With the help of multicopters, inspections can be carried out faster, more securely, with less effort, and also with less inconvenience. The result is that our service provides maximum cost efficiency combined with high security and high resolution images.”

Benefits of inspections with UAS:

- **Faster:** reduction of inspection time by 50% to 70% when compared to standard procedures
- **Safer:** use of drones in danger areas instead of staff
- **Minimised efforts:** reduction of scaffolding, lifting platforms or rope access
- **Minimised disturbance:** inspections during operation, less breakdown time
- **Better:** high-resolution photo and video recording, for live-view as well as saved files – even the smallest damages can be detected
- **Documented:** experts will be able to work with a comprehensive set of information regarding the condition of the building: live on-site or anytime later at any place off-site
- **Flexible:** short lead times, fast moving on site
- **Everywhere:** regardless of topology and height
- **Conclusion:** maximum cost efficiency combined with highest safety and precise images/data



Stefan Opitz, managing director

Services

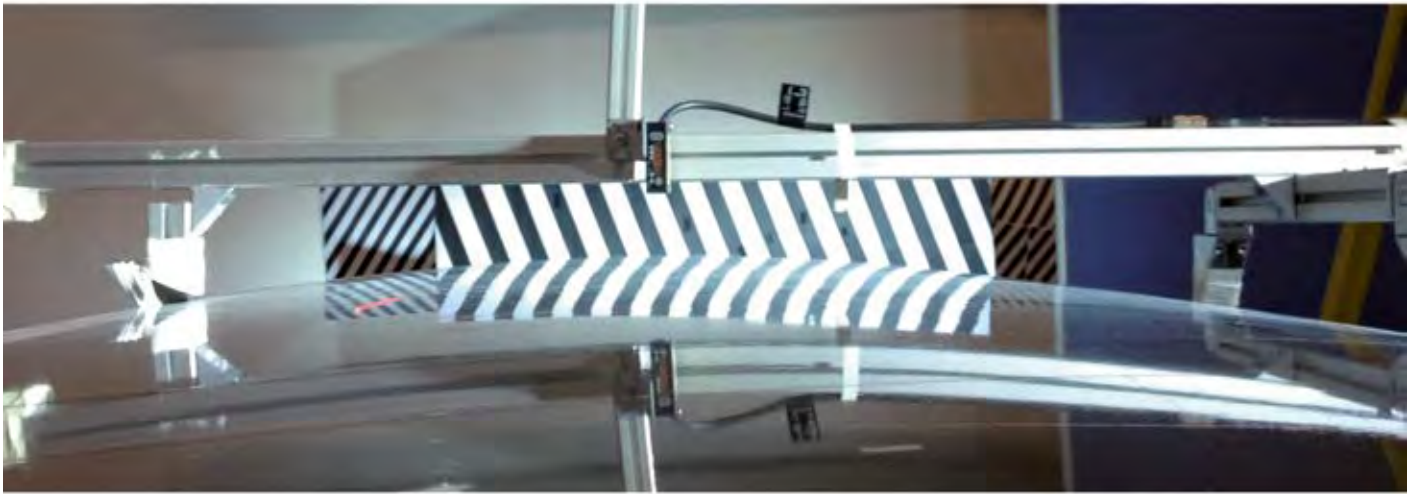
- Inspection of buildings and structures
- Long-term condition monitoring of buildings etc.
- Power plant inspections
- Inspection of chemical and other industrial facilities
- Inspection of wind power parks (onshore/offshore)
- Inspection of overhead power lines
- Several other inspections with drones
- Issue of expert reports, and determination of reconditioning plans
- Autonomous indoor flights of chimneys, flue gas ducts, tunnels etc.

Contact



360° inspections GmbH
Garzauer Chaussee 1a
15344 Strausberg
☎ +49 3341 3088579
☎ +49 3341 3088580
✉ info@360inspections.de
🌐 www.360inspections.de





Deflectometry

Optical measurement solutions and illumination systems

Demanding requirements for materials and their surfaces exist in a wide range of fields, such as the aviation or automotive industries, but the data/know-how/information regarding how materials change over time when in use (their "life cycle") are crucial factors for functionality.

5micron GmbH is a young company, which has been located in Berlin-Adlershof since January 2015. The 7 team members develop optical measuring methods and systems, and currently focuses mainly on unusual fields of application for:

- Highly precise measurements on large or faraway objects
- Geometric measurement of inaccessible surfaces
- Geometric measurements in harsh environments

5micron GmbH's current portfolio is made up of two business segments: 1. Surface measurement technology, and 2. Special illumination systems. The business segment *surface measurement technology* is concerned primarily with development projects for the aviation industry, which are based on optical methods. The methods are:

- Deflectometry (geometric measurements of dimensions such as length, torsion, roughness etc.). Resolution: 50 µm
- Shadow casting (defects inspection (OK/NOK decisions)). Resolution: 20 µm
- Pattern projection (analysis of surface structure/topography). Resolution: 5 µm

One example of a system solution is the measurement of the wing surfaces of an aircraft during flight, in particular the monitoring of changes for shape, dimensions and material defects with a precision of a few micrometres. One other example of a miniaturized measurement system was developed for an engine manufacturer in which measurement technology for the minimally invasive inspection of engines with the use of an endoscope was developed, with a resolution of 5 µm.

In the business segment *special illumination systems*, the feasibility of data transmission via pulses of light was demonstrated as part of an internal project. This enables communication and interaction between any kind of object or vehicle. Particularly in automatically and autonomously driven vehicles in road traffic, it is crucial that the networks between vehicles as well as the infrastructure are resilient (V2X).

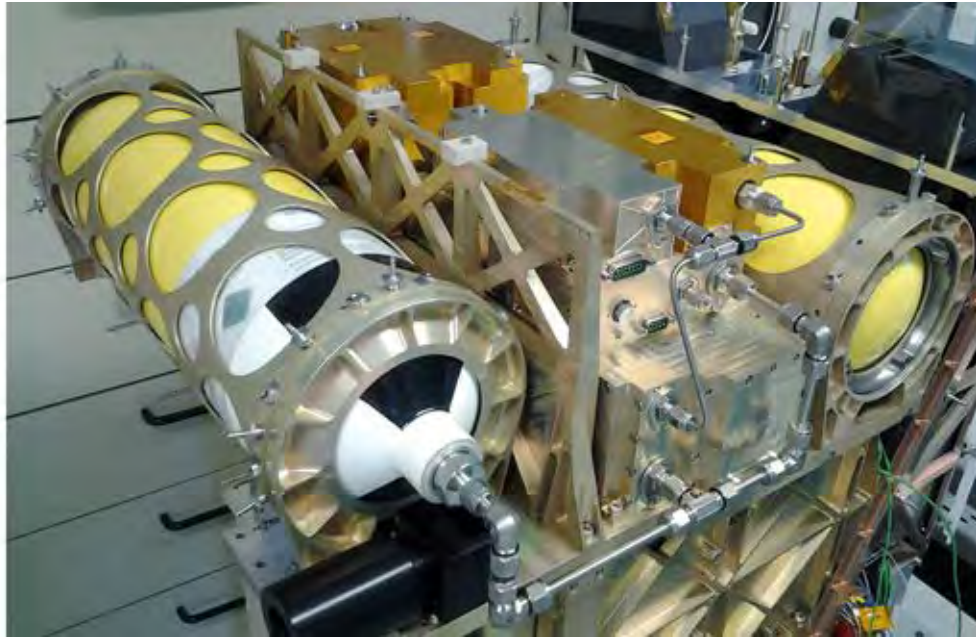
Services

- Measurement system solutions for the following applications: High speed data acquisition and image analysis (optimised algorithms); Contactless in the form of a mobile or stationary measurement system (also miniaturised/for adverse lighting conditions where necessary); Online evaluation can be used on a wide range of surfaces and materials/hardened sensory equipment and hardware for adverse environmental conditions
- Special illumination systems
- Communication via light pulses (V2X; IoT)

Contact



5micron GmbH
Rudower Chaussee 29, 12489 Berlin
☎ +49 30 565908850
✉ info@5micron.de
🌐 www.5micron.de



MICROJET 2000: Modular Propulsion System for Satellites

AI: Aerospace Innovation GmbH

Range of Products and Services

AI: Aerospace Innovation GmbH in Berlin develops special high-technology solutions and applications for the national and European aerospace industry and related agencies – DLR and ESA. Due to a long-standing experience in research and education along with extensive and detailed experimental work, the company is characterised by a unique technical know-how in the area of development, qualification and operation of aerospace systems. AI: Aerospace Innovation was launched in 2007 as an evolution of the AI: Aerospace Institute that was founded in May 2000 within the frame of the Technology Transfer Program at Berlin University of Technology (TU Berlin).

The company presently focuses on development, qualification and manufacturing of customised propulsion solutions (e.g. MICROJET and AQUAJET propulsion systems) for terrestrial and orbital operation. The range of products includes launch vehicle and propulsion subsystem and system engineering, feasibility investigations for new technologies and systems including development and manufacturing of demonstrators and prototypes, numerical simulations of complex dynamic processes, e.g. combustion in solid and hybrid rocket motors, feasibility investigations for new technologies and systems as well as system, trend and cost analyses.

The focus of AI: Aerospace Innovation activities are placed to environmentally friendly and cost-effective satellite and rocket propulsion systems for earth and orbital applications. Currently, electro-thermal, cold gas, solid and hybrid propulsion systems are under development. Until now, the team of AI: Aerospace Innovation has developed, qualified and successfully operated more than twenty-five propulsion systems for various terrestrial and aerospace applications.



MICROJET 2000 Propulsion System Implementation on BIROS Satellite (image credit: DLR)

Services

- Development, manufacturing and qualification of demonstrators, prototypes, and products of customised propulsion solutions for terrestrial and orbital operation
- CAD- and FEM-based engineering according to ISO/ECSS
- Numerical simulations of complex dynamic processes, e.g. combustion in solid and hybrid rocket motors
- System, trend and cost analyses

Contact



AI: Aerospace Innovation GmbH
Winterfeldtstr. 97, 10777 Berlin
☎ +49 30 31017881
☎ +49 30 31017880
✉ info@aerospace-innovation.com
🌐 www.aerospace-innovation.com



AIRTEAM drones-as-a-service

What does AIRTEAM do?

AIRTEAM is a drone-as-a-service provider, who creates stunning aerial photos, videos, 360°, 3D models and inspections. We offer aerial drone services all over Germany catering for customers in real estate, energy, construction and TV & events. What makes AIRTEAM unique is our own Preview software. Directly after we receive a customer request we send a free 3D visualisation of the requested drone flight to our customer. In this way, our customers (1) know exactly what the drone pilot will shoot, (2) our pilots know exactly what shots to take and (3) we can speed up the process from order to delivery by 2x in comparison to other drone services.



What is the idea behind AIRTEAM?

There are many talented drone pilots all over Germany that have great piloting and camera skills, but sometimes lack the passion and skills for professional marketing and sales. We at AIRTEAM are experts in finding customers that need aerial imagery. We then hand the drone flying to our expert pilots for fulfilment, creating a Win-Win-Win situation for pilots, customers, and for AIRTEAM.

Who are the people behind AIRTEAM?

Thomas Gorski (Founder & Team Captain) combines 10 years of marketing, sales and entrepreneurial experience in large corporations and start-ups. Gautier Chapuis (Founder & Engineering Lead) combines 15 years of aerospace and engineering experience in large corporations.

Services

- Photos
- Videos
- Panorama
- 360°-Videos
- Inspections
- Virtual tours
- 3D model
- Thermal imaging

Contact



AIRTEAM
 Rigaer Str. 67, 10247 Berlin
 ☎ +49 160 96810041
 ✉ info@airteam.camera
 🌐 www.airteam.camera



AQUILA A211 – perfect training and cross country aircraft

HAND MADE in GERMANY

AQUILA Aviation built the innovative VLA aircraft AQUILA A211

AQUILA Aviation is a growing medium-sized company located at Schönhagen airfield. We offer perfection down to the last detail, top class workmanship and are extremely proud of the label "Made in Germany". At our manufacturing facility in the south of Berlin, we are currently producing our latest highlight: the AQUILA A211, a modern, innovative and certified VLA aircraft. Our AQUILA A211 is built of fibre composite materials and consists of approximately 300 separate CFK/GFK components and in cooperation with our partners and suppliers, we command a strong, motivated and reliable network.

The A211 is designed for pilot training as well as a cost-effective cruising aircraft for private pilots. Our A211 is currently approved in more than 10 countries, including Australia, Norway, Great Britain, France, Austria and Switzerland and is favourite with clubs, flying schools and private pilots. After the approval by the EASA, the A210 & A211 can be operated under Day-VFR-conditions and under Night-VFR-conditions.

Furthermore, we are a centre of excellence for fibre composite materials and provide the full range of maintenance, repairs and modifications

on your aircraft made of fibre composite of up to 2 tons MTOW as well as sailplanes and motorgliders plus ROTAX and CAMO-Service.

In our own paint shop, we offer professional painting work in high quality. Whether you want a "Makeover", a complete repainting or as part of the Maintenance, we give a whole new shine.

In January 2016 BPlas (Bursa Plastic, Metal, Construction, Energy, Mining, Geothermal, Tourism and Agriculture Industry and Trade Corp.) from Turkish industrial hub Bursa, which operates mainly in the area of plastic injection molding, acquired AQUILA Aviation. Thanks to the state-of-the-art technology employed by BPlas along with its expertise in the fields of construction, development, thermoplastic molding, tool manufacture and surface coating, BPlas is one of Turkey's largest suppliers of automotive parts. The company can look back on a 150-year long tradition of industrial manufacturing. Splendid connections with the Turkish aerospace industry add to BPlas' activities in the automotive supplies field.

Services

- Development and manufacturer of the AQUILA A210 & A211
- Maintenance/Repairs for AQUILA A210 & A211
- Maintenance/Repairs for gliders, motor gliders, and microlight airplanes in composite fibre technology (CFT), repairing of components in CFT
- Engineering Services
- Mould construction: manufacturing of CNC-milled moulds for fibre composite components
- CAMO-Service

Contact



AQUILA Aviation International GmbH

OT Schönhagen – Flugplatz
14959 Trebbin

☎ +49 33731 7070

☎ +49 33731 70711

✉ kontakt@aquila-aviation.de

🌐 www.aquila-aviation.de



From concept to final product

Astro- und Feinwerktechnik Adlershof GmbH offers its customers an integrated system solution

We are a company with over 20 years' experience developing, manufacturing, and testing highly-reliable precision-engineered components, sub-assemblies, devices, and instruments. The origin of Astro- und Feinwerktechnik Adlershof GmbH is aviation and aerospace, from where the company has become a reliable and recognised partner for industry and science.

We offer development and design services from concept design to overall production documentation. Using state-of-the-art machines, we produce one-off and volume items with maximum precision and short lead times. For CNC products, we use an integrated CAD/CAM solution, from simple 2½-axis machining to 5-axis machining centers. We have extensive experience in processing of special materials such as titanium alloys, stainless steel, inconel, invar, kovar, structural materials (CFK, GFK) and plastics (PEEK, torlon).

The use of ultra-modern tactile and optical 3-coordinate measuring machines allows us to measure components with a volume of up to 700×1,000×660 mm, with an accuracy of up to 1.5+3*L/1000 µm.

In terms of environmental simulation and testing, Astro- und Feinwerktechnik Adlershof GmbH has many years' experience of performing standard tests and of test engineering, especially for light-weight, aviation, and aerospace components. In our own test lab, our company specialists not only carry out mechanical tests – such as vibration, shock, pyroshock, and centre of gravity – but also advise on the creation of test plans and definition of test procedures. Our test specialists actively collaborate with various environmental-specific bodies and play a crucial role in establishing new test processes and procedures.

As one of Europe's largest science and technology parks, the Berlin-Adlershof site is an important factor for the on-going development of Astro- und Feinwerktechnik Adlershof GmbH. Collaboration with the high-tech companies based there, as well as the high-quality, scientific environment, are two of the main reasons for the successful implementation of complex projects in which the company is involved.

Astro- und Feinwerktechnik Adlershof GmbH is certified according to DIN EN ISO 9001:2008 and DIN EN 9100:2010.



Attitude Control System - test stand for small satellites

Services

- Engineering services and design of fine mechanical and photonic equipment and components
- Manufacturing services on conventional production facilities and modern CNC machines
- Environmental simulation (vibration, shock, pyroshock, thermal vacuum tests, thermal tests etc.)
- Focus on aerospace components, mechanisms, attitude control of small satellites as well as the development and design of satellite busses



Work in the clean room

Contact



Astro- und Feinwerktechnik
Adlershof GmbH
Albert-Einstein-Str. 12, 12489 Berlin
☎ +49 30 63921000
📠 +49 30 63921002
✉ info@astrofein.com
🌐 www.astrofein.com



The BR725 is the latest member of the successful BR700 family (© Rolls-Royce plc)

Combined expertise

BBAА networks the aviation and aerospace businesses in and around the capital

The Berlin-Brandenburg Aerospace Alliance is an economic association of the aviation and aerospace industry in and around the capital. Its approximately 100 members – from small, highly specialised operators to global corporations, research establishments, and universities – represent the majority of the 17,000 people who work in the aviation and aerospace sector in Berlin and Brandenburg.

In 1998, eleven founding members from the region's businesses and economic development agencies established BBAA in order to strengthen the regional aviation and aerospace industry. Since then, it has been the aim and task of BBAA to actively network stakeholders from business, science and politics and support the further development of the aviation and aerospace sector in Berlin and Brandenburg by selective measures. The focus is on expanding and maintaining the network of regional players, promoting sites, as well as initiating and supporting strategic partnerships and innovation projects. BBAA is therefore involved in the national Supply Chain Excellence Initiative, which assists and supports companies in the aviation supply industry embarking on structural change (www.german-aerospace.de).

BBAA has an extensive network of contacts among businesses, scientific establishments, and ministries and authorities both at home and abroad. The organisation is an Associate Member of the BDLI and involved with the European Aerospace Cluster Partnership (EACP). BBAA uses its network of contacts to increase the visibility of the region's stakeholders beyond the limits of Berlin and Brandenburg, and improve their international competitiveness.

The association therefore organises expert forums and conferences, and is in regular contact with political decision-makers at national, regional, and municipal levels.

In addition, BBAA organises various events, such as the annual Aviation and Aerospace Day and the granting of the Lilienthal Award, thereby creating effective platforms for dialog between business people, scientists, and politicians. BBAA also offers its members and partners the opportunity to present innovative developments, products and services at major trade fairs and industry exhibitions, such as ILA.

Services

- Promoting Berlin and Brandenburg as an aviation and aerospace location
- Initiating R&D projects to improve the competitiveness of its member companies
- Helping to exploit new sales markets
- Targeted promotion of key topics: engines/testing/simulation, general aviation/business aviation, UAV/ RPAS and small satellites/aerospace

Contact



Berlin Brandenburg Aerospace Allianz e.V. (BBAA)
 Freiheitstr. 120, Aufgang C
 15745 Wildau
 ☎ +49 3375 9218421
 ✉ office@bbaa.de
 🌐 www.bbaa.de



Optical Systems for Use in Space

Berliner Glas Is Your Partner for Space Qualified and Certified Technologies and Solutions

The Berliner Glas Group is one of the world's leading providers of optical key components, assemblies, and systems as well as high-quality refined technical glass. As classic OEM partners the Berliner Glas Group companies develop and manufacture optical system solutions for customers in various market segments who are a cut above the competition thanks to the quality and functionality of their products.

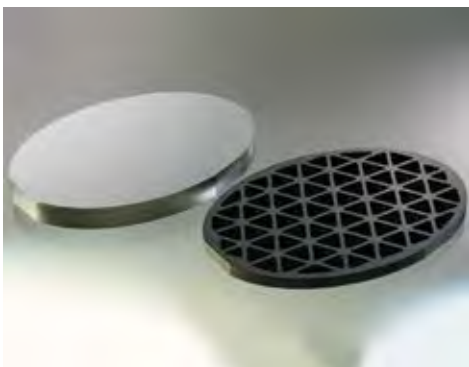
Berliner Glas has specialized in selected markets. Due to the understanding of the topics, trends and drivers in the respective market Berliner Glas

helps its customers to accelerate their innovation and be first to market.

Berliner Glas at the Berlin location has placed one focus of its business activities on the market segment space. With an experienced team of engineers and a comprehensive production competence Berliner Glas develops, manufactures, and assembles high-end components, modules, and systems that satisfy the strict requirements for use in space. This includes precision optics used to monitor the environment from space, as well as optical modules used for laser communication in space.

In order to guarantee the necessary, specific properties, all optical systems are tested and qualified for use in space by our specialists. To do so Berliner Glas has first-class, and in some cases even product-specific, metrology.

Since 2013 the optical components, assemblies, and systems made by Berliner Glas have been successfully used within various missions in space, and have shown an excellent performance. The Berliner Glas Group is continuously expanding its activities within the space industry and – in cooperation with its customers – is working on designing and manufacturing the products of the future.



Closed light-weight structures for mirrors used in space

Services

- Optical systems for laser communication in space
- High-performance optics to monitor the Earth and the environment
- High-performance mirrors for use in space
- Earthbound astronomical applications
- Optical measurement equipment for space applications

Contact



Berliner Glas KGaA
Herbert Kubatz GmbH & Co.
Waldkraiburger Str. 5, 12347 Berlin
☎ +49 30 609050
☎ +49 30 60905100
✉ space@berlinerglas.de
🌐 www.berlinerglas.de/space



Digital Economy

IT solutions for integrated business processes

The changes currently marching forward in the industry are often described using the buzzword 'digitalisation'. After the hype surrounding the Internet of Things, which is supposed to be providing us with intelligent cyber systems, the foundations are now being laid in the field of data processing for interlinking and automating as many business processes as possible. Harmonizing business processes, merging datasets, incorporating the most up-to-date technology and integrating IT systems are as much a part of this field as evaluating the huge datasets available today in order to optimize business-specific processes.

This development is taking place throughout all industries. Universal digitalisation helps to improve

production processes and make them more transparent, logistics is becoming more efficient, more flexible, and cheaper, market potential can be recognized more quickly, and customers and delivery services are better involved in the processes.

What's more: Digitalisation doesn't only affect large organisations and companies – SMEs and workshops can also enjoy the sustained benefits offered by the possibilities of today. Many of the processes within your organisation or company can be simplified or even completely redesigned based on new technical and technological developments.

Just one example: the much-discussed use of drones for inspection or surveys offers a completely new set of possibilities for obtaining high-quality data: all processes are changing! Do you need new software? Is cloud computing right for you? Do you want to integrate mobile solutions? How do you evaluate large datasets? The answers to all these questions have been explored for many years within the field of "Industrial Information Technology", which encompasses both research and application-oriented projects within businesses.

Talk to us!



Services

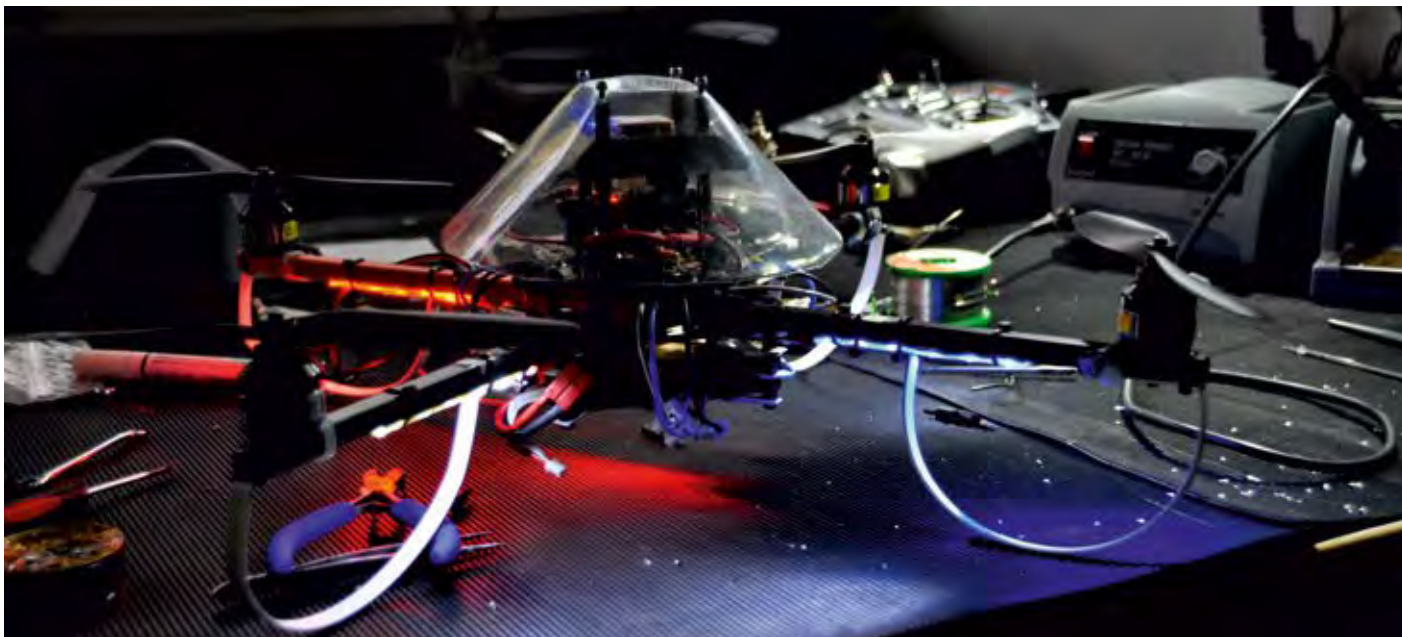
- Documentation and analysis of your business processes
- Analysis of market potential
- Modeling of digitalised processes
- Conceptualisation of solutions
- Realisation of concepts
- Support in realisation of concepts

Contact



Brandenburgische Technische Universität Cottbus-Senftenberg,
Fakultät 3, Lehrstuhl Industrielle Informationstechnik
Platz der Deutschen Einheit 1
03046 Cottbus

☎ +49 355 694581
📠 +49 355 694800
✉ meinberg@b-tu.de
🌐 www.b-tu.de/fg-iit



Drones

Innovations for economic civil use

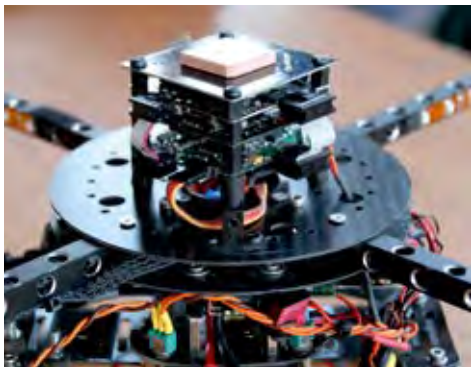
The use of unmanned aircraft systems now represents a large and growing market. Many possible applications have already been presented numerous times, as many scenarios are covered by the wishful thought: "that could be done using drones." As great as the expectations for these high-tech devices are, so many initial tasks have already been solved with their help. However, significant technological and technical efforts must still be made in order to turn these fascinating unmanned aircraft systems into economically useful tools for everyday business.

