EN

Automotive, Automation and E-Technology

Brief Industrial Profile of the West Palatinate Region

ZukunftsRegion Westpfalz

Foreword

Dear readers,

Rhineland-Palatinate is a forward-looking industrial location with a business-friendly climate. We provide the critical hard and soft location factors, which are equally as attractive to companies, as they are to employees and investors.

With its position in the middle of Europe, right next to important sales markets, our federal state is attractive for SMEs, as well as for industry. Companies from many sectors collaborate very closely in many cases with scientific institutions. Nothing is too far away. On top of that, there is the family-friendly and pleasant surrounding area with a high quality of life.

The West Palatinate's position, bordering Germany, France and Benelux, with its international transport connections and a very good supply of skilled workers make the region attractive for many companies.

With a high density of universities, research institutes and scientific facilities in the relevant topic areas, the West Palatinate is a well-developed technological location .

The West Palatinate is eager to welcome you!

Dr. Volker Wissing
Minister for Economics, Transportation, Agriculture and Viticulture and Deputy Minister President of the State of Rhineland-Palatinate

The Federal State of Rhineland-Palatinate

Rhineland-Palatinate is situated in Germany´s dynamic southwest, in the immediate vicinity of France, Belgium and Luxembourg. It also boasts excellent connections for anyone wanting to develop worldwide business relationships, thanks to the neighbouring Rhine-Main area being the European economic centre that it is.

Position in Europe

Area:
19.854 km²

Inhabitants:
4.1 million

Important industry sectors:
· Chemistry and pharmacy
· Healthcare
· Automotive industry
· Metal processing
· Mechanical engineering
· Nutrition

An excellent business location ...

Rhineland-Palatinate has rapid transportation routes by land, by water and by air. This saves companies time and money. The proximity to the hub that is Frankfurt airport, efficient motorways, the European high-speed train network and the position on the Rhine, the most important waterway in Europe, all collectively form the backbone of an exceptionally well-connected transport system.

The innovative, overwhelmingly middle-sized economy cooperates closely with the sciences and is internationally in the lead. The combination of global players like BASF, Daimler, Schott and Boehringer Ingelheim with middle-sized world market leaders is unique.

The attractiveness of the federal state in terms of education is based on more than 40 research institutes and universities, as well as a first degree free-of charge. Both the university education and dual training system with well-educated specialists and master craftsmen are renowned worldwide.

And finally, a word on mentality: Rhineland-Palatinates are cosmopolitan, sincere and uncomplicated. Visitors appreciate the hospitality of the Rhineland-Palatinate; with its abundant culture and delights, it is a favourite holiday region for many people from near and far.

"Continuous economic growth, a high export quote, as well as exceptionally attractive housing and quality of life: With its healthy medium-scale economic structures, the Rhineland-Palatinate is one of Germany's leading business locations."

Daniela Schmitt
State Secretary of the Ministry for Economics, Transportation, Agriculture and Viticulture

... and a perfect environment for innovations.

The Rhineland-Palatinate offers world-class quality in particularly promising fields of business and science. Therefore, the state government focuses on the areas in which the competitive advantages are greatest and unique selling points are particularly pronounced. With a view to leveraging the opportunities that come from global mega trends, as well as the newest market-leading and technological developments.

The identified potential areas are consistently promoted, e.g. by:

- targeted strengthening and promotion of infrastructure and competence development in research and development,
- support for ambitious research and technology projects,
- creating the best starting conditions for innovative start-ups,
- ensuring access to new research for all companies, as well as
- the offer of research, innovation and technology promotion from a single source.

99,7

percent of all companies in the Rhineland-Palatinate are **medium-sized**. Thanks to their flexibility, they react quickly to global challenges.

7

Every seventh person employed in Rhineland-Palatinate works in a **high-tech** field. Because of this, the federal state is in national top position.

2

In the Germany-wide **satisfaction ranking of the founders,** Rhineland-Palatinate is in second place among the 16 federal states

57,6

percent **export quote** in Rhineland-Palatinate in 2018 (Germany 50.3 %)

The West Palatinate

The West Palatinate region is situated in the Southwest of Germany in the federal state of Rhineland-Palatinate. Besides the regional centre of Kaiserslautern, it includes the independent cities of Pirmasens and Zweibrücken, as well as the districts Kaiserslautern, Südwestpfalz, Kusel and Donnersberg. It borders France in the south, Saarland in the west, the Rhine-Main area in the northeast and the Rhine-Neckar metropolitan region to the east. In comparison to its neighbours, the West Palatinate region offers companies particularly attractive locations in terms of price and accessibility, favourable conditions for investors and for employees, employment in future-oriented industries and an environment with a high quality of life.