The association CURPAS e.V., which is headquartered in the Aerospace Technology Centre

Schönefelder Kreuz in Wildau, was founded in this context, with significant support from the state of Brandenburg. "CURPAS" stands for "Civil Use of Remotely Piloted Aircraft Systems" – which clearly defines our goals.

We initiate innovations for the growing market of drone applications. We make contributions to political issues on the civil use of drones. We contribute to the social discussion on the civil use of drones. CURPAS e.V. makes decisive contributions to support the projected development of the market – also via continued professionalisation along the entire value chain. We use our events to provide information on current research & development topics in the field of unmanned aircraft systems and their use in various application fields.

Our members currently include drone suppliers and manufacturers, scientific institutes, service providers, as well as – primarily, as was our intention – system users and users of the data provided by drones. CURPAS is actively involved in association networks in Germany and at the EU level.



Services

- We bring together companies along the entire value chain
- We initiate partnerships – projects, research, exchanges
- We connect solution partners – for new technologies and for their application
- We make contributions to standardisation – for your competitiveness
- We provide comprehensive information – technical, technological and general conditions
- Become a member!

Contact



CURPAS e.V. (CIVIL USE OF REMOTELY PILOTED AIRCRAFT SYSTEMS)

Located at Zentrum für Luft- und Raumfahrt Schönefelder Kreuz c/o Wirtschaftsförderungsgesellschaft Dahme-Spreewald mbH

Freiheitstr. 120, 15745 Wildau

☎ +49 173 2604887

✉ meinberg@curpas.de

🌐 www.curpas.de



Research centre for aviation security

Think tank develops and tests new ideas on aviation security for tomorrow

Aviation security – the defense against terrorist and criminal threats in accordance with international regulations. For passengers, this means primarily an impairment of the travel experience for airport operators primarily an organisational challenge: security checks take time, space and money. The EASC operates security research and cooperates with partners from industry and science. There are developing solutions that increase the effectiveness while maintaining the necessary security standards while helping reduce the cost of these processes.

SECURITY INCREASE

As an example, the concept of the gate-of-Trust. The centerpiece is the equalisation of control processes using general current high-performance sensors for early detection of explosive and hazardous materials. It examines how future sensor networks can be integrated into an airport environment, and whether the information obtained qualify for a specific control.

RESEARCH LOCATION SCHÖNHAGEN

The EASC is engaged in the research and development of security processes and technologies, including video analysis method for automatically tracking suspicious persons, but also in the practical assessment of the benefits and risks

of unmanned aerial systems. As a recognised research centre, Schönhagen Airport offers the distinct advantage of a real operating infrastructure. This is used without those restrictions that would otherwise result from the usual security requirements for airports.

The EASC remains committed to the safe integration of drones in the airspace and in the exploration of the dangers, which arise, from the rapid and mass distribution and the misuse of this technology. This includes evaluation and testing of protective technologies and concepts, and publications to raise awareness of user groups and the public. In this context, the EASC is also an active member of relevant associations and in DIN Standardisation Committee to unmanned aviation equipment.

Services

- Systematic dissemination of information on the results achieved
- Analysis and assessment of opportunities and risks of new processes in enhancing aviation security
- Exchange of information with experts and institutions at home and abroad as well as the organisation of events, conferences, symposia, workshops, and training

Contact



EASC European Aviation Security Center e.V.

Flugplatz, Haus 2
14959 Trebbin-Schönhagen

☎ +49 33731 289898

☎ +49 30 62200068

✉ info@easc-ev.org

🌐 www.easc-ev.org



FLIGHTCOPTER

Flying Camera Systems GmbH

Aerial services for inspection, thermography, and agriculture using remote-controlled UAVs

FLIGHTCOPTER Flying Camera Systems GmbH is a service provider in the field of UAVs with over 10 years of experience in UAV solutions.

For many years now, we have been active in surveying and documentation, inspections, and in the agriculture industry by means remote-controlled hover platforms and aircrafts.

In the area of surveying and documenting, we use our aerial images to create point clouds, grid models, 3-D models of objects and areas (which can later be used in CAD or 3D-printing tools) and to document construction progress or the starting state of an area before construction is begun.

Furthermore, we are a reliable partner when it comes to documenting environmental damage or natural disasters. Here, we can document the extent of the damage, for example, or collect evidence.

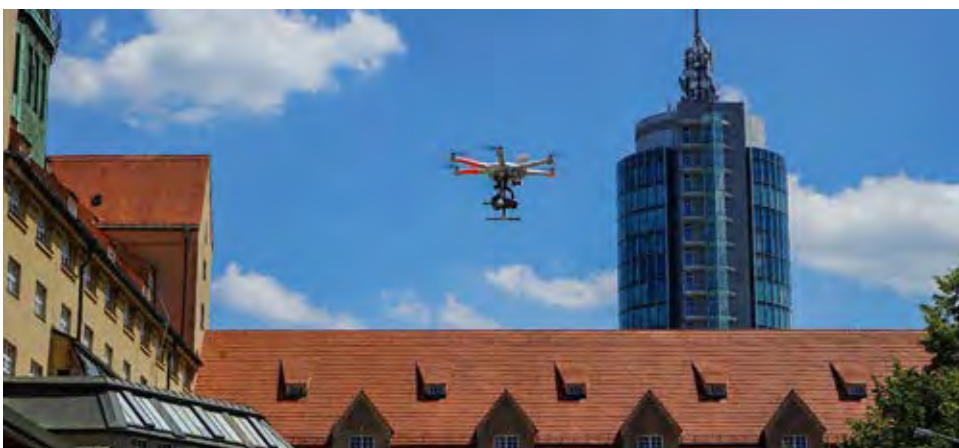
In the area of inspections, we can inspect onshore and offshore wind energy facilities for damage, wear, or malfunctions, can fly inside and outside of smokestacks and boilers for maintenance purposes and can inspect photovoltaic facilities for potential damage using a thermal imaging camera.

In terms of environmental and species conservation, we conduct surveillance flights to assess the condition of forest areas, monitor farmland and forests, and perform preventative flights using a thermal imaging camera.

With the help of the sensors we have developed, we are now also in a position to chart ground water retention from above, for example. The goal here is to capture geo-referenced measuring points for surface temperature of vegetation in agricultural spaces. By interpolating these values, they can be used as layer of information for agriculture.

Many of the visual line of sight inspection flights can be carried out autonomously and in a way that is tailored to the task at hand and can be reproduced or repeated at any time.

As soon as it is permitted by the legal aviation authorities on unmanned aircraft, the flights offered will also be expanded to include services beyond visual line of sight operations.



Services

- Flights using remote-controlled hover platforms and aircraft
- Inspection of onshore and offshore wind turbines
- Charting ground water retention using our own sensor board
- Survey flights
- Documenting damages and collecting evidence
- Locating compromised dykes using our own sensor board
- Boiler inspection flights (interior/exterior) for maintenance purposes
- Inspection of PV-sites through thermal cameras

Contact



FLIGHTCOPTER
Flying Camera Systems GmbH
Grenzweg 8
16356 Ahrensfelde-Elisenau
☎ +49 3338 7070000
✉ info@flightcopter.tv
🌐 www.flightcopter.com



Air Cargo for the World

The capital region's airports are part of a perfect network – the cargo volume is growing faster than the Germany-wide average

With almost 33 million passengers per year, Berlin is the third-largest airport location in Germany. Last year, the region topped all of its transport records. From the previous year, air transport in Berlin-Brandenburg grew by 11.4 percent. The trend is above the average for all international airports in Germany for a long time in a row (3.8 % 2015, Source: ADV – German Airport Association).

Berlin-Brandenburg has good connections to the rest of Germany, Europe and the world. On current summer flight schedule, 84 airlines are flying to 178 destinations in 57 countries. Schönefeld and Tegel ensure the capital region's worldwide mobility. To create the capacity required for the future, the Berlin Brandenburg Airport is being built on a site in Schönefeld.

Growth on long-haul routes

In an era of globalisation, the quick transport of people and goods to the entire world is a key competitive factor. In recent years, air cargo has become increasingly vital to Berlin. In 2016, approximately 93,000 tonnes of air freight were handled at the freight depot at Berlin Airport (+7%). Half of the origin and destination countries were in Asia and a quarter were in North America.

The amount of freight loaded onto aircraft totalled around 47,000 tonnes, and was therefore 8.7 per cent higher than in the previous year.

Today, almost 2/3 of the belly cargo is loaded onto long-haul flights. New York, Newark, Chicago, Beijing, Ulan Bator, Doha, Abu Dhabi – a total of seven long-haul destinations are currently on the schedule. Miami will be flown year around from winter schedule 2016, completed by San Francisco and Los Angeles from May 2017.

Advantage in business with Asia

The capital region is well on its way to becoming one of Europe's key air cargo locations. Above all, there is growth potential for air cargo in the long haul and niche markets. Within a catchment area of a three-hour car drive around Berlin, around 100,000 tons of air cargo export are transported to the European airline hubs annually – mostly by truck. These routes hold potential for additional long-haul flights originating in Berlin. Air cargo can be offered to many Asian destinations more quickly and cost-efficiently via Berlin than from the European airports located further to the west.

<http://cargo.berlin-airport.de>

Contact

FBB FLUGHAFEN
BERLIN
BRANDENBURG

Flughafen
Berlin Brandenburg GmbH
Flughafen Schönefeld, 12521 Berlin
☎ +49 30 60911150
✉ marketing@berlin-airport.de
🌐 cargo.berlin-airport.de



Key Business Location

In an attractive setting in the heart of Europe, Schönhagen Airport is one of Germany's key airfields

Optimally developed for business aviation, Schönhagen Airport is the most frequented general aviation airfield in the new German states. An instrument approach (GPS approach), legally approved since June 2016, Schönhagen offers even more development opportunities. With 180 aircraft currently stationed in its hangars, Schönhagen has become the most important alternative airport to BER, the capital region's future commercial airport, in the "up to 12 ton in maximum take-off mass (MTOM)" aircraft category. Today, 500 companies from Germany and Europe regularly use Schönhagen Airport.

Its attractive location at the centre of the high-growth business region between southern Berlin, Potsdam and the Schönefelder Kreuz is a source of added momentum for Schönhagen. The location offers business travellers optimal conditions for business charter, as well as hangar space for airplanes and helicopters. Both commercial and private pilots appreciate the airfield's outstanding infrastructure, which includes conference rooms for events with up to 300 people that can be booked at short notice, a shuttle service, rental cars and bicycles, limousine service directly from the apron, a charging point and an EC cash machine in the terminal. Schönhagen also features excellent accessibility and

extensive services for pilots and passengers such as top food service, pilot lounge, traveller lounge and a pilot-style guesthouse.

Schönhagen is not only an airfield, but also an expert partner for innovative inward investment, conferences and events. Around 40 companies, as well as associations and organisations have successfully set up shop in the modern offices and commercial halls of the airfield's Aviation Technology Park. They focus on airplane and helicopter maintenance as well as training for all pilot licenses – including airline and commercial helicopter pilots. At Schönhagen, companies also produce aircraft and supervise research projects on aviation-related themes. From Arctic expeditions to survey flights, the companies from Schönhagen are active in the global market. With its Aviation Technology Park, Schönhagen is one of the most important business locations in the region.



Services

- Attractive support point with outstanding infrastructure for commercial and private pilots
- Optimal conditions for business charter and stationing airplanes and helicopters
- Expert partner for inward investment, conferences, events and innovative technologies
- Popular film and photo location

Contact



Flugplatzgesellschaft
Schönhagen mbH
Flugplatz Haus 2
14959 Trebbin OT Schönhagen
☎ +49 33731 3050
✉ +49 33731 30525
✉ info@edaz.de
🌐 www.flugplatz-schoenhagen.aero



German Orbital Systems

Demystifying Rocket Science

German Orbital Systems is a company, founded by two former scientific assistants from the Technische Universität Berlin in 2014. GOS specialises in developing and building small satellites, with a strong emphasis on so called CubeSats. CubeSats are made up of multiples of $10 \times 10 \times 11.35$ cm cubic units with a mass of no more than 1.33 kilograms per unit. Typical sizes are 3U or 6U CubeSats. Based on our proprietary building block system, we provide turnkey satellite missions, including the spacecraft and its launch. Our satellites portfolio covers the whole spectrum, from a simple 1U CubeSat to a highly sophisticated 100kg remote sensing satellite. The turnkey package is comple-

mented by services like frequency coordination or mission operations which can be added on request.

Due to our close cooperation with our sister company ECM space technologies, we are able to guarantee an integration of a random customer payload into a satellite and its launch into space within 18 months after signing the contract. We are convinced that innovation in many cases also depends on the speed of realisation. This makes us confident that our unique offer creates a real value for the NewSpace community by guaranteeing the launch as part of the package.

The revolution of the space business started in Silicon Valley. Now it has reached Europe, and it's about time for Germany, and its capital region, to understand that the 21st century has begun, and to take an active role in it. We at German Orbital Systems are proud to contribute our small part to this exciting new movement with our passion and our commitment.



Services

- Tailored Turnkey Satellites with Customer Payloads
- Launch Service and Frequency Coordination
- Electronic Components and Subsystems for Small Satellites
- Separation Systems and Satellite Dispensers
- Feasibility Studies, Research and Consulting
- Technology Transfer and Trainings

Contact



German Orbital Systems GmbH
Reuchlinstr. 10-11, 10553 Berlin
☎ +49 30 34060309
✉ info@orbitalsystems.de
🌐 www.orbitalsystems.de



Mikrofon Arrays – Diverse arrays for every use case

Acoustic Camera – Listening with your eyes

This measurement system for localising acoustic emissions visualises noise and sound sources – for applications in different industries.

For this purpose, a camera image is overlaid with measurement data from a microphone array. The exact location of the sound source is determined, causes of noise emission are detected and therefore can be modified, properly shielded or eliminated altogether.

Advantages and solutions

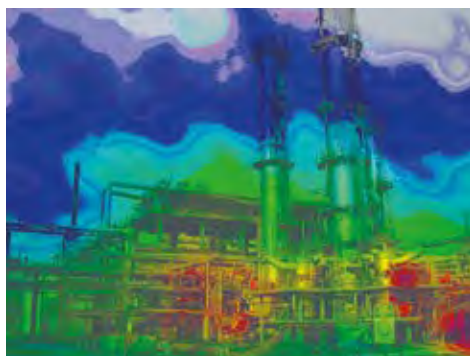
Noise causes stress. Noise is annoying. Sound insulation is complex and does not always bring forth the expected benefits. Another approach is to eliminate noise by finding and eliminating its root cause.

For noise sources of manageable size and complexity, the obvious localization and locating system is the human ear. Unfortunately, it's locating assets are limited and influenced by volume and pitch. The spatial resolution of the human eye is much better. The visualisation with the Acoustic Camera helps determining complex sound emissions.

Purely mechanical sources, such as running or rattling noises – which are caused by movable parts like wheels or pistons – are usually easy to find and eliminate.

In cases of noise emissions of moving gases or liquids – for example in aircraft turbines, water pipes, pumps or chimneys – it is a lot more difficult as fluid dynamics and turbulence are extremely difficult to compute and simulate. The very complex propagation of noise emissions of, in and around technical devices – like the aircraft interior, in the vicinity of power plants or wind turbines – makes noise reduction even more complicated.

Important applications of the Acoustic Camera are sound analysis, sound reduction and quality management. The modular and flexible system is quickly ready to use – inside or in the open field.



Acoustic photo of an industry complex from a distance of 300 metres. Picture: gfai tech GmbH

Services

- Acoustic measurements on-site or in the acoustics laboratory
- Individual systems for wind tunnel applications
- Individual development of measurement systems (Hardware & Software)
- Workshops
- Maintenance for measuring systems
- 3D Scanning Services
- Rental of measuring systems

Contact



gfai tech GmbH
Volmerstr. 3, 12489 Berlin
www.gfai.tech



The SiBeL Cooperation Network, promoted by ZIM

Safety and user-friendliness of unmanned aerial vehicles

The SiBeL cooperation network, promoted by ZIM, focuses on developing solutions for safe and reliable operation of unmanned aerial vehicles (UAVs). SiBeL encourages cooperation and knowledge transfer between small to mid-sized companies and research institutions, as part of research and development projects.

The network pools competencies from various industries and research fields, and has made it its mission to support network partners in developing and testing new processes, technical procedures, and products. The network management and the partners involved in the network offer consultation for developing prototypes into market-ready products, and facilitate the products' introduction to the market by way of specialist assessments, market studies, and industry contacts.

Our motto: Together, we can go higher!

The partners involved (business partners and research institutions):

- Gemtec GmbH
- IMG Electronic & Power Systems GmbH
- VTQ Videotronik GmbH
- germandrones GmbH
- navXperience GmbH
- Spectair Group GmbH & Co. KG
- hema elektronik GmbH

- RWTH Aachen
- Hochschule Nordhausen
- Technische Hochschule Wildau
- Technische Hochschule Brandenburg
- Freie Universität Berlin
- Technische Universität Berlin
- DAI-Labor
- Universität Würzburg
- GeoForschungsZentrum Potsdam
- Bundesanstalt für Materialforschung und -prüfung

The network is managed by GEOkomm e.V., the association for the geoinformation industry in Berlin/Brandenburg. In doing so, GEOkomm focuses on individually tailored development advice and offers substantial support to network partners in making their ideas a reality.

The key focus areas for the research and development partnerships (R&D) include:

- Redundant control units
- Inspection of wind turbines
- Maritime UAV applications
- Monitored UAV implementation and operation
- Detection of munitions by UAV
- Exploration of resource deposits by UAV
- Precise positioning and navigation of UAVs
- Testing energy efficiency with UAVs

Services

- Promotion of cooperation and knowledge transfer between SMEs and research institutions
- Support in developing and testing new processes, technical procedures, and products
- Consultation for developing prototypes into market-ready products
- Improving market access with the help of specialist assessment and market studies
- Development advice for R&D partnerships related to submitting applications, carrying out projects, and accounting.

Contact



Kooperationsnetzwerk SiBeL
GEOkomm e.V.
Hans-Thoma-Str. 4, 14467 Potsdam
☎ +49 331 2734108
☎ +49 331 2731935
✉ julia.gonschorek@geokomm.de
🌐 www.sibel-netzwerk.de



Hangar Schoenefeld

Lufthansa Bombardier Aviation Services

The Bombardier maintenance specialist

Lufthansa Bombardier Aviation Services (LBAS) was established in 1997 as a joint venture of Lufthansa Technik AG and the Canadian aircraft manufacturer Bombardier Aerospace. The Swiss ExecuJet Group later joined as the third partner, with a 20 percent stake in the successful joint venture (Lufthansa Technik AG: 51 percent; Bombardier: 29 percent). Based at Berlin's Schoenefeld Airport, which will be the only airport in the capital city region in the future, the company's facility of approximately 8,000 square metres specialises in maintaining and servicing Bombardier Business Jets. The only Bombardier Service Centre outside

North America, LBAS is today one of the leading providers of these services in the region made up of Europe, Russia and the CIS, the Middle East, and Africa.

The service spectrum encompasses the entire palette of maintenance and overhaul services (line and base maintenance), such as routine inspections (engines, fuselage, APU) along with VIP cabin modifications and conversions. As well as providing comprehensive MRO services for the Bombardier Learjet, Challenger and Global ranges, LBAS is also a certified Continuing Airworthiness Management Organisation (CAMO) and authorised to carry out manufacturer's guarantee work on all Bombardier aircraft.

As a member of LHT's international service network, LBAS and its staff of more than 220 highly qualified personnel provide optimal support for the operators of private and executive aircraft. A Mobile Repair Party (MRP) is available to customers around the clock.



Aircraft mechanic checking the flight control system

Services

- Line- and Base-Maintenance
- Interior Refurbishments
- Engineering und Modifications
- CAMO/MMS
- AOG Support
- Component Repair & Overhaul

Contact



Lufthansa Bombardier Aviation Services GmbH
 Elly-Beinhorn-Ring 4, Geb. Y012
 12529 Berlin Schönefeld
 ☎ +49 30 8875 4600
 📠 +49 30 8875 4511
 ✉ sales@lbas.de
 🌐 www.lbas.de



Aeronautical Information Management

m-click.aero GmbH, Berlin provides software solutions that address the challenges of Aeronautical Information Management and aims to contribute to the digitalisation process in aviation and air traffic control and to establish disruptive B2B processes.

Our software components are designed to support aeronautical, weather and flight information workflows for aviation stakeholders.

We enable our customers to seamlessly collaborate via SWIM API, while ensuring the high quality of exchanged data. Easy-to-start and cost-effective,

the components and services from our product portfolio fully support stakeholders' demand for consolidated information in "the right place at the right time", giving them the efficiency and flexibility required for future aviation IT solutions.

Our references include operational airspace planning and monitoring systems such as the German Airspace Management Tool STANLY ACOS, which is used for day-to-day airspace planning in Germany. In addition, we offer databases and B2B interfaces for flight planning and the AIXM Validator with EAD Business Rules, which were provided in cooperation with EUROCONTROL for SESAR.

We are ambitious to play an important role in contributing to a modernised aeronautical information management world which meets the safety, capacity and performance challenges of today's aviation industry. Our products support AIXM, FIXM and WXXM, the standards for worldwide exchange of aeronautical information. For data exchange, our products provide OGC-compliant Web-Services (WMS, WFS, WFS-T and WFS-TE).



Situation Awareness

Services

- Aeronautical Data Repository, the powerful and scalable data repository for modern aviation data formats (AIXM, FIXM, IWXXM, AMXM). Accessible through WFS-TE Temporality Extension and advanced GeoJSON API
- B2B Gateway for EUROCONTROL NM Data and Digital NOTAM Data
- Award winning Aeronautical Data Validation Platform
- Aviation web client for situation awareness
- Flight tracking platform and ADS-B receiver network

Contact



m-click.aero GmbH
Am Borsigturm 40, 13507 Berlin
☎ +49 30 35102536
✉ solutions@m-click.aero
🌐 m-click.aero



The Noise Prevention Cooperative

The NiELS eG network of innovative companies for energy conservation and noise prevention includes over 40 very diverse partners (SMEs, research institutions, universities) and promotes professionalism and acoustic/energetic standardisation in building redevelopment.

The introduction of BIM to the redevelopment process should increase the proportion of prefabricated buildings and make the prefabrication method more prevalent in redevelopment. Another aim is to introduce natural and sustainable resources to as much of the construction industry as possible. Since 2010, R&D projects have been conducted to this end, following a chain of processes starting with geo-mapping and followed by large-scale noise mapping, which culminates in the actual execution of construction work.

The main goal is to reconcile, coordinate and prepare members' products and services so that NiELS eG is perceived as a system provider by large infrastructure operators and also to encourage potential contracting entities to first consider offers from the network members.

In the medium-term, the NiELS cooperative hopes to initiate and progress technical developments in the coming years with the help of organised cooperation among members and funded by government grants.

In the long-term, NiELS hopes to bundle well-matched measures for noise protection and energy conservation, defined by the capabilities of members, which can be prepared and offered as system solutions catered to demand. However, the declared purpose also includes partial solutions that intersect with upstream and downstream service providers.

NiELS eG hopes to organize a central acquisition unit to allow the NiELS management to tap into markets and client bases alike, as members are supported in acquiring their respective clientele. For this, appropriate measures are implemented in central marketing and through cross-selling incentives.

Under the supervision of the NiELS management and geared towards market demand, developments in hardware and software will be controlled centrally and oriented towards the free integration of interfaces into the entire process.

The main target markets are operators of large infrastructure entities that are noise polluters (primarily airports and railways in German-speaking countries), relevant state authorities, as well as those affected by noise, and municipalities and municipal facilities that need to conserve energy.

Services

- Noise prevention in large-scale infrastructure projects, such as airports and traffic routes for trains and cars
- BIM Building Information Modeling – Planning, implementation and management of buildings with the help of software
- Virtual Reality – Planning of infrastructure measures by modeling the environment and demonstrating its capacity for change
- Industry 4.0 – Merging production with the digital world

Contact



NiELS eG – Netzwerk innovativer Unternehmen für Energie- und Lärmschutzsanierung
Bissingzeile 11, 10785 Berlin
☎ +49 30 7619000
☎ +49 30 76190099
✉ post@niels-eg.de
🌐 www.niels-eg.de



Our Audi lunar quattro on the surface of the moon

PTScientists

On a mission to the moon

Part-Time Scientists GmbH is a research and development company with the long-term objective of enabling SMEs to access space more easily and cost-effectively using innovative technologies.

The firm was founded in 2009 with the idea of implementing the first private mission to the moon. In partnership with AUDI AG and a number of other technology and research partners, such as the German Aeronautics and Space Research Centre (DLR), it has developed innovative rover and landing concepts.

Its self-developed moon landing concept, ALINA, is uniquely agile and can be adapted for many

carrier rockets, thereby offering an unbeatable payload and unprecedented flexibility. The moon rover developed for the harsh lunar environment is another of the mission's key technologies: it is possible to explore the surface of the moon using a multi-spectral camera and unique drive technology. Its first mission, planned for 2018, will focus on investigating the Apollo 17 landing site, in order to continue where Apollo left off 43 years ago. Building on the results from the missions of that time, additional knowledge is expected to be gained, increasing understanding of how the moon can be used as the starting point for further aerospace activities.

The head office of the growing company is located in the Berlin Marzahn district. As well as research, development and administration, the 2,200 m² building also houses a test area, integration rooms and production facilities. Part of PTScientists' premises is also available as a co-working space.



Services

- Development of aerospace technologies
- Distribution of payload allocation for lunar orbit and landing
- Co-working space

Contact



Part-Time Scientists GmbH
Märkische Allee 82a, 12681 Berlin
☎ +49 30 92036481
📠 +49 30 92036483
✉ info@ptsScientists.com
🌐 www.ptsScientists.com



Products & Innovations

The Photon Laser Engineering GmbH presents itself

Whether it's process development or implementation – Photon Laser Engineering only works with state-of-the-art equipment. Close cooperation with research institutes in the area of material processing with lasers is another factor which ensures that we are always on the cutting edge of the technology. Beyond that, we optimise the course of process development of the products which we have developed ourselves for these processes, such as the FokusMonitor® and WireScope.

Our customers appreciate that they are being taken care of by a partner that accompanies them from the development of the product right to its completion. We are always glad to help,



especially when questions arise as to the use of new joining technologies, which is something of inestimable value.

Whatever the challenge you present us with – a reduction in costs, savings in materials, a reduction in weight, construction advice, or optimisation of components – Photon Laser Engineering will find a convincing solution, together with you. With laser beam welding, we depend on a modern and innovative technology. It is the tool of choice in every situation in which one would want to reach the limits of what classic welding can offer in terms of process and quality. For our customers it offers a series of advantages: The smooth, fine surfaces mean that process steps such as filling and grinding can be omitted – and that helps save costs. But it's not just the functional aspects that are convincing. For the sake of our customers, we also place high priority on the outward appearance of the surfaces. If desired, our engineering services can also include the construction of prototypes and pre-production series. Our experts will ensure that the individual processes in the added value chain intermesh smoothly. This way they ensure continuity and cost-consciousness at every stage, from the product idea to series production.

Services

- Process development and implementation
- Prototype construction and pre-series production
- Laser beam welding, laser soldering, laser cladding welding, laser beam cutting
- Technology consulting and training

Contact



Photon Laser Engineering GmbH
Staakener Str. 53–63, 13581 Berlin
☎ +49 30 36408851
📠 +49 30 36408819
✉ le@photonag.com
🌐 www.photonag.com



So far more than 7,000 engine have been delivered from Rolls-Royce in Dahlewitz.

Rolls-Royce: The only German jet engine manufacturer with complete systems competency

Rolls-Royce's vision is to be the market-leader in high performance power systems where our engineering expertise, global reach and deep industry knowledge deliver outstanding customer relationships and solutions.

In Germany, Rolls-Royce is active in the following business segments: Civil Aerospace, Defence Aerospace, Marine and Power Systems.

Rolls-Royce Germany has maintained its own facilities and offices since 1990 and is active in the aviation industry. The company is the only one in Germany that possesses a licence for the development, manufacture, and maintenance of modern civil and military turbine engines (systems competency).

Rolls-Royce has about 3,600 employees working at its premises in Dahlewitz and Oberursel (as of 03/2017). In 2016, Rolls-Royce Germany recorded a total revenue of around 2 billion euros. Since it was founded, a total of 3.2 billion euros has been invested in development programmes and related infrastructure (as of 03/2017). To this day more than 7,000 engines were produced.

The executive board at Rolls-Royce Germany includes: Paul O'Neil – Chairman of the Management Committee, Rolls-Royce Deutschland and Chairman of EVP Assembly and Test, OE & MRO; Nicole Fehr – Managing Director, Rolls-Royce Deutschland and Programme Director; Alastair McIntosh – Managing Director, Rolls-Royce Deutschland and Engineering Director – Dahlewitz, Business Jets & Regional Engines; Dr. Holger Carlsburg – Managing Director, Rolls-Royce Deutschland and Director of Operations, Oberursel.

Rolls-Royce collaborates with numerous German research institutions, universities, and the German Aerospace Centre (DLR). The BTU Cottbus-Senftenberg, the Universities of Applied Sciences in Dresden and Darmstadt, as well as the Karlsruhe Institute of Technology (KIT) are all part of the global Rolls-Royce network comprising a total of 31 University Technology Centres (UTCs).

Services

- Competency centre for two-shaft engines; development, assembly, and maintenance of all engines in the BR700 family; the operations centre supports all engines in operation; final assembly of 50% of IAE V2500
- Competency centre for engine nacelles and the development of compressor technology
- Development tasks, assembly and test bed for large civilian engines; setting up and development of a test-centre for power gearboxes; mechanical tests of engine components

Contact



Rolls-Royce

Rolls-Royce Deutschland
Ltd & Co KG
Eschenweg 11
15827 Blankenfelde-Mahlow

+49 33708 60

+49 33708 63000

rrdinfo@rolls-royce.com

www.rolls-royce.com/country-sites/deutschland.aspx



MULTIROTOR G4 – Drone in action for Berlin police

UAV for Surveying, Industry, Agriculture, Film, TV and Photo

MULTIROTOR – Technology champion in the B2B UAV market

MULTIROTOR is a pioneer in the UAV market. Long before unmanned aerial vehicles (UAV) were commonly known and recognised, by the public as well as industry, MULTIROTOR had developed the first micro-multicopter for future-oriented B2B applications in 2008.

MULTIROTOR has been the pioneer of leading technology trends over the last decade. Our company can present the biggest experience and customer base in the market of professional multicopter drones for commercial application. We embrace our leading role in technology and

as the market leader. MULTIROTOR is conscious of its role as the world market leader and its great influence on the branch.

The fast-growing company produces series of individual flight drones as end-to-end solutions for an increasing number of astonishing applications. The production and assembly work of all key components, such as hardware and software, are 'made in Germany' and of the highest quality.

We are producing systems which even meet the security standards oriented towards the ones of civil aviation. Our products can be operated easily and intuitively. The wind stability is unique. The high scalability enables an almost unlimited range of applications and operations.

Each G4 MULTIROTOR drone is delivered with the newest software and is registered online individually on our customers' names, so that software updates can be received more easily and quickly. All registered customers are informed about software updates automatically and hence, always fly with the newest software release. In 2014, the newly developed, fourth generation of the flight control G4 was awarded the 'ARTIE innovation award for extraordinary, innovative solutions'.



Services

- Surveillance with UAVs
- Measurement via UAVs
- Search & Rescue via UAVs
- Crime scene documentation and measuring via UAVs
- Building inspection via UAVs
- Droneservice

Contact



service-drone.de GmbH
Forstweg 1, Haus 4a
14656 Brieselang
www.service-drone.de



sitebots GmbH

Professional multicopter and charging points

At sitebots GmbH we develop and manufacture small unmanned aerial vehicles (UAVs).

Over the past few years, we have specialised in the development and integration of complete solution packages using UAVs in industrial settings and in the safety and security sector.

Our professional drones are manufactured in-house to our own high standards with flexibility to accommodate special hardware and software requirements. In addition to our own operations, we employ a network of affiliates of about 20 individuals throughout Germany to offer our services across Germany and Europe. We have

developed state-of-the-art customised work-flows for surveying, inspection, safety and security, and logistics, that are regularly employed by numerous big clients.

Our returning and satisfied customers are institutions and corporations from the following areas:

- Industry (chemical, heavy industry, fuel/energy, mining)
- Safety and security
- Construction, surveying, realty
- Transportation, traffic, logistics
- Farming/agriculture
- Emergency services
- Administrative service
- Environmental protection



Services

- Aerial three-dimensional surveying via photogrammetry
- Aerial inspection for industry
- Aerial surveillance/ Safety and security
- Aerial photographs and videos for documentation or commercial purposes

Contact

SITEBOTS

sitebots GmbH
Kanalstr. 2, 16727 Velten
☎ +49 3304 2540320
✉ info@sitebots.com
🌐 www.sitebots.com



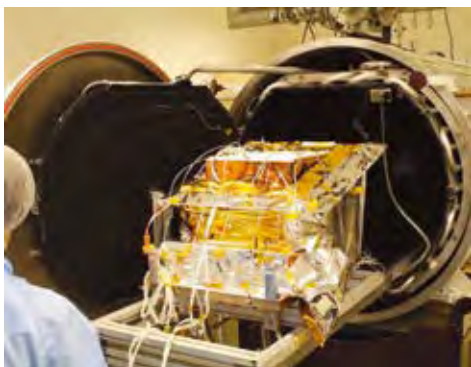
The 3,8m diameter MPCV Tank bulkhead, built for the Orion Program

30 Years of European Excellence in Space

Thermo-Structural Products and Services for all phases of Space Projects

Sonaca Space GmbH, since 2016 part of the multinational Sonaca Group and with a decade of experience in Germany and more than 30 years in Belgium, offers structural systems, thermal systems, Ground Support Equipment, Mechanism and Instruments, as well as various engineering services from its premises in Berlin (Adlershof) and in Gosselies (Belgium).

In recent years, SSG has been participating in numerous high-profile space projects, such as JPL/NASA's InSight mission to Mars, where SSG has been the prime industrial partner of DLR for the HP³ instrument, the MASCOT, Asteroid Lander from DLR/JAXA (Hayabusa2) and the research project PEASSS, financed by the EC and launched in Feb. 2017.



The MASCOT Lander during the test of the Thermal Control System (Courtesy of DLR)

SSG is also leader and partner of research projects financed by the European Space Agency in fields such as 3D printing for the International Space Station (MELT), low-temperature electronics (LTE), thermoelectric cooling of RF payloads (LNA), Space Aerogels (AerSUS) and much more.

In all these projects, SSG is a reliable and flexible partner, able to bring in play its competences in fields such as Thermal and Mechanical Engineering, System Engineering, Quality Assurance, Assembly and Testing (with internal Clean Room and Space Test Facilities), as well as Project and Proposal Management.

To its potential Customer SSG offers also hardware products such as Structures (from electronic boxes, through the instrument, to complete Satellites), metallic and composites, complete Thermal Control Systems, fully qualified bespoke Mechanisms and scientific Instruments.

SSG portfolio is completed by its strong expertise in the design and production of transport containers for satellites and instruments and Ground Support Equipment, providing all the machinery necessary to build, assemble, test, transport and store satellites and their sub-elements. SSG is providing complete flight systems with the related costs flexibility of an SME and the security of a big player.

Services

- **Structural Systems:** State-of-the-art and advanced structural solutions for satellites, instruments, launchers
- **Thermal Systems:** Thermal Systems Design, from initial trade-offs, to manufacturing and assembly
- **GSE & AIT:** Ground Support Equipment & Test for satellites, instruments, launchers and their components
- **Mechanisms:** Simple and effective designed for space applications
- **Scientific Instrument:** Instruments for exploration and EO

Contact



Sonaca Space GmbH
Carl-Scheele-Str. 14, 12489 Berlin
☎ +49 30 63926071
📠 +49 30 201632829
✉ info@sonaca-space.com
🌐 www.sonaca-space.com



Space Structures GmbH
Fanny-Zobel-Str. 9, 12435 Berlin

 +49 30 20649230
 +49 30 20649172
 info@spacestructures.de
 spacestructures.de



Whether you are a beginner or a professional: TRAINICO has the right educational offer for you

TRAINICO – Specialist in aviation training since 1993

Since its foundation, TRAINICO GmbH – one of the experienced educational providers in aviation and a recognised 147-training facility – has been successfully qualifying professional staff for aviation.

Renowned companies in the industry have relied on TRAINICO for many years, both in terms of dual initial training and company internships for retraining or further training participants. This form of cooperation not only ensures excellent profes-

sional quality in training but also the greatest possible practical relevance and – for companies – access to suitably trained specialists.

Trainees have the ideal prerequisites for a fresh professional start in aviation: through retraining courses with an IHK degree or further training in a commercial or technical career in aviation. Please contact us for advice at arbeitsmarktprojekte@trainico.de or by telephone at +49 (0)3375 5230-150 (technical professions) -155 (commercial professions in aviation).

TRAINICO offers a large choice of further training, both face-to-face or Multimedia Based Trainings (MBT). Please contact us for an overview of seminars for specialists and HR personnel of companies that would like to train their employees at vertrieb@trainico.de or by phone: +49 (0)3375 5230-424 (technical courses and EASA Part-66, MBTs) -423 (business and specialist courses, MBTs, management seminars, languages).

Trust in more than 20 years of educational experience.

We look forward to hearing from you!



TRAINICO: Modern learning in a pleasant atmosphere

Services

- Initial training for aircraft mechanics or avionics technicians
- Retraining or further training for lateral entrants
- Seminars, specialist courses and practical courses for professionals
- Individual in-house seminars for companies

Contact



TRAINICO Aviation Academy
Friedrich-Engels-Str. 62
15745 Wildau
☎ +49 3375 5230150
📠 +49 3375 5230151
✉ training@trainico.de
🌐 www.trainico.de



Aerial photo of the Aerospace Technology Centre in Wildau © Oliver Hein

Aerospace Technology Centre

The premier location near the Berlin Brandenburg Airport (BER) for technology companies in Brandenburg

With a total area of around 23,000 square metres directly next to the new Berlin Brandenburg Airport (BER), the Aerospace Technology Centre (Zentrum für Luft- und Raumfahrt) in Wildau has developed into one of the largest compact technology hubs in Brandenburg. Located right next to the University of Applied Sciences Wildau and the Fraunhofer Institute for Applied Polymer Research (PYCO), it is a place more than 60 companies from the high-tech industry with around 500 highly qualified employees have chosen to call home.

In order to create more room for innovative companies, another technology center with 7,000 square meters of space will be built by 2019.

It is particularly companies from the aviation industry looking for a representative company location, manufacturing halls, and office spaces that have found the infrastructure they were looking for here. The spectrum ranges from companies which test engine components (AneCom AeroTest GmbH) and engineering service providers (FTT Florida Turbine Technologies Germany GmbH) to companies which develop prototypes for small aircraft (REINER STEMME Utility Air-Systems GmbH).

The proximity to the University of Applied Sciences Wildau offers an ideal environment for close collaboration between business and the sciences. Companies benefit from research and development projects, personnel transfer, and further education courses. Numerous partnership events such as the German Aerospace Day Berlin-Brandenburg, the awarding of the Lilienthal Prize, the international specialist conference InnoTesting or the "Young Professionals Aerospace" lecture series have made this location famous across the country.



© AneCom AeroTest 2012
Picture: Steffen Weigelt

Services

- Relocation management and business support
- Incorporation formalities
- Business plan coaching
- Public relations
- Business contacts specific to the aerospace industry
- Acquisition of state subsidies
- Contacts to capital providers and investors

Contact



Zentrum für Luft- und Raumfahrt
Schönefelder Kreuz
c/o Wirtschaftsförderungsgesellschaft Dahme-Spreewald mbH
Freiheitstr. 120, Aufgang B
15745 Wildau
☎ +49 3375 52380
☎ +49 3375 523844
✉ info@zlr.de
🌐 www.zlr.de



Rail Systems Technology

Berlin-Brandenburg is perfectly poised as a richly traditional hub of railway technology with excellent connections at the European level.

Leading international location

Berlin-Brandenburg is among the leading locations for railway technology; over 100 businesses and scientific institutions with more than 20,000 employees make the capital region one of the most important European centres for research, development and manufacturing.

Major industry players like Siemens, Bombardier, Stadler, Knorr-Bremse and voestalpine BWG are represented here alongside small to mid-sized enterprises. Deutsche Bahn has its headquarters in Berlin and concentrates many central functions in the region.

Besides BVG – the largest German public transport service provider – the Berlin and Brandenburg region is home to other transport operators like DB Regio Nordost and S-Bahn Berlin (Deutsche Bahn), ODEG (Netinera), Abellio, Transdev, Industriebahngesellschaft Berlin and Niederbarnimer Eisenbahn (Captrain), BEHALA, and Havelländische Eisenbahn.

The Bahntechnologie Campus Havelland is currently under construction at the Wustemark marshalling yard as a modern technology centre for the rail transport industry.

Industry in the region focuses on the areas of vehicle engineering, infrastructure and transport systems, control and command technology, and on information and communications. There is also a large number of engineering companies providing services in the railway sector.

Attracting almost 3,000 exhibitors and around 145,000 trade visitors from 60 countries in 2016, InnoTrans is the world's lead expo and largest international showcase for railway technology.

A region with invitation potential

The capital region is a driver of innovation in railway technology, focusing on interoperability, automation, digitalisation, lightweight construction, energy efficiency, and noise reduction.

This specialisation creates new opportunities for railway technology and influences the entire value chain. Research, development, production and operations benefit in particular from the trend toward digitalisation, creating smart net-



works with other transport modes and services, as well as new models for condition-based repair and maintenance. A hub for startups, the capital region offers a foundation for new and fruitful collaboration between established companies and dynamic tech firms, even in sectors with more traditional structures like the rail transport industry.

TU Berlin, BTU Cottbus-Senftenberg, TH Brandenburg und TH Wildau possess outstanding competence in vehicle engineering, rail infrastructure and railway operations that extends from basic research to support in application development. They also have extensive know-how in additional disciplines, especially automotive engineering, materials engineering, information technology, logistics, and human-machine interaction, enabling cross-sectoral approaches and a high degree of interdisciplinarity. Other research institutions with a significant focus on rail transport technology include the three DLR institutes situated in Berlin-Adlershof and the four Fraunhofer institutes organised in the Berlin Center for Digital Transformation (LZDV).

Companies and research institutions from the region also occupy key positions in European projects for the development of railway systems in tomorrow's world. Besides direct involvement by prestigious manufacturers and operators, other stakeholders are currently involved in projects within the European research program Shift2Rail, among them TU Berlin, Havelländische Eisenbahn, and IAV.

Outstanding connections in the region and Europe-wide

As one of the growth industries in the capital region, rail transport technology belongs to the Transport, Mobility and Logistics Cluster. Supporting the cluster in its tasks, the Competence Network Rail Berlin-Brandenburg (KNRBB) also develops and manages sophisticated innovation projects on an international stage. In addition, the cluster cooperates with other European partners within the European Railway Clusters Initiative (ERCI). Situated in Berlin, the European Rail Research Network of Excellence (EURNEX) coordinates research competency in the railway sector at a European level.



From Wheel to Rail – Measurement as a System

Tools for Safer Trains

System solutions define the main focus of our work. Over and above the supply of components, we analyse the measurement tasks of our customers and create specific equipment, from stand-alone devices up to complex system solutions for measurement of railway vehicles. We are highly specialised in measurement technology as well as in hard- and software engineering. We also cooperate with partners in mechanical and plant engineering, weighing and sensor technology as well as in high speed and laser measurements. Beyond the development of measuring systems, we modernise available equipment and offer a comprehensive technical customer service,

which may include renting our mobile in-house equipment as well as measurements as a service for smaller vehicle fleets.

As an enterprise with a flat company structure, we value creative thinking as well as direct and open communication. Based on well-grounded knowledge of the technical standards and state-of-the-art, our most important guiding principles are interdisciplinarity, innovation and continuous improvement of our products and processes. We cherish networking and partnerships for mutual long-term benefits which offer the possibility to participate actively in research projects.

Our customer-driven and quality-minded approach to work led to a high acceptance with our customers, including: companies of the Deutsche Bahn Group (DB Fernverkehr, DB Regio, DB Fahrzeuginstandhaltung), divisions of the SIEMENS Group, ALSTOM, different public transport operators of German cities, German and European railway transportation companies as well as further European vehicle manufacturers.



Services

- Wheel load weighing equipment
- Corner force measurements equipment
- Bogie test beds
- Customer services
- Research & Development

Contact



AGG Anlagen- und Gerätebau
GmbH
Drewitzer Str. 50, 14478 Potsdam
☎ +49 331 8170780
📠 +49 331 81707829
✉ info@aggn.net.de
🌐 www.aggn.net.de



Allianz pro Schiene/Niklas Boockhoff/www.tiefseh.net

Because Transport Policy Requires Ideas

The alliance for safe, environmentally friendly rail transport

Allianz pro Schiene is Germany's strategic alliance for promoting environmentally friendly, safe rail transport. It is also one of the most unconventional transport alliances in the country. 23 non-profit organisations, which, for idealistic reasons, would like to drive rail transport forward, have joined as members of our alliance: environmental associations, unions, professional associations and consumer organisations. They represent over 2 million individual members.

In Allianz pro Schiene, civil society is closely meshed with business. More than 140 companies from the entire railway industry are supporting members of Allianz pro Schiene. They include railway transport and infrastructure operators, railway technology producers, construction companies, banks, insurance companies, etc. – global market leaders and small and medium-sized companies alike. The members and supporting members work in partnership and enjoy equal rights.

Allianz pro Schiene's main goal is to promote the protection of the environment and increase the market share of rail transport – in both the passenger and freight transport sectors. The alliance has derived a set of activities and measures to achieve this goal, including:

- Promoting and expanding the environmental advantage of railways
- Improving the transport mode's image in politics and the general public
- Increasing public funding for rails and applying it more effectively
- Creating fair competitive conditions among the modes of transport
- Strengthen the user-friendliness and accessibility of rail transport

Advantages for everyone

Allianz pro Schiene informs the general public about the environmentally friendly character and safety advantages of rail transport and, within the sector, argues in favour of maintaining and expanding these two public benefits, whose features set it apart from other modes of transport. It initiates discussion processes on the concrete outlook and visions for rail transport.

Services

- Lobbying, press, and public relations
- Competitions: Train Station of the Year, Big-hearted Rail Employee, Federal State Mobility & Environment Index
- SchienenJobs.de – The online job board and information platform targeted to rail-related mobility

Contact



Allianz pro Schiene e. V.
Reinhardtstr. 31, 10117 Berlin
☎ +49 30 24625990
✉ info@allianz-pro-schiene.de
🌐 www.allianz-pro-schiene.de

Bahntechnologie Campus Havelland

A railway infrastructure project in the Havelland district is picking up speed

The green light was given in January 2017 for an infrastructure project worth millions on the 34 hectares where the Wustemark marshaling yard used to be. With support from Havelländische Eisenbahn AG and funds from the State of Brandenburg, the Havelland district is developing a center for the rail industry and modern railway technologies. The development of a railway technology campus in Havelland is based on the following:

- Logistics
- Industry
- Research and practice
- Science and training

Its aim is to revitalise the historic location of the former marshaling yard and bring together industrial undertakings from the rail and scientific institution sector.

The Rail & Logistik Center Wustemark, which has been active since 2008, is once again in operation as a logistics platform and is to be further expanded. The proximity to GVZ Wustemark and to the three intersecting European TEN-T corridors creates optimal conditions for multi-modal freight transport, and forms the basis for additional companies to come to the area. The aim of the regional concentration of rail-based companies with services such as workshop services and vehicle commissioning is to create synergies and thus competitive advantages for all companies on the industrial campus.

In addition, the site is suitable as a practice and testing field for various companies in the railway, energy and infrastructure sectors, while also opening up various fields of activity for training, science, and research. Even today, the location is being used by renowned research institutes in Berlin and Brandenburg, such as TU Berlin, TH Wildau, TH Brandenburg, the Fraunhofer Institute for Transportation and Infrastructure Systems, and the German Aerospace Center – Institute of Transportation Systems for application-oriented research: controlled derailment, geo-thermal points heaters, and quiet brakes are tested here.

The development of the Bahntechnologie Campus Havelland should further supplement such possibilities and others, thus creating a research nucleus that can network with the European (railway) research landscape. Closely linked to this is the creation of new practice-oriented dual and modular training and continuing education programs. Trainees are to be qualified up to the university graduate level, and those who already have a degree will be able to receive additional qualifications in their professional specialisation.

The area will be revitalised and the existing buildings refurbished in accordance with the regulations for historical monuments as well as energy-efficient model solutions to test the use of regenerative energies.



Services

- Location revitalisation
- Logistics Campus
- Trade Campus
- Educational and Practical Campus
- Science and Research Campus

Contact



**Bahntechnologie Campus
Havelland GmbH**
Bahnhofstr. 2
14641 Wustemark OT Elstal
☎ +49 33234 309690
📠 +49 33234 309682
✉ info@btc-havelland.de
🌐 www.btc-havelland.de





Factory in Freiwalde (Brandenburg)/Headquarter in Kirchhundem-Albaum

Bals: A good connection, always

Quality that you can count on: For almost 60 years, Bals Elektrotechnik GmbH & Co. KG has been the partner for good and secure connections. Our products prove themselves around the world and in a wide variety of applications. At Bals, "Made in Germany" stands for a quality standard that offers you optimum safety.

CEE plugs and connectors for the world market

As an independent, medium-sized, family-owned company, we produce standardised industrial plugs and sockets acc. to IEC 309 1-2 as well as plug and socket systems and distributors for the global market. We set new technical standards with innovations and ground-breaking, partially patented new developments such as Multi-Grip or Quick-Connect. The export rate in excess of 50 percent shows: Our solutions are highly valued around the world. Our products are sold in more than 80 countries. Subsidiaries and exclusive partners in strategically important countries only sell our products.

Two modern factories – a consistent quality standard

From the beginning, the headquarters of our company is located in Kirchhundem-Albaum (North-Rhine-Westphalia). Product development,

marketing and sales, as well as administration are located here. In addition, plug and socket systems and special products are manufactured in the Kirchhundem-Albaum factory. The factory in Freiwalde (Brandenburg), built in 1994 and expanded many times since, has state-of-the-art production facilities for fully-automatic manufacturing of unique CEE plugs and connectors as well as a highly-effective logistics centre.

Customer proximity: You can rely on us

Always close to the customers. For us, this is no empty phrase but reality. Flexibility, customer orientation and the ability to respond quickly to short-term requirements are a matter of course for us. For this reason, integrated production – from the product idea and design to tool making and production to the shipment of the products – is optimised for short processing paths and the fastest response times.

Contact



Bals Elektrotechnik
GmbH & Co. KG
Am Stieg 1, 15910 Freiwalde
☎ +49 35474 2010
📠 +49 35474 20141
✉ info@bals.com



About Bombardier Transportation

Bombardier Transportation is a global leader in rail technology and offers the broadest portfolio in the industry. It covers the full spectrum of rail solutions, ranging from trains to sub-systems and signalling. The company also provides complete transport systems, e-mobility technology and maintenance services. As an innovation driver, Bombardier Transportation continuously breaks new ground in sustainable mobility. It provides integrated solutions that create substantial benefits for operators, passengers and the environment. Headquartered in Berlin, Germany, Bombardier Transportation employs around 39,400 people and its products and services operate in over 60 coun-

tries. Germany is home to seven production and engineering sites. This illustrates the company's steadfast commitment to Germany.

Bombardier is the world's leading manufacturer of both planes and trains. Looking far ahead while delivering today, Bombardier is evolving mobility worldwide by answering the call for more efficient, sustainable and enjoyable transportation everywhere. Our vehicles, services and, most of all, our employees are what make us a global leader in transportation.

Bombardier is headquartered in Montréal, Canada. Our shares are traded on the Toronto Stock Exchange (BBD) and we are listed on the Dow Jones Sustainability North America Index. In the fiscal year that ended on December 31, 2015, we posted revenues of \$18.2 billion.



Services

- Development and construction of innovative rail vehicles and turnkey transportation systems
- Services such as delivery of spare parts, maintenance, and fleet management
- PRIMOVE technology: E-mobility for wireless operation of buses and rail vehicles

Contact

BOMBARDIER
the evolution of mobility

Bombardier Transportation
Schöneberger Ufer 1, 10785 Berlin
☎ +49 30 986070
📠 +49 30 986072000
🌐 www.de.bombardier.com/de/transportation.html



Tracks to the Future

Complete solutions based on our principle

Designed as a one-stop shop, the BUG group of companies offers complete solutions for railway construction and engineering. It is our long-term aim as a medium-sized company to make railways even more attractive for the transport of both passengers and freight.

The BUG Verkehrsbau AG was founded in 05/1990 (BUG Construction and Maintenance of track systems founded by Mr. Martin Thomas – graduated engineer) and in fact of a steady increase of our business, we now have about 400 employees. Our main business activities are concentrated in

the area of all types of track construction and renovation, civil engineering projects, cable laying and installation, level crossing and premises.

These services will be supported by competent specialists and logistic. Our experience in this area and the know-how in communication- and electro-techniques enable us to offer complete solutions based on our principle "all in one hand".

The competence of our skilled worker and engineering specialists is highly appreciated by public customers and Deutsche Bahn AG.

The motivation of our staff and modern equipment enable us to fulfil orders in time and with the highest quality. This includes variations and a 24h-stand-by-service to eliminate averages.



Services

- Track-shifting
- Replacement of switches
- Delivery and assembling of LWC components
- Construction of bridges, cut-and-cover tunnel construction
- Upgrading and rebuilding of railway stations
- Manufacturing of concrete channel line or elevated oil trough lines
- Manufacturing of cable pits including cable laying up to 30 KV

Contact



BUG Verkehrsbau AG
Landsberger Str. 265, Haus M
12623 Berlin

☎ +49 30 8187000

☎ +49 30 818700190

✉ info@bug-ag.de

🌐 www.bug-ag.de

CASSANTEC

Zurich • Berlin • Cleveland • www.cassantec.com

The Prognostics Company



Towards Predictive Maintenance with Prognostic Foresight

Process and condition data yield insight into the future condition of assets

Knowing the future improves transportation operations. Cassantec has developed a prognostic solution to answer the “when”-questions by forecasting malfunctions. Through our SaaS offering “Cassantec Prognostics”, we calculate probabilities of future events and provide foresight into the future state of assets with an explicit time horizon of typically weeks or months, in special cases even years.

Our capabilities are proven through a strong and growing list of references. Among them are leading companies from the transportation sector as well as industry leaders from power, oil & gas and mining. All our customers benefit from the

prognoses through reduced maintenance cost, increased availability of their assets, transparency into their equipment’s remaining service life and, hence, improved economics of their operations.

Cassantec has developed unique and patent-pending stochastic algorithms. Their robustness, efficiency of implementation and long prognostic horizon (weeks and months, in cases years) differentiates “Cassantec Prognostics” from competing solutions, which focus on early warnings and current equipment conditions without providing the explicit view into the future that Cassantec specialises in.

The key benefits of Cassantec’s technology are:

- Understanding when in the future a malfunction is likely to occur
- Lower maintenance cost
- Higher asset availability, especially avoidance of unplanned downtime
- Better planning of maintenance
- Improved commercial strategies



Services

- Software for Industrial Maintenance
- Systems & Solutions for Predictive Maintenance, PdM
- Smart Data Analytics
- Software-based Solutions for Industry 4.0 & IoT

Contact



Cassantec GmbH
Bismarckstr. 10-12, 10625 Berlin
☎ +49 30 590083300
☎ +49 30 590083110
✉ marina.swjagina@cassantec.com
🌐 www.cassantec.com



Contecht GmbH

State of the art web applications for BIG DATA mining and visualisation

Contecht provides specialist services to support the whole life-cycle of IT solution implementations for infrastructure construction, engineering, and asset management related organisations with a focus on custom tailored building information modelling (BIM) and geographical information system (GIS) based web and cloud applications. Our knowledge and expertise lies in the development of state-of-the-art applications that draw on complex geometrical algorithms, deep learning, system simulation, advanced data mining/analysis, and visualisation methods.

We aim to support the entire life-cycle of technological innovations from IT strategy setting, IT strategy implementation, custom tailored software development, software and hardware configuration, and intellectual property questions. We offer our clients support in the whole life-cycle of developing web-based applications, environments, and infrastructure that ties in closely with existing business processes, decision making routines, and creative engineering. With our long-standing experience in software development, and our close link with international research institutions (Contecht was founded as a spin-off of the TU Berlin's department for civil infrastructure),

we are able to provide state-of-the-art web based solutions that can truly leverage the potential of the latest computing methods.

We are currently working on the development of BIM and GIS based asset management software for public housing co-operations and railway agencies. We are also developing a cloud based design collaboration platform that relies on state-of-the-art 3D algorithms. We have also experience with supporting large organisations, such as Deutsche Bahn International or Royal Haskoning in their ITC implementation strategy. We have also developed a number of BIM based visualisation and geometrical reasoning applications for small and medium enterprises. Contecht's CEO Timo Hartmann has experience with European funded research projects, for example, he is currently involved in the DESTination RAIL project, the GoSAFE Shift2Rail project, the P2Endure project, and the SAFE10T project. Within the GoSAFE project Contecht plays a crucial role in the development of information systems and risk-based decision support system to support the asset management of railway organisations.

Services

- Custom Tailored Web software
- IT Consultancy
- Data Mining and Analysis
- System-simulation

Contact



Contecht GmbH
Brehmestr. 36, 13187 Berlin
☎ +49 1515 3354302
✉ hartmann@contecht.eu
🌐 www.contecht.eu



No. 1 in Europe

We create the conditions for a safe, environmentally friendly and sustainable mobility

DB Netz AG, as the rail infrastructure company of the Deutsche Bahn AG, is responsible for the 33,380km long rail network. This positions us at the peak of the European Rail Infrastructure companies. As an innovative and future-oriented company, we create the conditions for a safe, environmentally friendly and sustainable mobility. For this reason, we are responsible for a modern rail network in Germany.

DB Netz AG provides rail infrastructure in good quality and with a high availability factor on a non-discriminatory basis. The company also manages operations, which involve compiling timetables in close cooperation with the railway undertakings, as

well as maintenance and repair of the rail network. It is also responsible for the ongoing development of rail infrastructure by investing in the existing network, in modern command/control technology and in new-build and upgrading projects.

DB Netz AG's performance profile for the service installations it operates comprises the provision of infrastructure, ensuring it is in working order, and operations management. Operations management by staff at DB Netz AG relates exclusively to the operation of remote-controlled switch connections and the related command and control system.

The staffing of the affected signal boxes, which is required for this, is dependent on the respective applicable working timetable and takes into account existing operating and shunting plans where necessary. The operation of locally operated switches and of locally operated, electronically controlled switches is not part of DB Netz AG's performance profile and is carried out by the users of service installations in accordance with the stipulations of the operating regulations.



Services

- DB Netz AG offers its passenger transport customers a variety of train-path products: express, regular-interval, economy, and light running paths are available for passenger operations.
- We offer our rail freight customers a variety of train-path products: express, standard, feeder, and light running paths are available for rail freight.

Contact



DB Netz AG Regionalbereich Ost
Granitzstr. 55–56, 13189 Berlin
☎ +49 30 29741000
✉ dbnetz.ost@deutschebahn.com
🌐 fahrweg.dbnetze.com/fahrweg-de/start



Picture: Markus Seeger

DB Systemtechnik:

Our rail expertise – your success

As a customer-oriented, high performing services company, DB Systemtechnik not only provides services to Deutsche Bahn, but also operates in the privately-owned railway market with great success. Engineering and testing services relating to rail vehicles, their components and workshops in operation and maintenance form the core of the DB Systemtechnik services its portfolio.

Over 800 employees with a high level of functional competency ensure that the wishes and requirements of customers are fulfilled to their complete satisfaction. The services range from procurement and approval to after-sales service (maintenance, conversion and accident remediation work) and commercialisation. The range of services for depots and machine technology includes requirements analyses and cost estimates for invitations to tender for transport contracts as well as the planning and design of new construction and conversion projects. Further areas of competency include testing and diagnostic systems and measurement and testing processes, including the full scope of calibration services.

DB Systemtechnik is represented at the Brandenburg-Kirchmöser location by the maintenance systems special field. Here, experts with spe-

cialist knowledge develop solutions for national and international railway undertakings. Some 160 dedicated employees in System Planning and Process Design for vehicle maintenance depots, maintenance systems, Non-Destructive Testing and Testing Systems, as well as materials engineering, welding and adhesive bonding help to ensure that orders are completed professionally.

Three large full-scale test rigs for testing under heavy loads, component testing and wheel/rail testing are used to test and analyse vehicle and track components. Track components can also be tested during scheduled operations on a route section near Hanover. This unique combination of bench tests and line tests is used to determine reliable and economically sound solutions for clients in relation to wear in the wheel/rail system.

DB Systemtechnik is a strategic partner of Kompetenznetz Rail Berlin-Brandenburg GmbH. In this way, we are sustainably incorporated into the regional network at the Brandenburg-Kirchmöser industry location.

Services

- Strategic and Technical Consulting
- Engineering and design for procurement, and operations
- Maintenance technology
- Testing and approval management

Contact



DB Systemtechnik GmbH
 Bahn Technikerring 74
 14774 Brandenburg-Kirchmöser
 ☎ +49 3381 812320
 📠 +49 3381 812105
 ✉ systemtechnik@deutschebahn.com
 🌐 www.db-systemtechnik.de



Research on the Trains of the Future

The DLR-Institute of Vehicle Concepts carries out research on technologies for future railway vehicles

The DLR is the national aeronautics and space research centre of the Federal Republic of Germany. Its extensive research and development work in aeronautics, space, energy, transport and security is integrated into national and international cooperative ventures. In the transport branch, three institutes are based in Berlin-Adlershof: Transport Research, Transportation Systems and Vehicle Concepts.

The DLR-institute of Vehicle Concepts (DLR-FK) has its base in Stuttgart and a branch office in Berlin-Adlershof. The Institute's fields of endeavour address the development of future technology systems for sustainable, safe, and affordable generations of vehicles on road and rail. The institute's contributions range from conception and design through construction, calculation and simulation to the presentation of research demonstrators, components and vehicles.

The systemic evaluation of novel powertrain technologies for railways is one of the focal points of the research. In particular, electrochemical storages, fuel cells and hydrogen and the corresponding recharging and refueling technology are looked at in depth. Further research topics are

the conceptualisation of dynamic coupling, novel on-board energy management systems and the layout of a flexible high-speed cargo train.

Requirement specifications, LCC and scenario techniques are elements of the technology assessment toolbox applied in the institute. Further areas of research are the simulation, design and validation of alternative drivetrain systems for railways. Test beds in Stuttgart and Berlin that are used for fuel cells and batteries enable investigations on system and component level.

The research work of the DLR-institute of Vehicle Concepts is bundled in the meta-project Next Generation Train. Projects with partners from the railway industry, railway undertakings, public authorities and other research institutions are undertaken as well.

Services

- Conceptualisation and assessment of railway concepts considering infrastructure, vehicle technology and railway operations
- Simulation and design of alternative powertrains and on-board energy management systems
- Execution of tests on component and system level
- LCC-analyses of sub-systems and complete rail vehicles

Contact



Deutsches Zentrum für Luft- und Raumfahrt e. V. (DLR), Institut für Fahrzeugkonzepte
Rutherfordstr. 2, 12489 Berlin
☎ +49 30 670557957
☎ +49 30 67055283
✉ johannes.pagenkopf@dlr.de
🌐 www.DLR.de/FK



DILAX Public Mobility

Intelligent Management of People Flows

DILAX offers exact passenger numbers, smartphone tracking and efficient seat management

DILAX is the world's leading provider of intelligent system solutions for capturing and managing people flows. Since our founding in 1988, we have been supporting companies in the retail and public transport sectors with a comprehensive range of services.

Our core competencies are automatic people counting, smartphone tracking, dynamic seat management and innovative data analysis tools. Our integrated approach enables our customers to successfully optimise their processes, increase their efficiency and improve service for their own customers.

With our two specialised business units: Public Mobility and Retail & Airports, we support our customers from the consultation and quotation stage up to the operation of entire systems. Complex hosting and reporting services are part of our portfolio as well. We offer complete one-stop solutions for development and production, enabling us to implement our customers' individual requirements professionally and quickly.

Our team of approximately 160 highly qualified employees offers expert service in all areas from six international locations. We serve over 350 customers in around 30 countries worldwide. Our

customers include rail vehicle and bus manufacturers, public transport operators and public transport authorities as well as shopping malls, retail chains and airports.

DILAX Public Mobility

Reliable information on passenger numbers and transport network utilisation is key to attaining maximum efficiency and the best possible utilisation of public transport capacity.

With DILAX, these data as well as other information can be collected and used as a solid basis for decision making. DILAX offers its customers reliable on-board technology as well as modular software solutions that optimally meet the current and future requirements of passenger transport.

We support our customers in assessing demand – from project planning and implementation to supporting active systems in daily use. Our customers benefit from our long-standing experience gained in many national and international projects. We show our customers where they can optimise their services, transport performance and resource efficiency.

Services

- Automatic Passenger Counting
- Smartphone Tracking
- Occupancy Detection & Reservation Display
- Data Management & Predictive Analytics
- Capturing and Managing Passenger Flows
- Fleet and Vehicle Management
- Real-Time Monitoring

Contact

DILAX

DILAX Intelcom GmbH
 Alt-Moabit 96b, 10559 Berlin
 ☎ +49 30 77309240
 📠 +49 30 77309250
 ✉ info@dilax.com
 🌐 www.dilax.com



Innovations on board

Turnkey solutions for mobile applications

For the past 20 years, we have been designing, developing and selling holistic hardware and software solutions for vehicle applications and local public transport.

We know our hardware and software systems inside out, because we made them ourselves: our recorder as well as our software for evaluation or for fleet management.

Whoever invests in DResearch technology does not need to worry constantly about new standards. All of our software systems and adapters for image analysis are backward compatible. Our offering provides you with maximum future-proof peace of mind.

Our equipment is designed so that they hardly need to be serviced. However, if you ever need personal assistance, we have an extensive network of partners who can quickly be at your site. Your needs and demands provide our developers with objectives. You tell us what you need in terms of vehicle safety and efficient operations and we translate your requirements into innovative systems.

Our recording systems and software solutions are completely designed and manufactured in Berlin in Germany. Even the systems installed in 2000 are still running without problems – quality from Germany!

We are among the pioneers in the consolidation of electronic systems in buses and trains. The best example is the combination of video recording, video transmission and automatic passenger count in one single device.

Our Vision: To make public transport safe and attractive through innovative system solutions.

Our Mission: As a reliable partner, we support our customers on their path to success with innovative and highly reliable turnkey system solutions. Our values are based on sustainable and environmentally friendly practices that follow international standards and norms.



HydraIP system

Services

- Hard- and Software Development
- Automatic Passenger Counting
- Video Solutions for Mobile Applications
- Fleet Management

Contact

DRESEARCH
DResearch Fahrzeugelektronik GmbH

DResearch Fahrzeugelektronik GmbH
Otto-Schmirgal-Str. 3, 10319 Berlin
☎ +49 30 515932440
✉ contact@dresearch-fe.de
🌐 www.dresearch-fe.de



View of the works

Welcome to the EBW Eisenbahnwerk Eberswalde GmbH

EBW – largest supplier and service partner for the maintenance of freight cars in East Germany

The EBW Eisenbahnwerk Eberswalde GmbH takes over all services of heavy and light maintenance, from the planning up to the handing over of quality tested vehicles.

We would like to convince and win customers with in-time deliveries, obligation, marketable prices, cooperative partnership and problem-solving skills. Maintenance of freight wagons is carried out according to the maintenance levels and includes a complete carefree package. Further, we could offer the following services:

- removal of accidental damage
- term inspection and change of tenant
- painting and blasting corrections.



Wheel set processing

The service of wheelsets is one of our core competencies. We offer the service of wheelsets in maintenance levels IS1 and IS2. The IS3 including the servicing of bearings is planned for the future.

We offer the complete service for bogies including maintenance and refurbishment. Also, the consultancy, the reporting after accidents and special work on two or three axle bogies can be carried out. We offer the possibility of reprocessing and construction of sidewalls, gliders, sidewall flaps of all types and additional attachments for all vehicle types as well as special work. In addition, we also can offer non-destructive material tests.

Another field of activity is the mobile service. With our mobile service, you can save time-consuming transfers of your freight wagons, and the short-term availability could be increased. For our customer, we guarantee binding prices and high quality of a full service.

In order to expand the current performance spectrum, it is planned to offer revisions, modifications and maintenance including the interior and exterior cleaning for tank wagons.

Services

- Repair of freight cars
- Reconstruction and modernization of freight wagons
- Wheel set and bogie refurbishment
- Component refurbishment

Contact



EBW Eisenbahnwerk Eberswalde GmbH
Eisenbahnstr. 37, 16225 Eberswalde
☎ +49 3334 8192620
📠 +49 3334 819298629
✉ N.Boehme@ebw-eberswalde.com
🌐 www.ebw-eberswalde.com



Matti Morelli

Eisenbahngesellschaft Potsdam mbH

Mobility and logistics with passion and social responsibility

Rail transport is the primary business area of DESAG's subsidiary, the Eisenbahngesellschaft Potsdam mbH. The company provides logistics and transport services and creates innovative transport concepts in the field of short- and long-distance transport of customer freight. The EPG owes its consistently outstanding quality, flexibility, and reliability to its dependable, modern fleet of vehicles as well as to its competent and committed base of employees. As a result, the EPG is always able to promptly carry out customer demands and requests, to provide absolute customer satisfaction, and to ensure the frictionless execution of orders.

The EPG offers a wide variety of freight transport options. This includes, for instance, regular cement transports from Deuna to Berlin or to Hamburg, and car trains from Ingolstadt to Bremen. Also included in the daily business of the EPG is oil transport, for example, from Neustadt (Danube) to Milbertshofen or to Nürnberg-Hafen.

Railways are not the only mode of transport of importance to the Eisenbahngesellschaft Potsdam mbH. Other modes of transport, such as roadways and sea, are gaining more importance. The EPG is currently the majority shareholder of the ElbePort Wittenberg GmbH and the HavelPort Berlin GmbH in Wustermark. Furthermore, its portfolio encompasses its own freight forwarder with five trucks.

See for yourself how well we perform!



Philipp Watzke

Services

- Provision of single-car and block train transport
- Intermodal transport
- Transport of hazardous goods
- Shunting services
- Support of feeder lines
- Port operations
- Truck haulier services
- Provision of pilots

Contact



Eisenbahngesellschaft
Potsdam mbH
Am Luftschiffhafen 1
14471 Potsdam
✉ info@eg-potsdam.de
🌐 www.eg-potsdam.de



Surface engineering competence center

The right powder coating for every component

ENVIRAL® Oberflächenveredelung GmbH began production at its Niemege site in August 1996. The company is now a recognised supplier in the surface finishing, powder coating, and blasting technology sector. We supply our industrial, trade, curtain wall and metal engineering customers with powder coating systems that meet the very highest quality standards. Our powder coatings are primarily characterised by an exquisite visual appearance and endless variety of colours and effects, as well as optimum mechanical resistance and outstanding anti-corrosion properties. We treat a wide range of materials, from aluminum, steel and galvanised steel to stainless steel, glass, papers and plastic film.



Air conditioning housing with anti slip coating (Photo: ENVIRAL®)

We produce a coated surface capacity of up to 2,500m² a day. Thanks to our coating system for large parts, we can coat components up to 13.0×2.5×3.6m and 17.5×1.0×2.0m with wall thicknesses of over 50mm and weighing up to 3,000 kg.

As well as powder coating, ENVIRAL® also offers other surface finishing procedures, such as anodizing and hot-galvanizing. Various repair systems, glass bead blasting, packaging/film coating and transportation services complete our portfolio.

We ensure the quality of our production by means of our QM system certified according to DIN EN ISO 9001, along with ongoing quality inspections in our own laboratory. We hold the GSB Master Coater Quality Seal for the powder coating of aluminum as well as zinc & steel and are approved by Deutsche Bahn. ENVIRAL® also holds the Powder Coated Tough seal.

We care for the environment by means of chromium and heavy metal-free liquid chemical pre-treatment, as well as a waste water concept free from industrial wastewater. Our environmental management system is certified according to DIN EN ISO 14001.

Services

- Powder coatings up to 17.5×1.0×2.0m and 13.0×2.5×3.6m, 3t
- Individual and volume powder coating
- Anti-corrosion powder coating up to C5 long
- Pressure and airless blast cleaning, glass bead blasting
- Hot-galvanizing, galvanizing, anodizing
- Film coating, nationwide transport service, warehousing service
- Assembly and machining, sheet metal sales
- Repair systems

Contact



ENVIRAL Oberflächenveredelung GmbH

Altdorfer Weg 6, 14823 Niemege

☎ +49 800 3684725

☎ +49 33843 64224

✉ info@enviral.de

🌐 www.enviral.de



Excellent European Transport Research

EURNEX integrates the fragmented railroad research in Europe – with the particular aim of increasing efficiency. The association is working to create a single European market for railway research which promotes the sustainable transport policy of the European Union. EURNEX connects 40 excellent research institutes in the transport sector from 20 EU countries, including TU Berlin and Berlin Partner for Business and Technology. EURNEX bundles top quality research services “from a single source”, and provides a one stop shop in this field of research.

Consisting of top decision makers from the rail transport sector, the EURNEX advisory board determines the overall orientation of the research and involves customers from industry and operators.

Multidisciplinary R & D is organised in 10 EURNEX Scientific Poles of Excellence that provide benefits to customers and scientists alike:

- Building international partnerships and direct access to the expertise of European partners
- Continuous learning process and up-to-date discussions of future issues in direct dialogue with industry and operators
- Initiation of EU-wide transport research projects

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

Services

- Goal-oriented research by exchange with operators, industry, and the EU
- Integration of research infrastructure and knowledge management in the EU
- Provision of bundled know-how at any location in the EU
- Increasing the competitiveness of the rail transport system by means of innovative, application-oriented solutions

Contact

EURNEX

EURNEX e.V.
Secretary General
Armando Carrillo Zanuy
Hardenbergstr. 12
10623 Berlin
☎ +49 30 31997020
✉ info@earnex.eu
🌐 www.earnex.org



Development of the European Driver's Desk



Forster SMT GmbH – Your Partner in Lightweight Construction

We provide an impressive range of professional consultancy, planning, manufacturing, and inspection services

Forster SMT GmbH provides individual end-to-end solutions for highly-demanding customers. SMT GmbH is a member of the Technischer Handel-Industriebedarf MROSE GmbH and GÜSCHU Stanzwerk GmbH corporate alliances.

SMT GmbH is a constantly growing company with a variety of production and innovation features.

Intelligently combined – SMT manufactures glass fiber reinforced (GFR) composites and provides system solutions in combination with metal and elastomer processing.

Industrial applications for SMT products: the automotive industry; shipbuilding; railway vehicles; interior and exterior; plant engineering.

Research & development – SMT has its own research and development department, and since being founded, the company has collaborated with BTU Cottbus-Senftenberg, ILK, DLR and TU Dresden.

The right solution for every requirement:

Processing options – our machinery park includes: turning machines; milling machines, including CNC-controlled 5-axis milling; cutting machines; bending jigs; polishing; sandblasting; 3D scanning.

Our core competencies are the manufacture of electrical, pneumatic and mechanical sub-assemblies. Other competences include the reconditioning of mechanical sub-assemblies and gearboxes, as well as pneumatic/hydraulic components, including the necessary pressure testing. The production of system components requires a great deal of trust, because the quality, deadline, and price must always be right. We provide an impressive range of professional consultancy, planning, manufacturing and inspection services, along with excellent customer service.



Services

- Design & innovation
- Research & development
- Production and processing of fiber composites
- Reconditioning and assembly of components, including sub-assemblies
- Service & installation using mobile deployment teams
- Bonding & industrial coating
- Manufacture of system components according to your patterns, drawings, and CAD files
- Metal processing

Contact



Forster System-Montage-Technik GmbH

Heinrich-Werner-Str. 1a
03149 Forst (Lausitz)

☎ +49 3562 981455

☎ +49 3562 981490

✉ info@smt-forst.de

🌐 www.smt-forst.de



Audiovisual presentation of a freight train passing

Noise Simulation Laboratory

Realistic audiovisual recording, simulation and reproduction of traffic noise and noise abatement measures

When it comes to planning transport infrastructure and noise abatement measures, different complex physical phenomena are an issue. Yet, only a relatively small group of experts fully understands the complicated coherences. The abstract calculations and visualisations used in planning are only partially suitable for plausibly communicating these coherences to decision-makers in the economic, political and social sector.

An interface between the fields of calculation/simulation on the one hand and the intuitive experience, realistic audiovisual depiction of rail traffic

noise and urban development effects of mitigation methods, on the other hand was missing – yet.

In cooperation with the Deutsche Bahn AG, an innovative technology was developed and implemented in the TiME Lab of the Fraunhofer Heinrich Hertz Institute HHI in Berlin.

Based on spatial sound recordings and acoustic simulations in combination with high-resolution video panoramas or photorealistic 3D computer graphics, the communication format “Infopunkt Lärmschutz”, a laboratory for noise simulation, emerged.

With the help of a 12 meters wide 180°-panorama projection and a 3D audio reproduction system based on wave-field synthesis, simulations of railroad traffic noise can be reproduced realistically in an unprecedented quality at the TiME Lab.

In addition, various noise-reducing or urban development measures can also be integrated into the audiovisual simulation. As a result, the visitor finds himself in the centre of a virtual space, for example directly in front of a planned railway section, and can experience the future structural and acoustic situation as well as the efficiency of the planned noise reduction measures in a realistic manner.

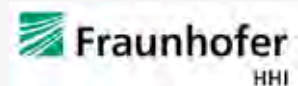


Noise Laboratory at Fraunhofer Heinrich Hertz Institute

Services

- Realistic audiovisual recording, simulation, and reproduction of traffic noise and noise abatement measures
- High-quality panoramic video recording and computer generated visualisation
- High-quality spatial sound recording for realistic sound field reproduction
- Acoustic simulation of noise reduction measures

Contact



Fraunhofer Institute for Telecommunications,
Heinrich Hertz Institute, HHI
Einsteinufer 37, 10587 Berlin
☎ +49 30 31002883
✉ thomas.koch@hhi.fraunhofer.de
🌐 www.timelab-hhi.de/index.php/de/infopunkt-laermschutz



VILLMANN-GRUPPE – Go safe with us!

Villmann-Gruppe offers complete solutions for maintaining your wagons

The Villmann-Gruppe have many years of practical experience especially with all kinds of wagons. We undertake modifications to wagons at all maintenance levels, along with all kinds of essential repairs in accordance with current regulations and guidelines. Our plants have special expertise in vehicle cleaning and the management of wheel sets at all maintenance levels. We also offer complete and partial colour schemes for the visual upgrading of your wagons. We guarantee a rapid and reliable service.

We accomplish modifications and modernisation according to your individual wishes and requirements. Our staff of specialists undertakes the technical preparation of the modifications in consultation with our customers, and in line with their requirements. This can involve the modification of the superstructure, undercarriage, product piping, and additional air system or brake modifications.

Our 'mobile maintenance' service allows us to resolve problems in transit, professionally and quickly. Our trained staff handle minor repairs and maintenance directly on site, without wagons having to be taken to the workshop. These services include:

- essential repairs to freight and tank wagons
- welding and torch cutting

- wheel set changes on site as emergency repairs
- replacing parts

We are happy to perform depot tasks for vehicles and especially for wheel sets on behalf of customers.

The company's sites are in Brandenburg an der Havel, Blankenburg in Harz, Niedersachswerfen/ Nordhausen in Harz and Altenburg in Thuringia.

Companies based in Brandenburg are:

- FWB Fahrzeugwerk Brandenburg Manfred Villmann e.K. in 14770 Brandenburg an der Havel
- ITB Industrietransportgesellschaft mbH Brandenburg; rail transport company on behalf of the plants
- HLB Hafenlogistik Brandenburg GmbH; operator of the city's port

The group's rail transport company enables us to serve the trimodal municipal port that is operated on behalf of the city of Brandenburg by HLB Hafenlogistik Brandenburg GmbH, which is also part of Villmann-Gruppe.



Services

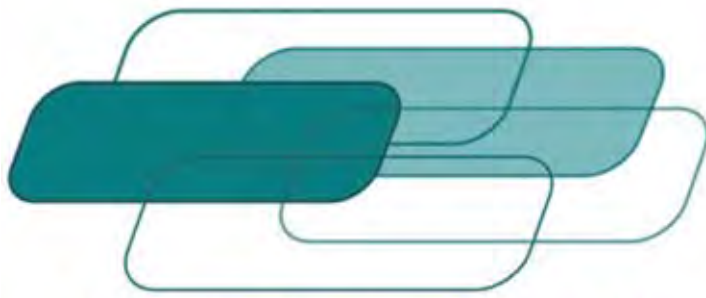
- Overhaul, maintenance, and modification of wagons
- Wheel set management up to IS3 and production of new wheel sets
- Mobile maintenance of railway vehicles
- Depot services for railway vehicles and wheel sets (including administration)
- Production of measuring devices, labeling, foil printing

Contact



FWB Fahrzeugwerk Brandenburg/
VILLMANN-GRUPPE
Friedrich-Franz-Str. 11
14770 Brandenburg an der Havel
☎ +49 3381 340411
☎ +49 3381 340422
✉ info@fwb.villmann-gruppe.de
🌐 www.villmann-gruppe.de





ifv Bahntechnik

**Interdisziplinärer
Forschungs-
verbund
BAHNTECHNIK e.V.**

**European Network of
Railway Competence**

RAILWAY-RESEARCH-ASSOCIATION.eu

INTERDISCIPLINARY RAILWAY RESEARCH ASSOCIATION

Railway-Network.eu

Interdisciplinary Railway Research Association is an international active networking-organisation, involving approx. 12,900 members, partners, and supporters from science and all relevant sectors of the transport industry.

We support target-oriented research from our partners by connecting consumers and suppliers systematically as well as representatives from service businesses, leading research facilities, associations, administration and politics.

As an independent and innovation-oriented network, the Railway Research Association can provide numerous advantages for its members and partners. Currently we attend research projects (including funding), national and inter-

national conferences (symposia, workshops) as well as service programmes covering more than 25 relevant topics:

- Rail-Infrastructure
- Rolling stock
- Passenger rail transport
- Freight rail transport
- Rail-Aerodynamics
- Rail-Acoustics/Rail-Noise
- Rail-Operation
- Fire Safety
- Rail Research
- Interior Design
- Rail-Maintenance
- Rail-IT and Telematics
- Rail-Management
- People with reduced mobility
- Rail-Safety (Passive Safety, Active Safety)
- Rail-Materials and Material Efficiency
- Rail-Energy (Efficiency)
- Innovation Management
- Control Command and Signalling
- Rail-Quality (IRIS-Certification)
- Tram and Metro (Rapid transit)
- Public transport policy
- Rail-Homologation (TSI)



Interdisciplinary – Innovative – Internationally

Services

- Network of Railway Competence
- Interdisciplinary Research
- Railway Events (Symposia and Workshops)
- Railway Leadership Circle
- Working Groups

Contact



IFV BAHNTECHNIK e.V.
(Railway-Research-Association)
c/o Technische Universität Berlin
Salzufer 17–19, SG 20C
10587 Berlin
☎ +49 30 31421698
☎ +49 30 31425452
✉ office@ifv-bahntechnik.de
🌐 www.ifv-bahntechnik.de



IGES-Topics: Germany-wide integrated timetables and the regulation of network access

We Design Mobility

IGES Institut provides consultancy services to public and private transport and mobility providers

IGES analyses the financing concepts of public transit systems, as well as the financing and regulation of railway infrastructures and their impact on the economy and business. The development of service concepts for passenger and freight transport companies is a further focal area of our consulting services. IGES specialises in implementing methods for municipal controlling instruments and inter-municipal cooperation, and developing integrated mobility concepts for rural regions.

CONSULTING ACTIVITIES FOR ALL LEVELS OF GOVERNMENT

Customers who have put their faith in our work include regulatory organisations, such as the Federal Network Agency and the Monopoly Commission, federal and state ministries, and private

and municipal transport companies in the local and national public transport systems industry. IGES also provides consultancy services to industrial companies, investors and associations, focusing on transport and mobility.

SCIENTIFICALLY SOUND COMPETENCE CENTRE

The IGES Institut was established in 1980 and is wholly owned by scientists who also work in the institute. Today, it is one of Germany's largest private sector institutes for consulting and research on public infrastructure. Our areas of competency are compatible consulting and networked mobility.



Comprehensive intercity bus know-how: IGES Kompass Mobilität®

Services

- Strategic traffic planning in passenger and freight transport
- Feasibility studies and development planning
- Cost-benefit analyses
- Regulatory settings and financial instruments in the rail infrastructure sector
- Competitive situation analysis and consulting, tariff and product development for local and regional public transport systems
- Contract models and management

Contact



IGES Institut GmbH
 Christoph Gipp
 Geschäftsführer
 Friedrichstr. 180, 10117 Berlin
 ☎ +49 30 230 809 589
 📠 +49 30 230 809 11
 ✉ christoph.gipp@iges.de
 🌐 www.iges.com/mobilitaet

ime “engineers with experience” Competence since 1980

You are entitled to excellent service

ime Elektrotechnik GmbH is one of the leading European service providers in electrical engineering in the railway sector.

We have been advising at the highest technical level for over 35 years in the substitution, replacement and modernisation of low-voltage products and are proven experts in fire detection, electric heating, automation and control technology.

We advise independently, deliver quickly and ensure continuity.

The largest, well-known operators in the transport industry are our trusted customers and partners. Due to our high expertise, they have entrusted us with an exclusive right of distribution in some areas.

We place very high demands on the quality of our work and the quality of the products that we market, while you as a customer always come first. This is the simple philosophy that our company has practiced successfully for more than 35 years.

We are happy to offer advice on all topics: an extensive portfolio of low-voltage products, switching devices, control and signalling devices as complete units or in modular technology, power

supplies, capacitors, transformers, solutions for fire detection equipment, electrical heating and automation technology, as well as complex solutions for rail vehicles.

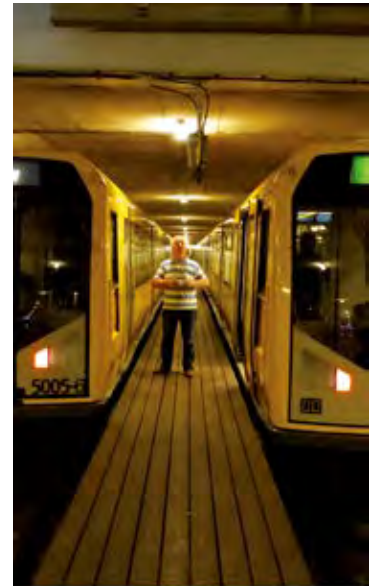
Our job is to realise your wishes competently whilst confirming your confidence in us. The relationship with our customers and suppliers is always based on mutual trust and understanding. With our sometimes very complex products, we are “consultants” and take the term customer service – service for the customer – very seriously.

Core competencies:

- Solution-oriented, vendor-independent consulting
- Specialising in replacement and substitution in the low voltage range
- Automation and control technology
- Fire-detection technology
- Electrical heating technology

Application areas:

- Traffic engineering: maintenance, repair, modernisation
- Cabinets and equipment
- Safety and machine technology
- Wind energy



Services

- Solution-oriented, vendor-independent consulting
- Specialising in replacement and substitution in the low voltage range
- Automation and control technology
- Fire detection technology
- Electrical heating technology



Contact



ime® Elektrotechnik GmbH
Beusselstr. 44 n-q, 10553 Berlin
☎ +49 30 3020860
📠 +49 30 39039065
✉ ime@ime.eu
🌐 www.ime.eu



Knorr-Bremse PowerTech: Defining tomorrow's standard

Power supply systems for rail vehicles, industry and energy

The Knorr-Bremse PowerTech brand stands for electrical power supply systems for rail vehicles and industrial applications, manufactured to proven Knorr-Bremse quality standards. PowerTech was formed through the combination of two medium-sized companies that are leading specialists in auxiliary power converters:

PCS Power Converter Solutions GmbH in Berlin and Transtechnik GmbH & Co. KG in Holzkirchen. Both companies were acquired by Knorr-Bremse in January 2014 and changed their names to Knorr-Bremse Powertech GmbH, Berlin and Knorr-Bremse Powertech GmbH & Co. KG, Holzkirchen in 2016. Worldwide, our solutions contribute to greater mobility and a more secure energy supply in the 21st century.

Power supply systems for rail vehicles and industrial applications

Knorr-Bremse Powertech can jointly draw on more than 100 years of experience in the field of rail technology. More than 500 employees at five sites on four continents work together to pioneer solutions for energy conversion. As a result, some 30,000 Knorr-Bremse PowerTech converters have already been delivered for different rail vehicles and industrial applications worldwide.

Our products at a glance:

- On-board auxiliary power converters: Knorr-Bremse PowerTech specialises in advanced auxiliary power supply for all types of rail vehicle – LRVs, high-speed trains, metros, locomotives or long-distance passenger cars. Due to our extensive portfolio, we are able to develop the right solution for the specific requirements of our customers – along with providing the necessary world-wide service.
- Battery chargers: Particularly on regional multiples and high-speed trains, high-output standalone battery chargers are required. With their temperature-compensated charging, PowerTech high-performance units protect the vehicle battery.

After Sales with Knorr-Bremse PowerTech

It is supremely important to us to provide our customers rapid, targeted support throughout the entire product life cycle of our technologies – and that also goes for the former Transtechnik, PCS and FAGA brands. This service includes: spare part management, upgrades, obsolescence management, commissioning and on-site service, training, repair service and much more.



Auxiliary power supply for metro train of BVG Berlin and battery charger for ICE of Deutsche Bahn.

Services

- The Knorr-Bremse PowerTech portfolio includes converters and electrical equipment for a broad spectrum of rail vehicles, as well as for industrial applications, energy production, storage and high-end dynamic test rig applications
- Knorr-Bremse PowerTech supply auxiliary power supply units and battery chargers for the railway sector



Knorr-Bremse PowerTech: Power supply systems for rail vehicles, industry and energy.

Contact



Knorr-Bremse Powertech GmbH

Am Borsigturm 100, 13507 Berlin

☎ +49 30 2977250

📠 +49 30 297725102

✉ info@kb-powertech.com

🌐 www.kb-powertech.com

Unsere Netzwerkpartner



Networking in the Field of Rail Systems

Kompetenznetz Rail Berlin-Brandenburg GmbH

The Kompetenznetz Rail Berlin-Brandenburg GmbH competence network (KNRBB) was founded on August 1, 2011 in Brandenburg an der Havel (Kirchmöser district). It has been in existence for 5 years, and is a corporate network for the rail transport technology industry. Its focal areas are: vehicle technology, route technology (track construction/superstructures), the modernisation of infrastructure installations, and innovations.

We are:

- An open, geographically independent, dynamic and international network with more than 70 members

- A neutral link between business, research and politics
- A catalyst and filter for identifying potentials for co-operation
- An intermediary and manager in the implementation of international co-operations and a “door-opener” for international co-operations in the field of railway technology

Our activities include the following:

Acting as a catalyst for innovative project ideas from the network (e.g. for trans-area topics: new materials and clean technologies)

Marketing activities for individual network partners (to compensate for the disadvantage of insufficient market penetration due to a small company size)

Initiation of international co-operation networks

Since August 1, 2016 – i.e. the 5th anniversary of our network – the KNRBB GmbH now also has a branch in Berlin:

Köpenicker Str. 48/49
Eingang G
10179 Berlin, Germany



Services

- The concentration of individual core competencies of our members and bringing together different companies
- Project and order acquisition for network partners
- Project management and interface coordination for acquired network projects
- Organisation and moderation of company meetings and informational events
- Interim support of projects and companies

Contact

KOMPETENZNETZ RAIL Berlin-Brandenburg GmbH

Kompetenznetz Rail
Berlin-Brandenburg GmbH
(KNRBB)
Friedrich-Franz-Str. 19
14770 Brandenburg an der Havel
☎ +49 3381 80402410
☎ +49 3381 80402419
✉ info@knrbb-gmbh.de
🌐 www.knrbb-gmbh.de



Network Intelligent Traffic In Metropolitan Regions

10 companies and 2 research institutes from Berlin, Brandenburg, and Saxony bundle in the framework of cooperation in the network "nitim". Their core competencies to develop innovative concepts and system solutions for the digitisation of public transport and the development of mobility.

About the network: "Network Intelligent Traffic In Metropolitan Regions" [nitim], consisting of professional international experienced network partners, innovation and new transport technologies are developed and applied. To ensure sustainable mobility, it is necessary to shape future transport systems intermodally. Therefore, an integrative strategic approach is crucial. The integration of the subsystems and the control of interfaces are leading factors. The aim of the network is the creation of new technical solutions by fusing different technologies (e.g. combination of sensors) and their system integration, combined with the networking of the involved actors.

The Network delivers solutions to intermodal mobility concepts by:

- Acquisition, processing and transmission of static and dynamic data
- Intelligent data preparation, coordination and distribution

- Innovative solutions connect the vehicles, infrastructure, transport systems and users continuously in real time
- Security of networked IT – components and their communication
- Human-technology interaction
- Innovative Vehicle Equipment
- Hardware Development for evaluation, analysis, ...
- Intermodal Planning Systems
- Linking existing mobility offerings, including new mobility services (e.g. car-, bikesharing and Chauffeur Services)

The partners ASCI Systemhaus GmbH, BLIC GmbH, Datalyze Solutions GmbH, DResearch Fahrzeugelektronik GmbH, HFC Human-Factors-Consult GmbH, iris-GmbH, Kompetenznetz Rail Berlin-Brandenburg GmbH (KNRBB), TH Brandenburg, Joinery Thiede, TU Dresden Institute for Traffic Telematics, Verkehrsautomatisierung Berlin GmbH and VIOM GmbH contribute their expertise in the fields of sensors, detection and evaluation, networking and output of data/information.

Services

- Smart Entrance Solutions (Control of passenger flow)
- Innovative vehicle equipment (interior, On-Board-Systems)
- Intermodal planning systems
- Predictive maintenance/ Service solutions

Contact



EASC European Aviation Security Center e.V.
for nitim "Network Intelligent Traffic In Metropolitan Regions"
Flugplatz, Haus 2
14959 Trebbin-Schönhagen
☎ +49 (0) 33731 28 98 98
☎ +49 (0) 30 62 20 00 68
✉ info@nitim.de
🌐 www.nitim.de

Laser Beam Welding S...XL



Services & Innovations

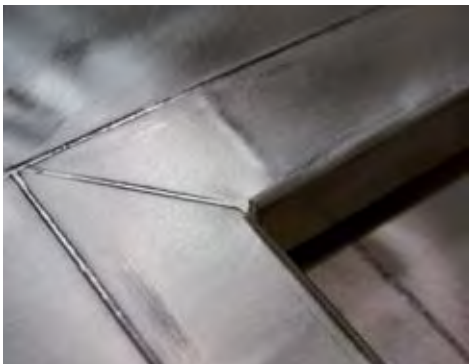
The Photon Laser Manufacturing GmbH presents itself

The name Photon Laser Manufacturing GmbH stands for many years of experience and expertise in the manufacture of complex subassemblies made of steel, stainless steel, aluminium, and composite materials. Particularly our know-how and resources in the area of laser beam welding make us a reliable partner for the rail and utility vehicle industry, machinery and plant construction, and the defence technology. Here, we guarantee efficiency, outstanding quality, and to keep deadlines for the entire process chain – from laser beam cutting to bending/shaping and welding, right to assembly and surface coating. Our established quality management system,

which regulates accountability, procedures, and verification down to the smallest detail, guarantees this.

The services we offer include metalworking with lasers, conventional metalworking, and a series of other service work in the area of metalworking and processing. The circle of customers from a wide variety of branches that counts on the expertise and know-how of Photon Laser Manufacturing continues to grow. Because of our state-of-the-art equipment, the products we manufacture satisfy the most stringent of demands – this applies to the same extent for the design as it does for precision, low-warpage levels, the use of materials, the reduction of wind noise, or the development of new product characteristics.

Laser beam welding also offers a variety of advantages in the area of machinery and plant construction. Despite functional elements being welded into the inner surface (ligaments, guides, etc.), parts still retain a perfect outer surface. For parts with multiple layers, we guarantee low-warpage, and leak-tight welding of the inner and outer layers (ISO tanks, etc.). Laser beam welding technology also makes it possible to weld through plates lying on top of one another (plate heat exchangers, etc.).



Services

- Laser beam welding, conventional welding, laser beam cutting, bending/shaping
- Process development, technology and machinery consulting for suppliers of production lines for serial production
- Prototype and pre-serial production, post-serial production
- Applications in the railway equipment manufacturing sector, the automotive sector, the aviation sector and the shipbuilding sector

Contact

Photon

Photon Laser Manufacturing GmbH

Gewerbegebiet Rosengarten 15
14621 Schönwalde-Glien

☎ +49 33231 7050

☎ +49 33231 70520

✉ lm@photonag.com

🌐 www.lm-photonag.com



Safe technologies for train dispatch

System integration & services

Successful together. We assist you in developing solutions for different projects and tasks, implement them purposefully and achieve optimised operational processes. At the same time, we keep an eye on the economic and safety-relevant aspects, always fulfilling our customer's expectations.

For the establishment of a new train dispatch system, we have supported the construction of an innovative synergy between video, radio and network technologies. With this, train drivers are independently able to dispatch their trains. In this process, the video images of the platform are processed via the efficient network of the customer, encrypted via radio and finally transferred to the train driver's screen. Thus, the train driver can thoroughly observe the train and securely control the dispatch.

In some of our other projects we have made great ideas become reality. With our concept studies and coordination, we simplified the changeover of the radio technology of numerous rail vehicles. We took care of the pre-commissioning checks and ensured that all vehicles returned to operation without downtime.

For the past 10 years, we have continuously developed our project management, control and support, thereby benefiting from our comprehensive experience in communication, network and safety technologies. With technical concepts and holistic consulting, we turn your projects into tailor-made solutions. We tackle every challenge – no matter whether it relates to planning, development or realisation. We support and document technical commissioning and approval, and also train your users and technical staff on the implemented system technologies. Furthermore, we provide complete system integration of communication and security systems, as well as IT and network technologies.

Your project thrills us. We get equally excited about supporting public clients or emergency services or public transport and railroad companies or different industries or ...

We are pleased to support you.



Services

- Service and maintenance
- Project management
- Engineering
- Consulting
- Training and documentation
- Project planning of technical installations and systems
- Planning of radio networks and measurements
- Communication solutions
- IT and network solutions
- Security solutions
- System integration

Contact



PPMnet AG
 Rudower Chaussee 29, 12489 Berlin
 ☎ +49 30 921087300
 📠 +49 30 921087399
 ✉ info@ppmnet-ag.de
 🌐 www.ppmnet-ag.de



Locomotive ALP-45DP with a PROSE measuring wheelset ready for use at the New Jersey Transit Meadows Maintenance Center

Rolling Stock Expertise

PROSE offers a comprehensive range of services in engineering, testing, acoustics, measurement wheelsets, and certification services

PROSE was founded in 1982 and is a global, independent service provider in the mobility solutions sector. Our 9 locations are spread across Germany, Sweden, Italy, Denmark and Switzerland and we are particularly active in the rolling stock sector. We provide engineering and consulting services worldwide, operate accredited testing facilities, and produce customised wheelset solutions.

With more than 200 dedicated and experienced employees, we solve our customers' global mobility challenges, wherever we are needed. With more than 3,000 successfully completed or in-progress projects worldwide, we can confidently say that we have the knowledge and expertise on an international scale to carry out any project anywhere, both reliably and on time.

Our customers—manufacturers, operators, authorities, and maintainers—trust us to deliver total solutions for complex requirements, often involving more than one of our broad range of services.

We provide high quality, cost effective A to Z engineering solutions through a deep understanding of our customers' businesses.

We support you in every stage of the life cycle—from vehicle concept planning or assessment, the formulation of requirements, such as in tenders

or specifications, to the development of whole vehicles or components, e.g. bogies.

We offer this both comprehensively in the form of turnkey engineering, including all manufacturing documents, or in partial aspects, e.g. relating to driving technology, structural strength, braking technology, servicing, documentation, RAMS, fire safety, acoustics, vibration, LCC, vehicle gauge or clearance, cross-wind, longitudinal dynamics, wheel/rail contact etc.

We manage and monitor production (including welding and bonding engineering), issue verification with measuring techniques related to driving technique, braking technique, EMC, current collectors, acoustics, etc. and regulate authorisation.

PROSE provides proven solutions for the measurement of wheel/rail forces covering the whole spectrum, from idlers to locomotive wheelsets with the hollow-shaft drive. We plan the modernisation of vehicles or determine the residual value of vehicles.

We optimise the operation process and maintenance and resolve all kinds of sensitive problems—most in the direst need.

Services

- Engineering and design of vehicles and components
- Strength calculations and technical analysis for driving
- Noise and vibrations including travel track
- Testing of vehicles by our accredited test centre
- Measurement services
- Support with procurement and authorisation
- Troubleshooting of all kinds
- Sale and rental of measurement wheelset systems

Contact



PROSE Berlin GmbH
Colditzstr. 28, Geb. 7, Aufg.C
12099 Berlin
☎ +49 30 754490810
☎ +49 30 754490899
✉ info.berlin@prose.one
🌐 www.prose.one



Maintenance, commissioning, and modification of rail vehicles

Your competent contact with ideal conditions

RWS Railway Service GmbH is a mid-sized company in the rail transport industry, headquartered in Neuhagen, near Berlin. Since 1999, we have been planning projects and constructing and manufacturing electrical and electronic components and systems for rail vehicles. Our customers include Deutsche Bahn AG, the Swiss Federal Railways (SBB), and private rail transport companies in Germany and Europe, as well as the system manufacturers Alstom, Bombardier, and Siemens. RWS is certified according to ISO 9001:2008. In 2016, RWS received the ECM certification.

Our areas of expertise:

- Development, project planning, and construction of electrical components and systems for rail vehicles
- Manufacturing of switch cabinets, underfloor containers, mounting plates, and on-site modification work
- Testing of electrical components and entire rail vehicles, commissioning
- Design and installation of fire detection systems in rail vehicles
- Development and maintenance of electrical and electronic devices
- Maintenance and servicing of components and rail vehicles

In the future, RWS will also offer maintenance, commissioning, and modification services for rail vehicles, including long-distance trains, light rail vehicles, and e-locomotives at the Elstal site (Wustermark). The newly-built service and maintenance hall meets all of the technical requirements for professional execution of these services; for example, the voltages required for maintenance are available from overhead conductor rails. Repair and refurbishment of electronic components will continue to be offered at the RWS site at Neuenhagen.

The Elstal site is ideally connected to all major railway lines from the north, south, east, and west, offering convenient access for rail vehicles. The close proximity to the Berlin-Spandau and Berlin Hauptbahnhof train stations offers excellent conditions for carrying out urgent repair and maintenance work on trainsets during their down-time in the west of Berlin. Additionally, the new hall will enable us to carry out a comprehensive range of type tests on newly-constructed vehicles. We have two track gauges planned for such vehicles (1,000 mm and 1,435 mm).

Services

- Engineering
- Manufacturing/Assembly
- Testing technology
- Fire detection technology
- Control electronic
- Maintenance/Service

Contact



RWS Railway Service GmbH
Am Wall 31, 15366 Neuenhagen
☎ +49 3342 159970
📠 +49 3342 1599720
✉ info@railway-service.de
🌐 www.railway-service.de



Innovative Noise Reduction for Silent Areas

Noise Reduction at Rails, Wheels and Machines

Noisy trains at noisy tracks: That's no longer state of the art – tuned dampers are improving the situation for passengers and residents. Due to the harsh environmental conditions, only stable products are able to stay in long-term economic use.

Often noise protection is required only at limited track section; therefore, it makes sense to optimise the track instead of the vehicles.

However, the conventional noise walls are bordering open spaces, especially in urban areas. Also uncontrolled graffiti 'art' covers these walls very quickly – therefore innovative alternatives are very welcome.

Previously, the practical usage of a homologation procedure was necessary, both for acoustical and rail technical issues. Neither of the (sometimes oppositional) targets can be left out. Also a fast installation is necessary: the track closure periods have to be minimised as much as possible.

If acoustic specification limits of rail vehicles have to be met or the highly annoying 'curve squealing' has to be switched off, similar measures are useful at vehicle wheels. Of course, all of them have to be homologated and meet the legal requirements.

Special attention has to be paid to the boundary conditions of each vehicle: Mostly the available space and additional weight is strictly limited, only a direct communication with the vehicle supplier can solve these challenges.

Our portfolio offers passive vibration absorbers for different applications especially in the railway sector but also in general engineering. Due to the passive working principle, no energy supply is required; therefore, they can also be used at hard-to-access track sections or at vehicle wheels.

Three product categories are available: VICON AMSA Rail Dampers, VICON RASA Wheel Dampers and VICON SYSA Absorbers for Steel Structures, e.g. steel bridges.

Rail and wheel dampers are introducing a noise reduction of up to 4 dB. The bridge absorbers mitigate the 'roaring noise' of up to 7dB which leads to a similar noise amount compared to the adjacent track.

Often the rail damper VICON AMSA has been assessed to suppress rail corrugation which saves maintenance costs.

Services

- Design, engineering and production of passive vibration absorbers
- Homologation, benefit measurements and validation in real operation
- Vibration absorber, also for general engineering
- Lead and consulting in railway noise projects

Contact



Schrey & Veit GmbH
Berlin Office
 Bundesallee 156, 10715 Berlin
 ☎ +49 30 520057112
 ✉ info@sundv.de
 🌐 www.sundv.de



Safety marking at the train platform

Innovative Fibre-Optic Concrete from Berlin

Illuminated concrete for infrastructure

SIUT started as a scientific spin-off of the Technische Universität Berlin in the areas of building materials and building chemistry. In 2012, the two founders, Vincent Genz and Benjamin Westerheide, started their research and cooperative collaboration with the University on their innovative fibre-optic concrete. Their products have been officially on the market since 2015. The luminous concrete can either be used in the field of design or for building intelligent safety concepts. Especially in public spaces, the concrete offers perfect visibility as an active light source. Major companies such as Deutsche Bahn AG are already working with us.

Due to clearly visible safety marking in the form of luminous lines, symbols, and pictogrammes, the composite developed offers improved orientation in public spaces. This technique serves on the one hand in managing flows of people and traffic in railway stations, airports or in parking spaces. On the other hand, it can be used for marking danger spots or signalling during fire evacuations. Due to the direct illumination of the concrete surface, the material becomes an information source whilst actively communicating with its environment. Thanks to material's frost-, water- and impact-resistance, SIUT's products are protected from external influences and can therefore be used in many different places.

In cooperation with Deutsche Bahn, SIUT develops customised products which guarantee safety and increase passengers' comfort at the same time. Taking the form of flashing arrows and symbols, the concrete components are intended to assist orientation and visibility of danger spots for passengers on platforms. The first projects for Deutsche Bahn have already been implemented.



Marking of danger spots (e.g. steps)

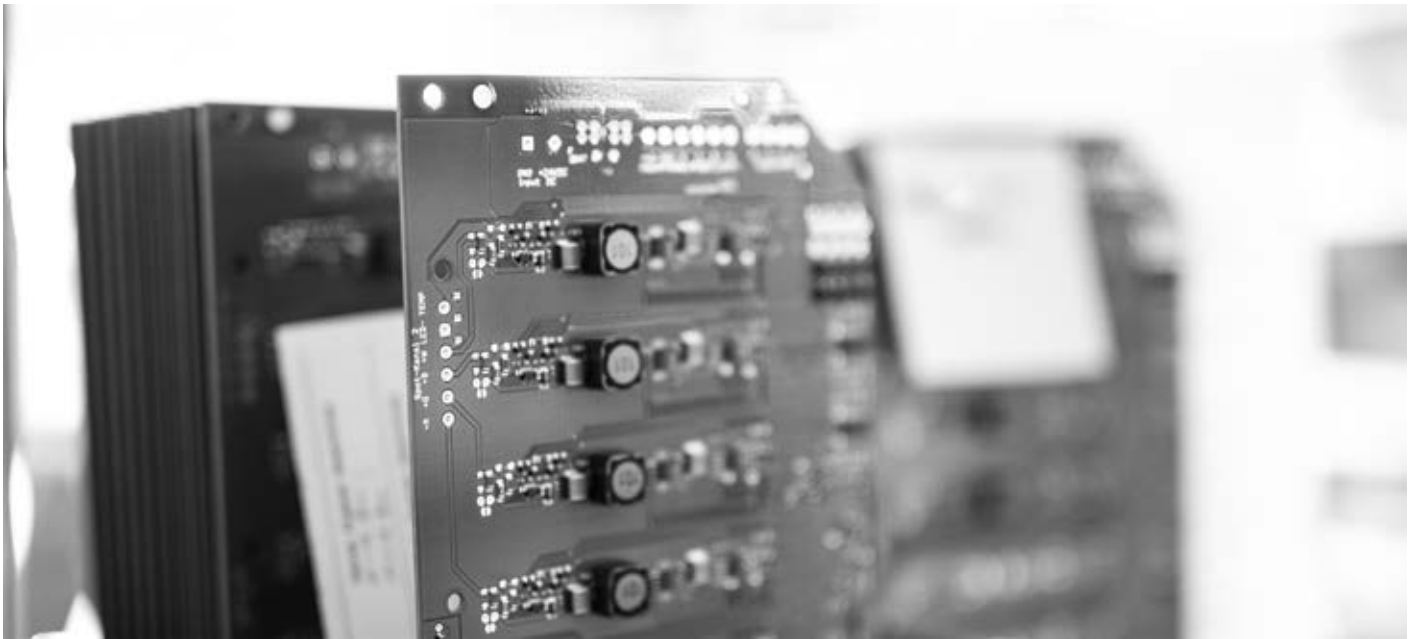
Services

- Residential constructions
- Interior fitting
- Hotel business and gastronomy
- Infrastructure
- Security concepts
- Duplicate parts

Contact



SIUT GmbH
Ackerstr. 76, 13355 Berlin
☎ +49 30 31478751
✉ info@siut.eu
🌐 www.siut.eu



Traditional firm with pioneering technology

LED technology | Medical technology | Component production

The Berlin specialist for the design, development and production of cost-optimised solutions – SRM Technik GmbH offers anything but standard solutions. For customer-specific tasks and challenges, SRM Technik GmbH develops sophisticated products for your application – in all performance areas – with consistently accurate form and function and maximum technical competence.

SRM is all about control – regulation – measurement

Firmly established in the market, SRM Technik GmbH is a trouble-shooter, supplying products that meet customers' requirements with regard to price, quality and time-sensitivity. By integrating standard processes, SRM ensures that projects are managed efficiently, from enquiry through concept development, to volume delivery. Extensive networking in the materials market guarantees timely access to the required component.

Our service portfolio

- Layout and development
- SMD assembly
- Vacuum soldering via vapour phase
- Lead-free and non-lead-free wave soldering
- THT assembly
- Protective coating
- Maintenance
- Programming/functional testing

- Inspection
- Materials/circuit board procurement

LED technology

Development and manufacture of customer-specific medium- and high-power LED lighting solutions for industry, design and architecture – tailored to the spatial and technical requirements and using all the LED types/optics available on the market.

Medical technology

According to your specific requirements, SRM Technik GmbH provides uninterrupted power supply, test equipment and impulse generators/monitors for medical technology devices – from design, through development, to production – always focusing on the quality and safety of these highly-sensitive applications.

Component manufacture

- Combination of LED, development and production
- SMD assembly: samples, short and medium production runs
- Use of semi-automatic machines for sample production
- Flexible assembly concept with SMD assembly machines
- Vacuum vapour phase soldering.

Services

- LED technology
- Medical technology
- Component production

Contact

SRM

SRM TECHNIK GmbH
Colditzstr. 33, 12099 Berlin
☎ +49 30 70190060
📠 +49 30 70190099
✉ anfrage@srm-technik.de
🌐 srm-technik.de



Stadler Pankow GmbH

Customised solutions for the railroad: our strength

Stadler Pankow GmbH, based in Berlin (Pankow and Reinickendorf) and in Velten in Oberhavel County, is the German branch of the multinational Stadler Rail Group, which provides customised solutions in the rail vehicle sector. The company has sites and offices in Switzerland (Altenrhein, Bussnang, Winterthur, Biel), Spain, Poland, Hungary, the Czech Republic, Italy, Austria, the Netherlands, Algeria, Belarus und the USA.

The Stadler Group's product portfolio includes high-speed trains, intercity trains, double-deck trains, regional and commuter rail trains, underground trains, tram trains and trams. In addition, Stadler manufactures main-line dual-mode locomotives, shunting locomotives and passenger carriages, including the most powerful diesel-electric locomotive in Europe.



KISS ODEG

The group provides a full service offering in all market sectors in local public transport. This offering ranges from the development, construction and manufacturing of the vehicles through its assembly, paintwork and activation to its maintenance, modernisation, repairs and refurbishments. This, alongside decades of experience and technical expertise, allows the company to perform tasks quickly and with an eye to cost efficiency.

Stadler Pankow is responsible for market cultivation in Germany as well as the export of trams and light-rails and is also the center of expertise within the Stadler Group for the development of trams, light rail vehicles and metros. Here is where vehicles for the German market and for export as developed, manufactured and assembled.

Stadler makes sustainable mobility in the future possible. Sensitive and sparing use of natural resources is a key feature of railway vehicle production. In addition to the profitability of the products, Stadler places high importance on the safe provision of necessary components and parts.

Stadler keeps track of the effects of its work on the environment and observes the entire lifecycle of each product – from the concept development phase through production and operation through to recycling. From the manufacture of raw materials through to their reutilisation.

Services

- Development, construction and assembly in the mainline railway and urban transport sectors: high-speed trains, intercity trains, regional trains and city trains, tramways, metros and tram-trains
- Service offering: Maintenance tasks, modernisations, refurbishments, repairs and spare parts supply

Contact

STADLER

Stadler Pankow GmbH

Lessingstr. 102, 13158 Berlin

+49 30 91911616

+49 30 91912000

stadler.pankow@stadlerrail.com

www.stadlerrail.com



Innovative Engineering of Critical Systems

Systemerel Group has been creating, designing and implementing innovative solutions in the area of real-time and safety critical systems for over 15 years.

It is specialised in critical software and RAMS (Reliability/Availability/Maintainability/Safety).

Its expertise is covering a wide range of skills:

- Development, verification, and validation or software assessment at all safety levels
- Building of a full safety case up to its approval by a certification authority
- Related activities: methodology, architectural study, tools, etc.

The source of its competitive differentiation lies in its ability to combine:

- Key technological expertise (B method, SCADE, Model Checking, Simulink + Design Verifier, Ada, PikeOS)
- Rigorous development processes that comply with standards (DO178B, CENELEC, CE161508, MIL-STD, ...)
- RAMS techniques and methods specific to each industry

The mastery of advanced technologies such as formal approaches, linked to a thorough industrial knowledge (signalling, avionics...), enables Systemerel to supply highly innovative and competitive solutions for the benefit of its customers.

In particular, Systemerel offers the following solutions:

- Systemerel Smart Solver: formal verification of systems or software developed in SCADE, C or Ada
- Systemerel IXL Builder: design of formally proven automata-based systems
- Systemerel Data Analyser: analysis and diagnosis of communicating systems behaviour
- Ovado2: automatic formal validation of critical configuration data
- EAL4+ secure implementation of the OPC-UA protocol

Its ability to innovate with a commitment of results makes Systemerel a strong partner of leading actors in the railway, aeronautics & space, defence, energy & industry sectors.

For more information: www.systemerel.fr/en

Services

- Consulting & Expertise
- Safety Critical Software Development
- Verification & Validation
- Assessment & Audit
- RAMS
- Training
- Products: Ovado2, Systemerel Smart Solver, Systemerel IXL Builder, Systemerel Data Analyser

Contact



Systemerel GmbH
Allerstr. 5, 12049 Berlin
✉ patricia.langle@systemerel.fr
🌐 www.systemerel.fr/en



Talgo Site

Talgo (Deutschland) GmbH

In addition to the maintenance of Talgo rail vehicles, our strength lies in the mastery of small fleets and special problems

Talgo (Deutschland) GmbH maintains rail vehicles for both day and night services as well as power cars. With a staff of over 100, our Berlin works carry out both preventive and corrective maintenance work. Our workshop is certified to ISO 9001:2008.

We also have verifications of suitability for the bonding and welding of rail vehicles. Among other things, our works has up to 365m of covered track and its extensive equipment includes:

- Underfloor lathe
- Automatic wheel parameter measurement equipment



underfloor wheel lathe

- Inspection pit
- Overhead cable testing section
- Gantry cranes
- Module repair workshop (power electronics modules, WC modules, water modules, air conditioning modules).

Talgo (Deutschland) GmbH is part of the globally operating Talgo Group with headquarters in Madrid.

The Talgo name is renowned all over the world for its innovative vehicle design with cars of very light-weight articulated construction. We are proud to be global pioneers in the field of total maintenance solutions for the railway sector. Since the 1950s we have offered the advantage of being able to complete the 'technological cycle' of our products, from design to assuming complete responsibility for the lifetime maintenance of the trains that have been supplied.

Since 2015 we have been certified as an 'entity responsible for maintenance' (ECM-9159) in accordance with EU Directive 445/2011. If required, with the help of our IBM software solutions we are able to provide all four functions of the ECM directive from a single source – including audit-proof verification management.

Services

- On-site maintenance of passenger trains and their components
- Development and implementation of modifications; obsolescence management
- Underfloor profiling of all types of rail vehicles with an axle load up to 22.5 t
- Sales, commissioning and support from underfloor wheelset lathes and measuring equipment for wheelset diagnosis
- Operating and technical train manning

Contact



Talgo (Deutschland) GmbH
Werk Berlin
Revaler Str. 99, 10245 Berlin
☎ +49 30 2388000
📠 +49 30 23880011
✉ info@talgo.de
🌐 www.talgo.de



Innovations for the Railway System

Application-oriented research and teaching at the Brandenburg University of Applied Sciences

Since its establishment in 1992, rail systems have played a key role in research and teaching at the Brandenburg University of Applied Sciences. Here, a team of committed colleagues from the three fields of engineering, information technology, and economics investigate a wide spectrum of railway-specific research topics and issues.

The university is a member of the Kompetenznetz Rail Berlin-Brandenburg GmbH competence network (KNRBB) and a partner of the Eco Rail Innovation Initiative (ERI). Furthermore, the Brandenburg University of Applied Sciences will also be playing an active role in the construction of the future Bahntechnologie Campus Havelland (BTCH).

At the institute for Marketing, Innovation, and Rail Systems, the various aspects of railway traffic have been studied for many years. The focus here is on topics such as innovations for rail systems, rail freight transport and combined transport. Furthermore, market and technology analyses are also carried out and the corresponding concepts developed. A large number of final theses also involve various projects from the railway sector.

Current research topics include the market introduction of innovations in rail systems (system technologies), the development of new production concepts for rail freight transport or comparisons between and evaluations of innovative technologies for combined transport.

In a recently published study, a total of six focal areas were identified which played a major role when shifting goods traffic over to rail-based systems. Apart from topics such as modern production concepts and innovation, other issues examined also include access to rail systems (Freight Depot 2.0) and economically viable infrastructure. Consolidating and increasing the knowledge of rail systems among major players in the sector is of crucial importance.



Services

- Market analyses/market research/innovation intelligence
- Marketing concepts and strategies
- Market introduction of innovations
- Technology and innovation management
- Employer branding and acquisition of qualified personnel
- Concepts for rail freight transport/combined transport
- Consulting for railway companies and the railway industry

Contact



Technische Hochschule
Brandenburg (Fachgebiet
Marketing-Innovation-System Bahn)
Prof. Dr. Uwe Höft
Magdeburger Str. 50
14770 Brandenburg an der Havel
☎ +49 3381 355203
📠 +49 3381 355199
✉ uwe.hoef@th-brandenburg.de
🌐 www.th-brandenburg.de



Interlocking in the railway and teaching laboratory Berlin © Berlin Partner/M. Wüstenhagen

Track and Railway Operations

TU Berlin

The Chair of Track and Railway Operations researches and teaches in the overall system railway excluding the vehicle construction.

Handled topics are the infrastructure such as the rails and superstructure, with the rail-wheel-contact and railway noise; the control and safety systems including research in potential further developments; training of planners; design of railway tracks; the strategic infrastructure planning including rules and regulations and the stochastic analysis of situations in the railway operation.

Additionally, the Chair of Track and Rail Operations analysis railway operation situations with simulations and teaches these to the students. With the lectures "rail freight transport" and "Planning for control and safety systems in railways" the chair offers two lectures, which are unique at German universities.

Current research topics are the effects of the increasing automation in the railway operation on the training methods used to train blue and white collars and the Human-Machine-Interaction at dispatcher work-places. Additionally, alternative forms of energy for the railway sector are researched for their economic use.

The Chair also has the "Eisenbahn-Betriebs- und Experimentierfeld", in English: railway operations and experiment field, which consists of two driving simulators, an outdoor area, and signal boxes. With real signal boxes from different periods in time, a model railway is operated as an output medium. On all of these, the railway system is taught to different customers which are fit specific to the client needs.

Current topics in the railway industry are regularly illustrated in the Eisenbahnwesenseminar held in german language every Monday at 6 PM during the lecture period.



Outside Area of the Chair
© Berlin Partner/M. Wüstenhagen

Services

- Training in railway operations for beginners and advanced users, adjusted to the needs of the clients
- Stochastic analysis in the railway operations
- Noise measurements on railway lines
- Operational investigations
- Capacity analysis on railway routes
- Routing of railway lines
- Economic feasibility studies in the railway sector

Contact



Technische Universität Berlin
Fachgebiet Schienenfahrwege und
Bahnbetrieb

Sekr. SG 18, Salzufer 17-19
10587 Berlin

☎ +49 30 31423314

☎ +49 30 31425530

✉ Sekretariat@railways.tu-berlin.de

🌐 www.railways.tu-berlin.de



The Railway of the Future

TU Berlin's Chair of Rail Vehicles works on innovative themes for railway technology

In the Chair of Rail Vehicles at Technische Universität Berlin, 18 employees work on topical research themes. They include extensive studies in the focal areas of acoustics, vehicle dynamics, vehicle engineering and passive safety, as well as telematics and maintenance in rail freight systems.

The chair strives to apply a systematic combination of measurement and simulation to all issues.

The parameters required for simulation can be determined by measuring real system so that precise maps can be created in simulation models. Proposals for engineering-related changes on existing systems are based on the results.



One current research project analyses the wear behaviour of wheelsets in freight car bogies based on simulation computation and a subsequent measurement phase. These activities make it possible to represent the benefits of new, track-conserving bogies, increasing their appeal to freight car owners.

More attractive freight transport

Other studies involve the automatic detection of flat spots and axle bearing damage, as well as monitoring freight car operational performance and vehicle dynamics. This enables condition based maintenance for freight wagons, which reduced costs and contributes to freight transport acceleration.

Acoustics is another major research field. Currently, the chair is creating a simulation model for computing the acoustic emissions of track and analysing activities on the track bed structure and the vehicles themselves. Further examples of current research projects are: longitudinal dynamics studies, automatic braking tests, the development of a "snap-on" control cab for rail freight systems, supervisions of the development of new freight cars and freight car bogies and the application of simulation technology to the certification process.

Services

- Acoustics of rail vehicles and tracks
- Engineering and passive safety of rolling stock
- Vehicle dynamics and their dimensioning
- Freight car telematics and maintenance
- Increasing energy efficiency and reducing greenhouse gas emissions

Contact



Technische Universität Berlin,
Fachgebiet Schienenfahrzeuge
Schr. SG 14, Geb. SG 12
Salzufer 17-19, 10587 Berlin
www.schieneinfzg.tu-berlin.de



Chair of Civil and Building Systems at the TU Berlin

Complex infrastructure networks and plant systems are at the forefront of education and research

As part of the Technische Universität Berlin and the Institute for Civil and Building Systems, we are involved in the economic efficiency, environmental sustainability, and optimisation of frequently-used infrastructure systems, such as train stations, airports, buildings, streets, bridges, power stations, and sewage treatment plants.

We at the Chair of Structural Systems are also researching models to demonstrate the components of the systems and illustrate their physical and technical interaction with mathematical process models. Furthermore, we are also working on solutions for a targeted implementation of this model in practice in the field of design, so that engineers can better understand the complex interactions between individual system components.

This will allow for structures to be planned, constructed, and maintained in an optimal way. We educate civil engineers in sustainable system concepts. Emphasis is placed on methods for stochastic simulation of processes and product modelling of building structures.

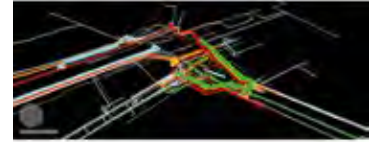
In the field of transport and railways, we are currently working on the Horizon 2020 project RAIL (DESTination RAIL). Here, new technolo-

gies are being developed to filter problematic infrastructures out of the rail network and analyse them, in order to offer solutions to the problems.

These solutions can be offered thanks to computer-aided programs that support the infrastructure manager in making rational and safety-related investment decisions. In this way, the incidence of risks and errors can be reduced further and further. If rail freight transport is to be increased in Europe, then it must also be designed to be safer, more reliable, and more efficient!

We will also be starting work on a new project, Safe10T, in 2017.

Of course, the team also deals with current topics and projects. As a research institution, we are always interested in new subjects, also in the form of innovative Bachelor or Master theses.



Services

- Research and Education

Contact



Technische Universität Berlin
Institut für Bauingenieurwesen,
Fachgebiet Systemtechnik
baulicher Anlagen
TIB, Gebäude 13 B
Gustav-Meyer-Allee 25, 13355 Berlin
[www.civilsystems.tu-berlin.de/
menue/civil_and_building_sys-
tems](http://www.civilsystems.tu-berlin.de/menue/civil_and_building_systems)



Image source: Fotolia

Cluster Mobilities Research at department of Arbeitslehre/Technik and Participation, TU Berlin

Mobility and transport form the core thematic cluster of the chair for methodological questions about technology and participation, transformation, and knowledge.

Exemplified by transport and mobility we explore infrastructures in their social and economic context. Among the key sectors of energy consumption, transport is globally the fastest growing sector. Thus, the energy transformation and the sustainable development of the modern world is crucially depending on a "transport transformation". In this vein, the aim must be a transformation towards a mobility, which is sustainable and independent of growing scarcity of resources.

Within the mobility research cluster we explore how similar challenges can be and have been defined and solved differently by conducting internationally comparable case studies about the history and future of mobility and transport. Our theoretical as well as application-oriented projects search for new solutions regarding the satisfaction and the facilitation of growing demands for an increased, safe and just mobility.

Therefore, we use public participation methods, scenario processes, "Leitbild" development as well as constellation analysis and historical comparisons.

Currently running projects:

- Marshrutkas – Fluid mobilities for cities in transformation: Spatial dynamics of marshrutkas in Central Asia and the Caucasus
- Automobile Industry Goes Global – Foreign Actors, Models and Capitals in the Modernisation of Soviet and Post-Soviet Automobile Manufacturing
- Forschungscampus Mobility2Grid
- Ramses – Rural Mobility 2.0
- VERS – Verkehrszugangssysteme

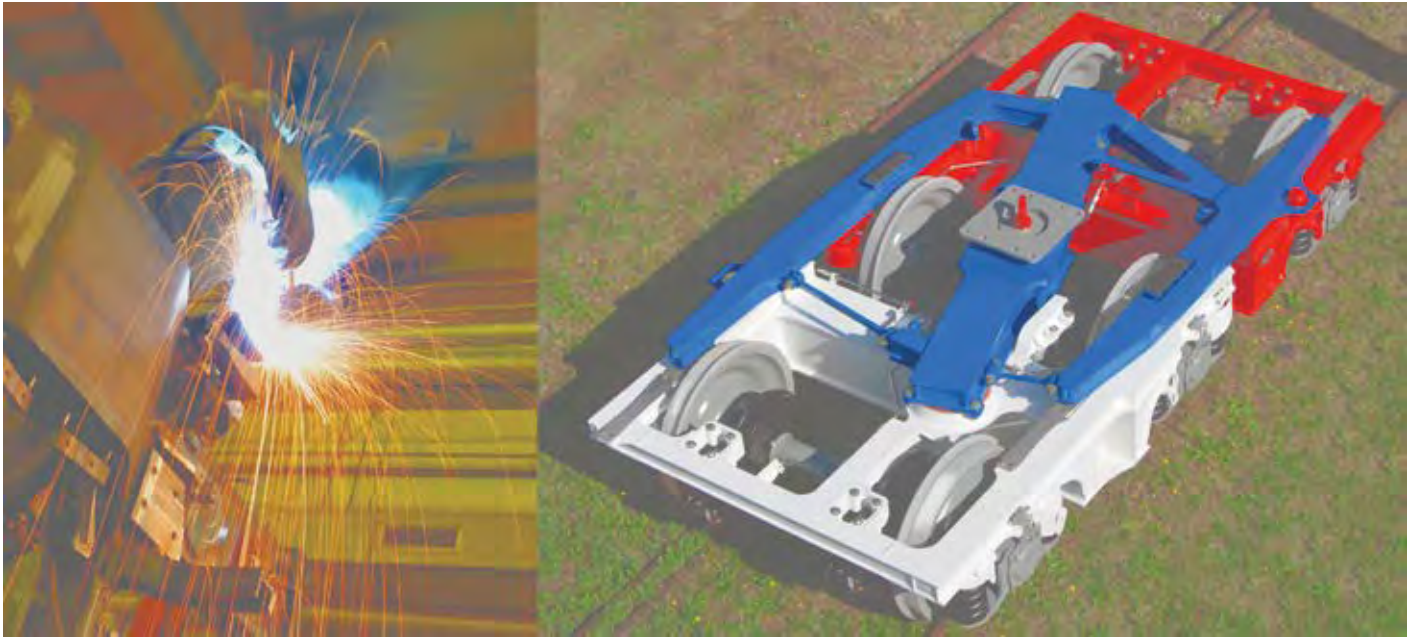
Services

- Development of mobility and transport scenarios
- Historical and comparative analyses of transport modes and mobility behaviours
- Citizen participation processes
- Constellation analyses

Contact



TU Berlin – Cluster Mobilitätsforschung am Fachgebiet Arbeitslehre/Technik, Partizipation des IBBA (Institut für Berufliche Bildung und Arbeitslehre)
 Marchstr. 23, MAR 1-1, 10587 Berlin
 ☎ +49 30 31421406
 📠 +49 30 31421120
 ✉ Hans-Liudger.Dienel@tu-berlin.de
 🌐 www.technik.tu-berlin.de/menue/forschung/cluster_mobilitaetsforschung



The HFB 3.25 triple axle bogie – Winner of the Privatbahn Magazine Innovation Award 2012

Innovation from Vetschau

True to the motto “The future lies on rails” – Manufacturing bogies and welded components since 1970

TransTec F&E Vetschau GmbH specialises in the fabrication, engineering, developing, production, assembling and maintenance of customised bogies.

Today these are used worldwide in railway vehicles such as trams, subway and commuter trains, passenger trains and freight wagons, service vehicles, and rail buses. Along with the decade's worth of experience and expertise, the company is especially distinguished by its qualified employees with a high level of commitment. With passion and innovative drive, they find the right solution that satisfies customer requirements and wishes. In this context, quality is a top priority. All products only leave the works in Vetschau after a detailed quality inspection.

The spectrum of products and services is as varied as the customers' requirements. Therefore, only high quality and reliable bogies are manufactured which are precisely adapted to local conditions. Furthermore, components and assemblies are also being produced for other industries and many services in the steel construction sector are offered.

From customised development, manufacturing, spare parts delivery over assembling and maintenance to any kind of servicing, the customers obtain everything from one source. No matter which products or services you order, fair conditions and top performance are guaranteed. This is exactly the reason why products from Vetschau are successfully in use worldwide today.

“Our experience is your success.”

Thanks to a high production depth and the employees' wealth of experience, TransTec F&E Vetschau GmbH is a competent partner for various industrial sectors. As especially complying with highest safety standards plays a key role in the rail operation, TransTec F&E Vetschau GmbH continuously invests in the modernisation of its machine park in order to continuously guarantee a high quality.

Services

Railway Vehicles

- Engineering
- New construction
- Maintenance
- Repair of bogies and components
- Spare parts
- Jigs/Fixing

Steel Construction

- Flame cutting
- Machining
- Welding
- Sand blasting
- Coating
- Assembly

Contact



TransTec F&E Vetschau GmbH
Fabrication & Engineering
Juri-Gagarin-Str. 10
03226 Vetschau/Spreewald
☎ +49 35433 520
☎ +49 35433 5222
✉ info@transtec-vetschau.de
🌐 www.transtec-vetschau.de

VERMDOK offers surveying services

Our medium-sized enterprise provides precise measurement by using laser trackers

Founded in 1997 as a surveying office, VERMDOK GmbH has steadily expanded its portfolio in the area of construction and engineering.

Since the establishment of VERMDOK for Industries in 2013 our company offers comprehensive services in the area of industrial surveying in Germany and the rest of Europe, especially in Switzerland.

Together with our subsidiary company VERMDOK for industries Australia Pty Ltd, located in Perth, we are also easily available for you in the Australian-Asian region.

VERMDOK for Industries is your service provider if you need precision measurements in an industrial environment. We would always support you in the precise measuring range of micrometre (μm), in the positioning and orientation of plants and components, the inspection of work-pieces before and after assembly, and in the determination and validation of geometric variables.

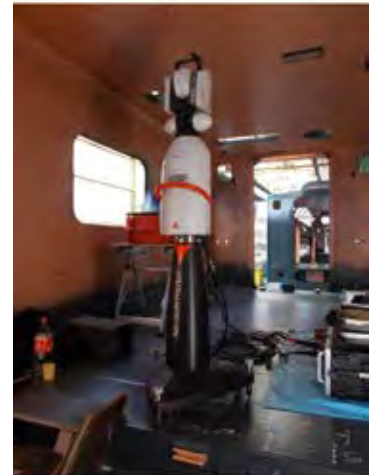
Since several years, we assist well-known major companies in the railway sector. In addition, our clients include companies in the fields of plant engineering, automotive engineering, mineral processing and the aircraft industry.

Our portfolio is supplemented by the services of the VERMDOK GmbH that is DIN EN ISO 9001

and mainly operates in the fields of construction and engineering surveying, acquisition of land for construction projects such as roads, planning services for small- and medium-sized-construction projects of various public utilities and image flight using UAV (unmanned aerial vehicle).

Together, VERMDOK for Industries and VERMDOK GmbH offer a wide range of surveying services to support your project in the area of civil engineering and facility management, in the cadastral field or in large-scale industrial surveying.

The instruments used (without exception Leica/Hexagon instruments) are subject to an annual calibration and verification according to our certification. The instruments used are subject to an annual calibration and verification according to our certification. The employment of the Leica Absolute Tracker AT901-LR in combination with precision reflectors enables us to determine positions with an accuracy of $\pm 10 \mu\text{m} + 5 \mu\text{m/m}$ in a measuring volume of $10\text{m} \times 5\text{m} \times 2,5\text{m}$. In unchanged parameters, repeatable and therefore comparable measuring results are guaranteed. The laser tracker has a very short initialisation phase and is ready for operation within minutes. In addition, it can be transported and operated by just one person which provides a high degree of flexibility.



Surveying using laser tracker, Vermdok for Industries

Services

- Staking out
- Variance analysis
- Reverse engineering
- Calibration
- Adjustment

Contact



VERMDOK GmbH
Jupiterstr. 10, 13405 Berlin
☎ +49 30 417498690
📠 +49 30 4174986999
✉ info@vermdok.de
🌐 www.vermdok.de



Booth at the world's leading trade fair for transport technology InnoTrans 2016, Vermdok for Industries



High-tech automation for harsh environments

transCON – the optimal automation solution for all kinds of large and commercial vehicles and stationary areas with higher durability requirements

YACOUB Automation GmbH, founded in 1992, is a Berlin-based technology company with excellent expertise in modern processor and software technologies.

Whether working with rail cars, construction vehicles such as diggers or cranes, special vehicles or on operating sites at an outside facility, the transCON system provides solutions in the most varied areas of application.

transCON was developed using the latest technologies. It stands out thanks to its ability to provide maximum performance despite its very small dimensions, the high computing power of the CPUs, its extremely fast system throughput, as well as its incomparable accuracy and reliability.

The typical applications of the system in vehicles are:

- Management of the driver's cab information
- Control of drive units
- Door control
- Control of the air conditioning system
- Passenger information
- Control of the light
- Passenger count

The company's key skills include the specification and development of automation and network products for use in industries requiring higher technological and environmental specification. Our stand-out products include our unique solutions for the railroad industry (EN 50155/ EN 50121-3-2/EN45545), explosion protection zones 1+2, functional safety zones 2 and 3, and SmartGrid (IEC 61850).

The company's application experience and market knowledge allow it to offer client-specific developments from the problem formulation phase through devising a solution approach to creating a serial product.

To make this possible, the company works closely with internationally renowned technology partners, such as the Fraunhofer Gesellschaft and the Gesellschaft für Mathematik und Datenverarbeitung (GMD) and, with its product portfolio "Made in Germany", has shaped the global automation and network technology industry significantly.

Services

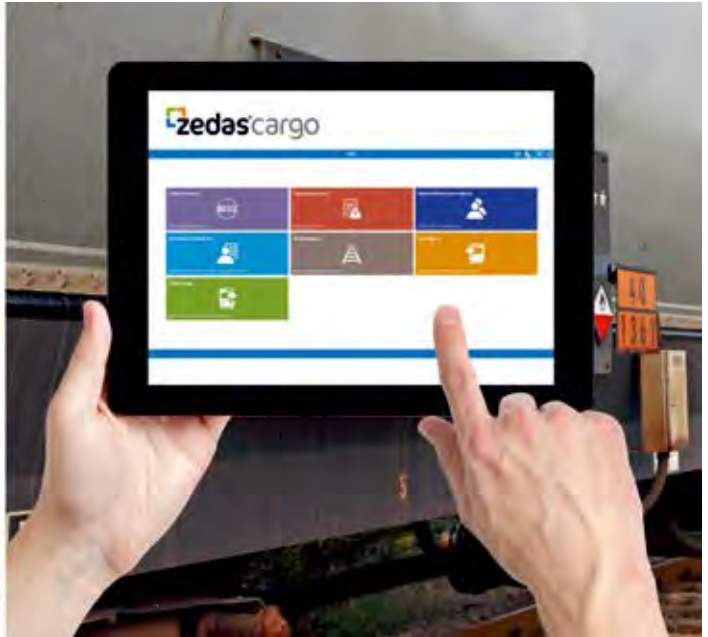
- Automation
- Industrial Ethernet
- Soft- und Hardware development
- Consulting

Contact



YACOUB Automation GmbH
Gustav-Meyer-Allee 25 Haus 12.2
13355 Berlin

☎ +49 30 34998340
☎ +49 30 349983428
✉ info@yacoub.de
🌐 www.yacoub.de



zedas® – consistent railway processes, intelligently managed

IT for rail transport

zedas® – the consistent comprehensive solution for logistics management and maintenance

ZEDAS GmbH develops software products for rail transport logistics management and for facility management of vehicle fleets and technical systems.

zedas®cargo is our logistics solution for national and international rail freight transport. It makes the efficient management, control, monitoring, documentation and invoicing of all freight transport in shunting and long-distance transport possible, from the signing of a contract through implementation and monitoring to invoicing. As a result, it ensures the safe and efficient handling of transport jobs. A sophisticated rulebook, definable workflows with plausibility assessment and configuration options are at your disposal. The solution delivers solid decision making bases on measures for restructuring, resource planning, and cost reduction. This results in a variety of competitive advantages for your long-term success. The efficiency of long distance transport increases and logistics at works grounds, docking areas, and terminal areas are optimised with zedas®cargo.

zedas®asset is our standard software for maintenance and technical systems management. The solution optimises the operation of railway infrastructure networks, vehicle fleets, and systems for cargo handling: it increases availability and reduces operating costs. With zedas®asset, you can monitor the condition of railway vehicles and facilities and control the efficient use of maintenance resources. You can assess the current condition of your vehicles and facilities at any time, taking into account the stress factors affecting them. Inspection data (e. g. on zedas®mobile) is seamlessly recorded and ensures a direct update of condition data and master data from measurements and visual inspections. You can therefore plan, control and manage maintenance processes according to requirements and in a condition oriented and cost effective manner. zedas®asset incorporates your partners and optimally supports you in your particular key tasks. The solution supports your continuous improvement process and your investment decisions.

Services

- The ZEDAS GmbH product portfolio comprises software solutions for rail transport
- zedas®cargo – Logistics solution for shunting operations and long-distance transport
- zedas®asset – Technical facility management and maintenance for railway infrastructure, railway vehicles and facilities for cargo handling

Contact



ZEDAS GmbH
Adolf-Hennecke-Str. 37
01968 Senftenberg
☎ +49 3573 70750
📠 +49 3573 707519
✉ info@zedas.com
🌐 www.zedas.com



Intelligent Transport Systems

High Tech Creating the Future Today

The capital region provides the optimal conditions for developing and testing new technologies

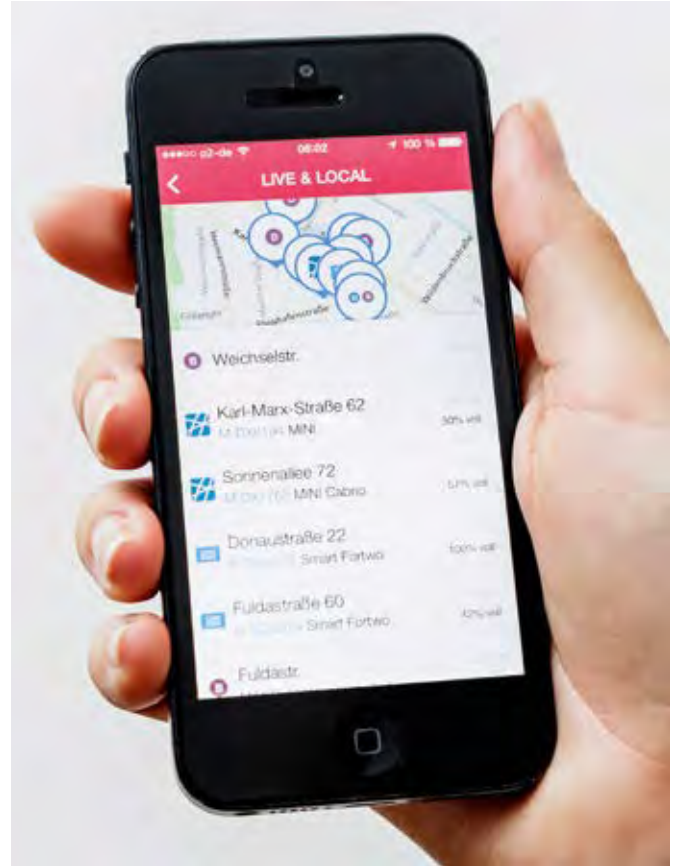
Intelligent transport system (ITS) solutions have become part of daily life. They are also the key components of modern mobility solutions. These solutions span a broad spectrum of applications, including driver assistance systems in vehicles, fleet management applications in freight transport, management and information technology for buses and trains, and modern public transport management. The further development of technology will generate cars that can travel automatically and exchange data with other vehicles and the surrounding infrastructure.

The connection to smartphones is already providing new mobility options. With an app, they can plan multimodal routes that encompass the use of rented bicycles, buses and car sharing on a trip. Travelers can locate and book the nearest car-sharing vehicle by an app as well as a charging station for their electric vehicle.

The capital region enjoys an excellent position in the ITS value chain: The 10,700 jobs are distributed across more than 90 companies and 24 scientific institutions. Universities such as TU Berlin, TH Wildau, FH Potsdam and HTW Berlin expertly cover the scientific aspects of the field. In the non-university area, the DLR's Institutes of Transport Research and Institute of Transportation Systems and Fraunhofer FOKUS are the region's leaders.

Companies such as IVU Traffic Technologies, Hella Aglaia and IAV are developing innovative hardware and software solutions in the capital region. Large companies and global corporations, such as Siemens and Bosch Software Innovations, have relevant ITS locations in the region, and Toll Collect, the truck toll system operator, is headquartered in Berlin. T-Systems is active in the area of tolling technology and also works on connected car and logistics applications. The worldwide headquarters of the from a mapping service to a data service provider developing HERE is located in Berlin, and the navigation specialist TomTom has a research and development center in Berlin.

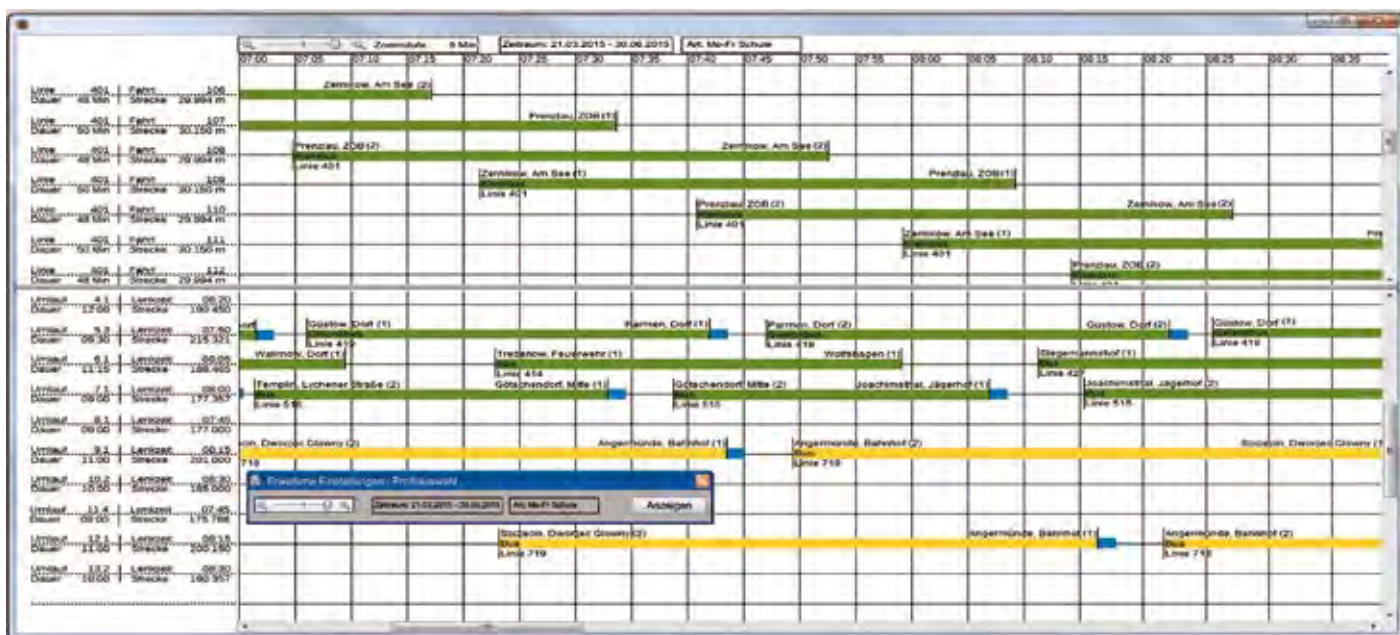
Traffic Control Center (VKRZ) and Traffic Information Center (VIZ) of the Berlin Senate are linked to the traffic computer center in Brandenburg. This combination is the backbone of modern traffic management in the region.



As a certified test bed for multimodal mobility, the region can look back at many years of demonstration projects. In addition to their international visibility, companies appreciate the Berlin residents' openness toward new mobility options – which is why they like to test their new products in Berlin.

Networking within intelligent transport systems

The TelematicsPRO e. V. network is active Europe-wide but encompasses a major share of the regional ITS community. The mission of ITS Berlin-Brandenburg e. V. is to represent the interests of regional ITS players in implementing intelligent transport systems on the national and international levels.



SyFAHRweb – Application for scheduling staff and vehicles of bus enterprises

Innovatively – adaptably – future-proof

Tailor-made solutions for passenger and goods transport

The focus of the research projects and development works of ASCI Systemhaus lies on innovative software solutions for a reasonable operation of bus and railways.

The distinctive traffic-technological knowledge of the developers in connection with the use of modern web technologies and stable Open Source components guarantees reasonable, adaptable products, which fulfil the demands of the customers optimally and increase the efficiency of the transport enterprises.

ASCI works in close collaboration with scientific facilities, cooperation and practise partners.

Projection with telematics

RailDISPO is a comprehensive management and telematics solution for railroad companies with the modules resource planning, scheduling and management of staff and vehicles as well as their accounting, order management and order billing.

The software was developed as an Internet and Intranet solution and can easily be used decentralised at different places. The integration of mobile terminals and the support of the on- and off-line use of these devices allow a safe capturing of the data suburb and the quick, comprehensive infor-

mation of the mobile staffs or to the deployment controls. The transmission of location information in connection with the permanent target-performance comparison means substantially the decisive security in the arrangement under concurrent lowering of the administrative costs of the railroad companies (EVU). The multilingual facility of the solution permits the application in German EVU as well as in foreign EVU.

SyFAHRweb is a web application for timetable, vehicle-circulation, duty roster as well as the achievement account for the bus enterprise of the regional public transport. With SyFAHRweb, we can take place the billing of the produced achievements and the statistical data analysis automates on the basis of the actual outputs of the drivers and vehicles. Changes are recognised by the consistent data management in the driving planning or the planning of vehicles, and adapted automatically to the new conditions if necessary.

The software works as an Internet/Intranet application independently of operation systems platforms and hardware platforms under the use of Open-Source components. The mobile client supports the drivers by the supply of the services, timetables and as a communication platform.

Services

- Research and development services for transport companies
- Software products and mobile solutions for bus and railways
- Consulting services for traffic telematics systems

Contact

ASCI
SYSTEMHAUS

ASCI Systemhaus GmbH
Seddiner Str. 5, 10315 Berlin
☎ +49 30 2934850
☎ +49 30 29348511
✉ oev@asci-systemhaus.de
🌐 www.asci-systemhaus.de



Map-based Mobile Services

In local public transport and waste disposal logistics

Precise, interactive maps, reliable route algorithms and GPS location tracking are the basis for digitising previously analog processes in transport and logistics.

A team at the Department of Computer Science and Media at the Beuth University of Applied Sciences in Berlin is developing innovative solutions for map-based services that can be used flexibly in a range of transport and logistics applications.

In cooperation with the company BT Berlin Transport GmbH, the team has taken everyday work processes in public transport, such as accident and repair reports, which have until now involved bus personnel submitting paper documents at the depot, and moved these communications to the Smartphone. This not only makes things easier for bus drivers, management receives timely, reliable data – data that can be supplemented by important visual and audio information. An interactive, 3D map application – currently under development – is being used to communicate route knowledge around the streets of Berlin. In addition to showing the various bus routes operated by BVG (the principal Berlin

public transport operator), the app shows a panoramic view of bus stop approaches. The app is also suitable for navigation purposes.

The field of waste disposal logistics – like public transport – is distinguished by having certain routes that require servicing at regular intervals. In addition, the payloads need to be controlled in terms of quantity and content. Effective daily management of a fleet of garbage trucks en route to their dumping grounds is not only an operational requirement, but it also contributes to easing road congestion. Extensive data from various mobile and stationary sources are easily visualised by the planners, ideally within a map application at a multi-person workstation. Large-scale, multi-touch displays are ideal for this. Integrating multiple, heterogeneous data sources and providing geo-referenced logistical information on multi-touch displays calls for completely new IT concepts. In cooperation with the Gesellschaft für Informationssysteme und Prozessautomation mbH (GIPA), universally usable gesture and interaction concepts are being developed for intuitive, situationally guided, touch-sensitive and non-contact surface control systems.

Services

- Map-based client-server applications for heterogeneous mobile and stationary data sources
- General-purpose gesture and interaction concepts for touch-sensitive and non-contact surface systems
- Usability studies of map-based applications (apps in particular)

Contact



BEUTH HOCHSCHULE
FÜR TECHNIK
BERLIN
University of Applied Sciences

Beuth Hochschule für Technik
Berlin, Fachbereich Informatik
und Medien
Luxemburger Str. 10, 13353 Berlin
☎ +49 30 45042836
☎ +49 30 4504662836
✉ goerlitz@beuth-hochschule.de
🌐 www.beuth-hochschule.de



ICT for smart mobility

German Research Center for Artificial Intelligence

Mobility Services of the research department Intelligent User Interfaces

Located in Kaiserslautern, Saarbrücken, Bremen (a branch office in Osnabrück) and with a project office in Berlin DFKI is the leading German research institute in the field of innovative software technology. Internationally, DFKI is one of the most important “Centers of Excellence”. Considering headcount and volume of orders, DFKI is the world’s largest research center in the field of artificial intelligence.

Projects cover the spectrum from application-oriented basic research to market- and customer-oriented development of product functions. Currently, more than 480 people from 60 nations do research on innovative software solutions in all application areas of artificial intelligence. The impact: more than 60 professors from within the company and more than 60 spin-off companies with approximately 1,700 highly skilled jobs.

In the research area Intelligent User Interfaces (IUI) the basics of multimodal human-computer interaction are elaborated and personalised dialogue systems, that combine the modalities speech, gestures and facial expressions with physical interaction, are developed. One focus is on mobile user interfaces for location-based and

context-sensitive services in particular for the use in vehicles and fleet management, as well as for mobility apps and wearables.

eFahrung is a project in the field of electric mobility where DFKI develops, tests and evaluates concepts for electric vehicles, charging technology and the acquisition of vehicle data. We provide models for smart, green and interconnected urban mobility, create simulations on fleets and charging infrastructure, and integrate electric mobility in multimodal approaches. The IUI Software Emobilesim is a traffic simulation tool for electric cars and charging stations for specific geographic areas.

The EU project STREETLIFE aims at reducing pollutant emissions of motorised individual traffic in urban areas. DFKI, therefore, developed a mobility app integrating intermodal routing for bicycle, bike sharing, public transport, car and pedestrians and employing intelligent crowdsourcing and gamification techniques to reward environment friendly mobility behaviour with tangible incentives. In a three-month field study the STREETLIFE Berlin app has been tested with success and was so well received by the users that it is still available in the Google Play Store after the testing period.

Services

- Mobile and Web-based Applications
- Wearables
- Speech-based and Multimodal User Interfaces
- Software Project Management
- Intelligent Mobility Services
- Frontend/Backend Development
- User-Centered Design
- User Experience & Usability Testing
- Prototyping
- Crowdsourcing and Gamification

Contact



Deutsches Forschungszentrum für Künstliche Intelligenz GmbH
DFKI – Projektbüro Berlin
Dr. Norbert Reithinger
Alt-Moabit 91c, 10559 Berlin
☎ +49 30 238951802
☎ +49 30 238951810
✉ norbert.reithinger@dfki.de
🌐 www.dfki.de/web/kontakt/dfki-projektburo-berlin



DLR Institute of Transportation Systems

Our goal: To shape the mobility of people and the transportation of goods

The German Aerospace Centre (DLR) is a national research facility for the fields of aviation, aerospace, energy, transportation and safety. For the field of transportation, the Institute of Transport Research, the Institute of Transportation Systems and the Institute of Vehicle Concepts are located in Berlin-Adlershof.

Around 170 scientists work at the Berlin and Braunschweig facilities of the Institute of Transportation Systems.

The majority of accidents occur due to mistakes of the driver. Hence, safety and efficiency in road traffic can be increased with the use of assistive systems. That is why driver error, stress and accidents are being examined in the automotive field in order to derive requirements for driver assistance systems. Psychological and ergonomic findings are combined with the cutting-edge technology available at the DLR to develop assistive features. They are implemented so that they correspond to the abilities and expectations of the driver. Driving tests are used to assess the implementation — in simulations and in actual road traffic.

The globalisation of the economy and the increasing need for mobility have led to enormous

growth in the amount of traffic, which is mainly borne by roads. In order to counteract this trend, the competitiveness of rail traffic needs to be increased. The key to this is an economical and efficient use of rail networks, as well as technical and operational interoperability. In the field of rail systems, the development and application of innovative technologies, methods and concepts for rail systems are being investigated in order to improve rail automation. The goal: to make rail traffic safe, efficient and competitive and to drive European rail integration.

Traffic management is the key to increase efficiency in road traffic. What is needed here are new concepts for the organisation and operation of traffic. But first, the corresponding information on the current state of traffic needs to be collected in order to serve as a basis for all traffic management measures. These tasks can be categorised into two areas: the development of innovative methods for monitoring traffic (traffic monitoring) and the development of methods to influence traffic flows (traffic manipulation). The work done at the institute concentrates mainly on the management of large traffic systems, such as in conurbations and in the case of disasters and major events.

Services

- Large-scale research installations ranging from test vehicles to complex simulation laboratories
- The research done focuses on the automotive industry, rail systems, and traffic management with its main goals: safety efficiency, sustainability, economy, and quality

Contact



German Aerospace Center (DLR),
Institute of Transportation Systems
Rutherfordstr. 2, 12489 Berlin

☎ +49 30 67055161

☎ +49 30 67055291

✉ its@dlr.de

🌐 www.dlr.de/ts/en



Tomorrow's mobility

Interdisciplinary teams at the Fachhochschule Potsdam are developing comprehensive solutions for the “Urban Future”

The Fachhochschule Potsdam (FHP) was founded in 1991 with a practical and interdisciplinary orientation, aiming to initiate active cooperation between the various areas of study. Within the last two decades, the Fachhochschule has proven both the disciplinary expertise and the potential of this idea by developing innovative concepts. Interdisciplinary teams work on projects in the fields of social affairs, architecture, civil engineering, design, and information sciences. Solutions are created together with regional partners, and in cooperation with international networks.

INNOVATION IN MOBILITY

Our teams support the development and operation of integrated mobility solutions and intelligent transport systems.

The modern structural design of the infrastructure is coupled with innovative operational solutions. The range of services extends from strategic planning to complete design of individual elements, such as transport facilities, technical transport systems, vehicles, or information systems, up to the inclusion of operators and transport users in the implementation process. The projects make use of complex, interactive visualisation methods and simulation models, which take both the demonstration of transport efficiency and sustain-

ability, and the dynamic of the innovation diffusion process, into consideration, therefore providing useful information for system implementation and support for decision-making processes.

SHAPE THE DEVELOPMENT OF OUR CITIES

Transport innovation is a central component in shaping the future of our cities, and that is the research focus of the newly-founded Institute for Applied Research at the Fachhochschule Potsdam, which considers the “Urban Future”, along with the subject areas of “Information and Visualisation” and “Social and Regional Transformation”. The institute draws on knowledge from a wide range of disciplines, including social, cultural, information, media, and engineering sciences, as well as artistic design. The close interlinking of the innovation process with the partner network allows for application-oriented projects.

Services

- Planning of intelligent transport systems and infrastructures
- Designing innovative mobility solutions
- Designing interfaces for information systems
- Concepts for system implementation
- Information visualisation and simulation
- Analysis of the dynamic of the innovation diffusion process

Contact



Fachhochschule Potsdam, Institut für angewandte Forschung Urbane Zukunft

Prof. Dr.-Ing. Michael Ortgiese
Vizepräsident für Forschung und Transfer

Kiepenheuerallee 5, 14469 Potsdam

www.fh-potsdam.de/forschen/urbane-zukunft



Picture: © madpixblue/Fotolia

Business Information Systems at Freie Universität Berlin

Decision Support Systems in Transportation and Logistics

The Master of Science in Information Systems degree programme is designed to meet the needs of students who want to combine technical capabilities in computer science with the application of information and apply this knowledge in a business environment. The curriculum is completed at Freie Universität Berlin in the field of economics through adding a sociotechnical component. In this way, the programme combines the technical underpinnings of computer science with the key concepts of business and economics. In four semesters graduate students can attend courses in the fields of information systems, computer science, and business administration. In addition, they can choose from among the following specialisations: business analytics, e-business, IT-entrepreneurship, operations research, and decision support systems.

In our research area "Intelligent Planning and Control in Transportation", we focus on recent questions and problems that require the application of established methods of quantitative decision support combined with intelligent data analysis. Under the heading "Robust Efficiency", we are looking for new approaches that will enable a cost-efficient production of transportation services under varying conditions in a risky and unstable environment. To optimise the revenue

side in transportation companies, we develop concepts and models for the integration of customer relationship management in revenue management and the use of competitive information.

The increasing population density in urban areas demands intelligent planning and regulation of the mobility of persons and goods. In our research area "City Logistics" we examine the trade-off between efficiency and reliability in the delivery of goods in urban areas, e. g. time-window-based delivery of groceries for online-shops. We focus on preparing large datasets for dynamic-stochastic shortest-path and vehicle routing methods. Therefore, an integrated approach is used, starting with analysing big datasets with data mining methods, and followed by applying adapted methods of operations research.

Services

- Development of decision support systems in the areas of transportation and logistics
- Preparation and intelligent analysis of big data with data mining
- Heuristic and exact optimisation methods

Contact



Freie Universität Berlin,
Wirtschaftsinformatik
Prof. Dr. Natalia Kliewer
Prof. Dr. Jan Fabian Ehmke
Garystr. 21, 14195 Berlin
✉ info@wiwiss.fu-berlin.de
🌐 www.wiwiss.fu-berlin.de/fachbereich/bwl/pwo/index.html



The Geoinformation Industry: Leading the way for society

GEOkomm represents the geoinformation industry and initiates innovation networks and international collaborations

The significance of location-based information to improve business processes and decisions cannot be denied. The products and services of this industry are part of everyday life in nearly all areas. The capital region Berlin/Brandenburg offers outstanding benefits for economic activity in this field, thanks to the excellent research landscape.

The geoinformation association for Berlin/Brandenburg, GEOkomm e.V. was founded in November 2002. A multitude of small to mid-sized companies and global enterprises in the industry belong to the association. The profile is rounded out with research institutions dealing with earth sciences and geoinformation, as well as representatives from regional authorities, trade associations and other players dedicated to promoting a sustainable and prosperous geoinformation market.

The association's goals include representing the interests of its members, gaining a more profound understanding of the technical, economic, and social relevance of geoinformation, and encouraging active dialogue between businesses, administrations, politicians, and scientists to further promote the geoinformation market. As an association for the geoinformation industry, we deal with current market trends, and support innovation networks consisting of SMEs and research institutions, in a project management capacity.

GEOkomm is a member of numerous networks, such as go-cluster, the excellence program initiated by the German Federal Ministry for Economic Affairs and Energy, and has been awarded the Silver Label by the European Cluster Excellence Initiative (ECEI).



Services

- Representation of interests – we represent the interests of our members on a political level.
- Innovation networks – we initiate and manage innovation networks and provide support in acquiring funding.
- Knowledge transfer – we support the transfer of knowledge and technology.
- Trade fairs and events – we represent the industry at the most important trade fairs and organise workshops and specialist events.

Contact



GEOkomm e.V.-Verband der
GeoInformationswirtschaft Berlin/
Brandenburg
Hans-Thoma-Str. 4, 14467 Potsdam
☎ +49 331 2731923
✉ geschaeftsstelle@geokomm.de
🌐 www.geokomm.de



All Applications – One System

More efficiency in the management by generating and processing real time data

At INTERAUTOMATION, we have been developing and realising solutions for data acquisition and control for more than 30 years. Our activities focus on rail passenger services. With our InLineWeb system, we provide our customers with innovative solutions for automatic passenger counting, travel time analysis with AVM/ITCS, real-time passenger information, energy optimal traffic management, and vehicle management.

More than 20 transport companies rely on products made by INTERAUTOMATION, and to date more than 1,800 vehicles have been equipped by INTERAUTOMATION.

International projects in France, Poland and Russia also document our success.

All applications – one system: Our hard and software solutions for rail vehicles are completed by corresponding modules from our background systems and can be used as an integrated all-round solution from a single source or as an add-on product for already existing systems.

INTERAUTOMATION products are based on the InLineWeb data processing system, central server components for managing all data for AVM/ITCS, focusing on railway transport.

The data exchange in the background is guaranteed above varied standardised import inter-

faces (e.g. RailML, Association of German Transport Companies (VDV)) for data on the network, timetables, vehicle workings and assignment, as well as customer-specific interfaces and export interfaces for transferring data to authorities and external systems.

For efficient management in online business the online linking of external data servers for permanent, automatic data exchange (e.g. VDV services for cross-system connection synchronisation), the vehicle fleet as well as the possibilities of short-term changes in planned operations to support the OCC (e.g. editing of train delays, detour, partly and complete cancellation, rail replacement transport, short term change of vehicle and train composition, track changes and more) are strikingly important.

Varied visualisation possibilities are available as well as the approved usability of the system above web surfaces for the users in the headquarters. This also applies to the mobile solutions for employees.

We maintain the high quality of our products through excellent networking with scientific institutions and co-operation in various committees.

INTERAUTOMATION is certified in accordance with ISO 9001:2008 and IRIS Revision 02.



INTERAUTOMATION's customer service app for extended passenger information.

Services

- AVM/ITCS for city, suburb and regional rail service public transport
- APC | Automatic Passenger Counting
- APR | Automatic Punctuality Reporting
- RTP | Real Time Passenger Information
- DAS | Driver Assistance System
- Coordination, management and realisation of projects
- Development and supply of hardware and software
- System engineering, integration and installation

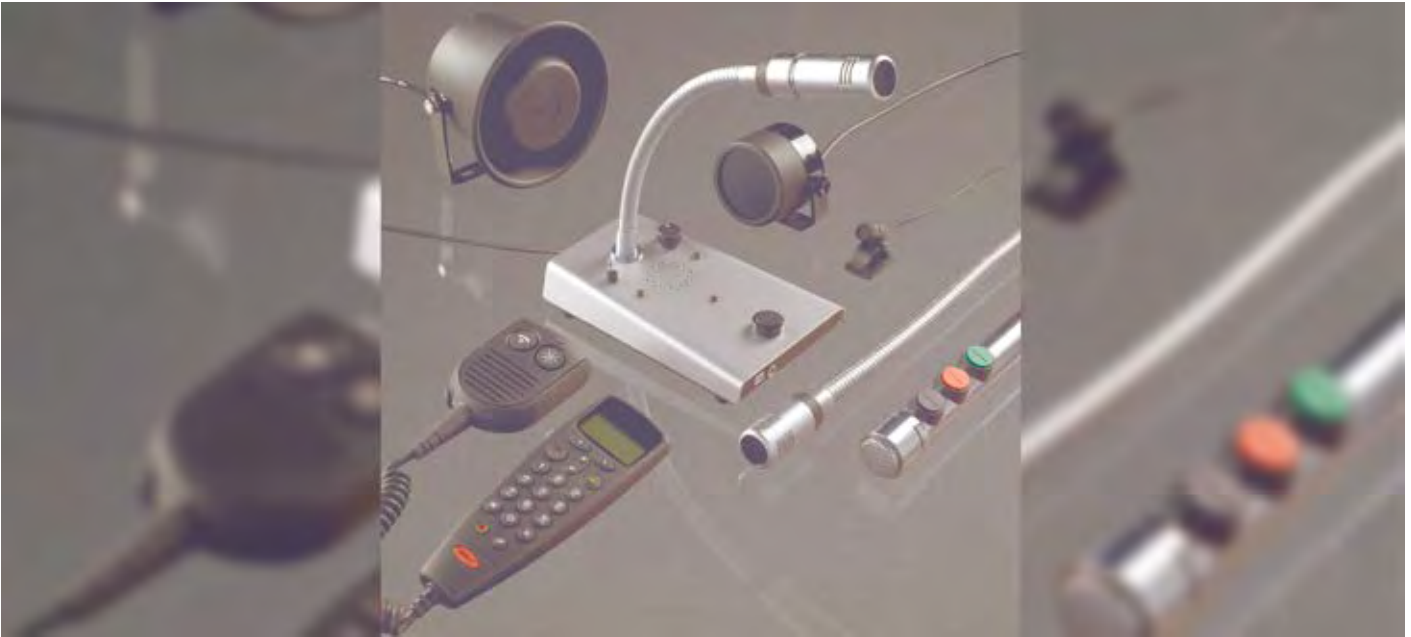
Contact



INTERAUTOMATION
Deutschland GmbH
Lessingstr. 79, 13158 Berlin
☎ +49 30 9160760
☎ +49 30 91607620
✉ info@interautomation.de
🌐 www.interautomation.de



Efficient management with the AVM/ITCS system InLineWeb © for operational control centers.



High-quality communication products and radio accessories – Made in Germany.

High-Quality Communication Products and Radio Accessories

pei tel develops all Products and Components in Germany

pei tel, a member of the peiker group, stands for professional equipment for perfect voice transmission. The company, which is based in Teltow (near Berlin), specialises in developing and producing high-quality communication solutions and radio accessories. Its extensive product range encompasses various types of microphones, handsets, speakers, voice units, and microphone speakers along with additional headsets.

pei tel also develops vehicle and system solutions that bring voice and data communication technologies together at the highest level. These

include the PTCarPhone – a professional car phone with first-class acoustic properties, an excellent hands-free function, and flexible telematics performance features.

pei tel's customers include bodies with safety-related responsibilities (police, fire departments, other government agencies), control centres, industrial firms, and companies from the public transit, sound transmission, traffic and conference technology sectors.

pei tel holds DIN EN ISO 9001 certification and develops all products in Germany, emphasising compliance with technology and quality standards in the process.



PTCarPhone 5: Car phone for fixed installation with telematics features

Services

- Software Engineering
- Hardware Engineering
- Production
- Quality Assurance
- Sales and Marketing
- Hardware Design

Contact



pei tel Communications GmbH
Rheinstr. 15 A, 14513 Teltow
☎ +49 3328 35160
📠 +49 3328 351616
✉ info@peitel.de
🌐 www.peitel.de



Senozon Deutschland GmbH

Product range – map material and detailed location data

Are you looking for high-traffic locations for your retail space and offices? Should they be easily accessible for your target customers and employees? Senozon AG is a spin-off of ETH Zürich and an international technology and consulting company which deals with the answers to these location questions among other things. Since 2016, we have been providing the entire range of services for all German-speaking countries. Senozon combines cutting-edge technologies from transport planning with methods and algorithms from supercomputing and big data processing.

Senozon Locations

The online-based locations tool allows us to comprehensively and simply answer such complex questions as “Who is going where?”, “How?” and “Why?”, thus delivering an innovative solution of target-group specific location analyses – all at the touch of a button. The agent-based mobility model shows detailed information on the potential pedestrian traffic and vehicle numbers, as well as catchment areas of individual locations.

Locations Finder

The new Locations Finder delivers high-resolution hotspot maps that provide information on the target group's activities in a defined time

period and catchment area. After defining the relevant catchment area and target group characteristics (age, gender, level of education, income and time period during the day, as well as the types of activities being performed), the potential pedestrian traffic of target customers is shown in each hectare of a Federal State, for instance, in accordance with the need.

Data Layer

The Senozon Data Layer provides the opportunity to check each and every built-up hectare in a predefined area for a number of various characteristics desired by the customer. In contrast to the Locations Tool, the Data Layer not only delivers reports and maps, but also comprehensive datasets that can be directly integrated into company-specific GIS systems.

Projects

Senozon carries out individual analyses and studies on a project basis. Customer potential and white-spot analyses for large regions help with optimising networks of subsidiaries over a wide area by taking into account the existing subsidiaries, competitors' locations and other influencing factors

Services

- Location planning and assessment
- Transport and infrastructure planning
- Mobility research

Contact

senozon
understanding mobility

Senozon Deutschland GmbH
Schillerstr. 112, 12305 Berlin
www.senozon.com/de



SIBB

ICT & Digital Business Association Berlin-Brandenburg

SIBB e.V. is the Association of ICT & Digital Business Industry in Berlin and Brandenburg. Since 1992 we have been linking up the local ICT & Digital Industry and representing their broad interests in politics and society, standing proactively for a continuous intersectional exchange of experiences and know-how transfer.

Our member companies reflect the broad spectrum of the industry. Among them are:

- SOFTWARE PROVIDERS & HARDWARE PRODUCERS
- IT-SERVICES PROVIDERS & INFRASTRUCTURE OPERATORS
- E-COMMERCE PLATFORMS & CONSULTING COMPANIES IN DIGITAL ECONOMY
- UNIVERSITIES AND RESEARCH INSTITUTIONS

We organise numerous events, workshops, seminars, meet-ups, conventions and trade shows, which belong to the event-highlights within the industry and constitute the basis for a continuous transfer of knowledge and business exchange within the economy in the region. One of our main missions is setting up liaisons and developing cooperation between the IT&ICT sector and other industries (telecommunication, electronic, automotive, manufacturing, agriculture, and public health), R&D units, universities and local authorities in the capital region of Berlin.

The companies benefit from:

- Networking at the management level

- Numerous intersectoral cooperations
- Specific project proposals for IT-Services
- Jointly initiated research and development projects
- International cooperation with selected countries
- HR training and qualifications
- Representation of interests in local politics and business
- Improved perception as members of a strong local network

Our Networks:

- FORUM DIGITAL PLATFORMS & TECHNOLOGIES
- FORUM DIGITAL TRANSFORMATION
- FORUM E-HEALTH
- FORUM FINANCE
- FORUM HUMAN RESOURCES
- FORUM INDUSTRIE 4.0
- FORUM INFORMATIONSSICHERHEIT
- FORUM LAW, TAX & COMPLIANCE
- FORUM MANAGEMENT
- FORUM PUBLIC SECTOR
- FORUM SERVICE DESIGN & USER EXPERIENCE

Become part of a strong network with well over 200 technology-oriented enterprises and organisations. The SIBB team is always at your disposal in the branches in Berlin and in Brandenburg for your questions. Please visit us at www.sibb.de or contact us at info@sibb.de

Services

- Representing the interests of ICT industry in the region
- Networking and contact with end-users from different sectors
- Cooperation and support of industrial R&D projects
- Topic-specific events and educational workshops
- Public image-building for members

Contact



SIBB e.V.
Potsdamer Platz 10, 10785 Berlin
☎ +49 30 408191280
📠 +49 30 408191289
✉ Berlin@sibb.de
🌐 www.sibb.de



Synfioo 360° transportation monitoring – Real-time transport monitoring with delay predictions

Real-time transport monitoring with delay predictions

See immediately where delays and incidents have a negative impact on your transport

Logistics is of uttermost importance to ensure smooth execution of industrial production processes since internal processes get stalled without timely replenishment, punctual delivery and speedy pick-up of goods. Due to a variety of external influences, logistics is especially prone to numerous disturbances. Although inducing major risks, transportation planners and participants simply lack the time to manually monitor all available information channels for all transportations.

Tackling this challenge, the Synfioo service offers 360° transportation monitoring. All Synfioo needs



Thanks to Synfioo, planners can react faster to incidents

as input are few facts on a transportation: Start location, stopovers, and destination as well as the actual start time of the transport. Based thereon, the Synfioo software determines in real-time for each single transport all actual and relevant disturbances from a large and diverse set of available data. The determined information is then provided to all parties involved in the transport chain as a notification in the usually used planning system through a web service, by text message or email, in a mobile app or directly in the ERP system. This provides the customer with a well-founded decision-making basis towards more robust and more reliable transportation planning, which always considers all known information sources.

Analysing the work of transportation planners shows that more than 50% of the working time is spent on identifying disturbances, reacting to them and finally rearranging the previously created transport plan accordingly – especially in the case of long, complex and intermodal transportations. The workload – and hence the working time – of transportation planners gets reduced by 20% just through utilisation of an early notification system like Synfioo's software solution. The freed time can easily be used to handle additional transports fostering company growth.

Services

- Real-time monitoring with Synfioo Software
- Reduce time, money and stress
- Delay predictions for more efficient transport planning
- No new software needed! Information is integrated into the existing system

Contact



Synfioo GmbH
 August-Bebel-Str. 27
 14482 Potsdam
 ☎ +49 331 60075025
 ✉ mail@synfioo.com
 🌐 www.synfioo.com/de



The future is now

TelematicsPRO e. V. – the European Telematics Society

The mission of TelematicsPRO e.V. is to raise awareness of telematics and support its application. The society's headquarters in the centre of Berlin looks like a normal office: however, an air of innovation fills the space. When the members meet to plan their next project, they are in their element. Here, you will often hear such terms as "road toll", "mobility", and "innovative technologies".

What exactly does the term "Telematics" mean?

Telematics is the combination of telecommunications and IT. As ambiguous as the term may be, the various applications of telematics are now wide-spread. Wherever communication and technology meet, telematics is involved. Smartphones are a prime example of the applications of telematics. Traffic control systems or truck toll schemes on German highways can also only function with the help of telematics applications.

How do users benefit from telematics?

A look at the costs and uses of such applications reveals it all: In the long term, telematics applications really can save you money. Intelligent software is used to optimise structures and processes, and networked activities are less time-con-

suming. For 17 years now, TelematicsPRO has been supporting projects that aim to make our lives easier by using intelligent technology solutions.

What does TelematicsPRO do?

More than 80 members get involved in interesting projects. Among other things, the concept of mobile parking was supported by TelematicsPRO. What would have been unthinkable only five years ago is commonplace today: You can conveniently pay for parking using your cell phone at machines with the orange mobil-parken.de sticker.

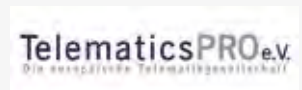
What does the future hold?

As a platform for questions, discussions, and answers, TelematicsPRO offers the ideal conditions for all players in politics, administration, and private companies.

Services

- Support for projects and products, as well as the creation of processes essential to meeting mobility needs in society
- Hosting political workshops, parliamentary evenings and expert discussions

Contact



TelematicsPRO e. V.
Helmholtzstr. 2-9, 10587 Berlin
☎ +49 30 39902320
☎ +49 30 39902322
✉ info@telematicspro.de
🌐 www.telematicspro.de



VBB Public Transport Authority Berlin-Brandenburg GmbH

2 Federal States – 44 Transportation Companies – 1 Ticket

Along with their partners the Public Transport Authority Berlin-Brandenburg (VBB), covering the federal states of Berlin and Brandenburg, provides a modern and innovative public transport. The VBB is one of the largest transport associations within Europe covering more than 30,000 square kilometres and is in charge of coordinating the services of more than 40 public transport companies – since 1999. The shareholders are the federal states Berlin and Brandenburg as well as the municipalities, rural districts and district-free cities in Brandenburg.

The goal still is to offer top-class service to ensure an increasing and attractive mobility market. Due to technical innovations and the provision of digital information, passengers can enjoy intermodal route planning using different means of transport. This enables them to combine public with private transport (e.g. Bike/Car Sharing). As a result, passengers can act more flexible and the operators benefit from a better quality and quantity of information.

The VBB also provides an interface for third parties to access the travel planner backend (by an API) with real-time information or download as well as time table data in GTFS format. So, third parties can provide their own services, based on

the data supplied by VBB. That enables them to offer value-added services such as an apartment hunting combined with public transportation and its local accessibility.

The main tasks of VBB are the co-ordination of the services of more than 40 public transport companies and improving connections across them, the introduction and development of a common fare system and their revenue sharing as well as the improvement and quality control of public transport services. Also, the VBB assists the authorities in charge of public transport in planning, tendering and managing of regional railway services. The VBB stands for a customer-friendly integrated public transport service that handles the requirements of a metropolitan area like Berlin as well as it meets the interests of the rural communities in the countryside of Brandenburg.

Services

- VBB Ticketing
- Revenue sharing
- Quality assurance
- Product marketing
- Comprehensive supply planning und conception
- Transport management
- Passenger Information/ Open Data data provision
- Infrastructure management

Contact



VBB Verkehrsverbund Berlin-Brandenburg GmbH
Hardenbergplatz 2, 10623 Berlin
☎ +49 30 25414141
☎ +49 30 25414112
✉ info@VBB.de
🌐 www.VBB.de

Software that moves

VIOM GmbH develops solutions for intelligent mobility since 2002: Optimisation systems and geo informatics with focus on process optimisation, geographic information systems (GIS), as well as assistance systems using mobile devices and monitoring applications. Part of VIOM's work is the development of strategic and operative perspectives in a future-oriented expanding mobility with reference to energy concerning, infrastructural, environment-friendly and economic aspects. The VIOS planning software recurs to models developed in business research, which is enriched with newly developed techniques and subsequently provided to institutions and businesses in the spirit of Mobility 4.0 and our era of digitalisation.

VIOM offers a tool for analysis of data-based processing of mobility data, operating data, dynamic environmental variables and planning data, independent of manufacturers, drive-kinds, and goods. Classic software engineering is combined with rapidly changing requirements of a society that continues to get more mobile each day.

Digital maps are used for visualisation of space data, for the interconnection of available and mathematically derivable data, as well as for steering of processes. In the area of GEO Services, we are hosting internet-based services on our own VIOM

servers to be able to gather and process dynamical measuring data, for example about 1000 floating-car-data reports per second and to work with this data to turn intelligence about the past or current traffic situations into traffic prognoses.

VIOM extends boundaries of the traffic digitalisation sector by taking part in different working groups and projects which develop and expand on mobility concepts and is well connected with scientific partners. In particular, for example in the showcase project "SMART E User" for which VIOM provided IT for tour planning and simulation scenarios for a mixed-drive fleet.

In this context, VIOM developed an instrument to determine the capacity of the distance of e-vehicles.

In the joint project "Virtueller Begleiter" (ViBe; Engl.: virtual companion) VIOM compiled a barrier free routing system while taking traffic schedules of public transportation into account. In this process, a "network editor" arose from a neutrally usable instrument for detection and gathering of interior GEO-information data. In the context of current research and development, VIOM is dealing with the integration of its VIOS platform in the development of a European-wide educational curriculum for vocational schools.



Useful software works invisibly in the background.

Services

- Creation and sale of IT systems for the non-stationary use of data and functions for process optimisation in areas of logistics and mobility
- Data platform for operational and movement data distribution as precondition for the implementation of different services
- VIOS platform for fleet management under consideration of telematics, GIS functionalities & sensor technology, and mobile order management

Contact



VIOM Gesellschaft für "Mobile Business Technologies" mbH
Sachsendamm 93 Quergebäude,
1. Etage, 10829 Berlin
☎ +49 30 24083060
☎ +49 30 24083066
✉ info@viom.de
🌐 www.viom.de



VIOM – Visions of Mobility.



Transport Mobility Future

Competent transport management

Urban mobility and transport management form the core business of VMZ Berlin. VMZ Berlin operates the transport information centre (VIZ) for the state of Berlin. The information portal, www.viz.berlin.de, offers numerous information services that provide the Berlin population, the media, and businesses with free, up-to-date information about the situation on the streets and railways of Berlin.

We offer consultation and support for states, cities, and municipalities, as well as private companies, to assist in finding intelligent transport solutions. Our mission is to answer the most pressing questions on mobility, the environment, and safety in the field of transport. With the help of a large dataset – based on traffic detection, FCD, etc. – that is constantly updated and adjusted, we are able to offer tailored strategies and solutions for anything to do with environmentally-oriented transport management, and event or incident management. At the same time, we support our clients in the analysis, conception, implementation, and evaluation of projects. Of course, we also offer classic transport planning, such as development and signage concepts.

Our multimodal mobility services support transport users in reaching their destination comfortably, quickly, safely, and in an environmentally-con-

scious way - as internet services, as location-specific information displays – e.g. for airports and trade fairs – or as mobile smartphone apps.

In cooperation with rbb (Rundfunk Berlin Brandenburg), we operate the capital's intermodal mobility app, BerlinMobil (www.BerlinMobil.de). We deal with multiple modes of transport and combine mobility services with cars, buses and trains, cycling, and walking, and also include flexible mobility options, such as carpooling, taxis, and bike rentals.

Our control centre systems ensure a coordinated response to incidents, involving all of the various players (police, public transport, fire service, etc.), introduce concerted control measures, and provide quick and consistent information to transport users. Our IT systems for information on roadworks and monitoring traffic and environmental factors allow for real-time analysis of the traffic and environmental situation.

VMZ is also involved in federal and EU research projects on concepts and solutions for the Smart City of the future, e.g. in the field of innovative door-to-door information services that include long-distance travel, in the Internet of Things, or Smart City platforms.

Services

- Operation of the traffic information centre for Berlin (VIZ)
- Transport planning
- Environmentally-oriented traffic management
- Transport incident management
- Climate protection concepts, air quality and noise pollution planning
- Software development and operation of mobility apps, multimodal mobility monitors, and Smart City and mobility platforms
- Hosting and operation of mobility services
- E-mobility

Contact



VMZ Berlin Betreibergesellschaft
mbH
Ullsteinstr. 114, Turm C, 12109 Berlin
☎ +49 30 814530
☎ +49 30 81453150
✉ office@vmzberlin.com
🌐 www.vmzberlin.com

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