Traffic and accessibility

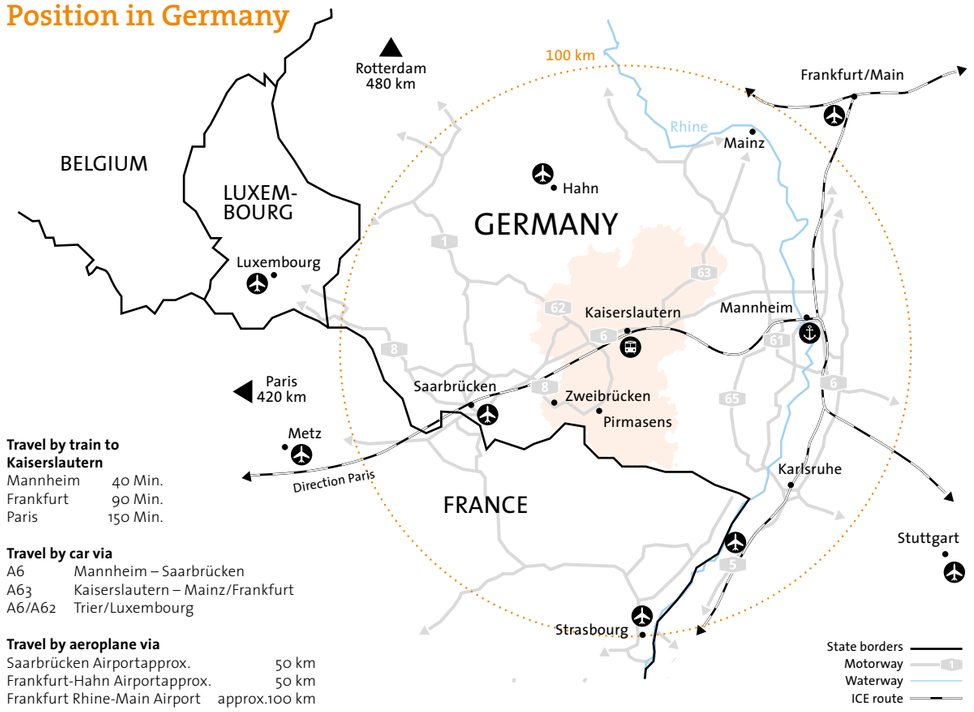
Whether on one of the numerous motorways that cross the region or the good local and long-distance rail connections, the West Palatinate can always be quickly and easily reached. Special feature: from Kaiserslautern, the metropolis of Paris is only about 150 minutes away by train. More importantly: the biggest German airport, the international hub Frankfurt/Main may be reached by car in under an hour. More regional airports in the area round out this enticing offer.

Labour market, population

In recent years, the number of employees subject to social security contributions has increased significantly to around 165,000 in 2018. At the same time, the number of unemployed people has continued to decrease. Due to demographic change, it was forecast that the Western Palatinate would experience a noticeable population decline in the coming years. In recent decades, however, especially in the centres, things have developed much more favourably than previously feared.

The official population statistics don't even include the some 50,000 Americans, who have been present in the Western Palatinate for 70 years, as well as members of NATO countries and their families. The US-American community is the largest outside the USA, which is reflected in a traditionally high level of English language proficiency among the local population. This presence, the large number of foreign students, foreign companies and their employees and the border with France with its numerous cross-border commuters all make the Western Palatinate an especially international region.

Position in Germany



Travel by train to Kaiserslautern

Mannheim	40 Min.
Frankfurt	90 Min.
Paris	150 Min.

Travel by car via

A6	Mannheim – Saarbrücken
A63	Kaiserslautern – Mainz/Frankfurt
A6/A62	Trier/Luxembourg

Travel by aeroplane via

Saarbrücken Airport	approx. 50 km
Frankfurt-Hahn Airport	approx. 50 km
Frankfurt Rhine-Main Airport	approx. 100 km

520.000

Around 520,000 **people** live in the West Palatinate overall. Practically though, it is closer to 570,000, because ...

50.000

Americans live in and around Kaiserslautern ("K-Town") as the biggest **American community** outside of the USA.

132

Citizens from 132 **various nations** live and work in West Palatinate.

8

international **airports** less than a two-hour drive away.

20.000.000

An estimated 20 million people live within a two-hour drive around the West **Palatinate.**

Economy and Technology

The West Palatinate has traditionally been rooted in industrial production. Machine and apparatus construction, automotive suppliers, footwear and leather goods, chemicals, plastics and last but not least, building materials still characterise the economic structure of the region to this day, which itself is strongly supported by SMEs. The US military is also a significant economic factor.

Based on its industrial roots, the West Palatinate's economy has developed in recent decades into a strongly export-oriented, SME-influenced research and development economy with innovative production and a specialisation in IT.

The conversion of formerly military and industrial areas or areas used by the railway has also played a special part in this transformation. There, with the support of the state, innovative new uses for these areas have emerged. The diversity of the economic structure together with the cooperation of the players in industry-specific networks has left the regional economy unscathed by international turbulence. Agriculture also avails itself of modern production methods, is partnered with modern agricultural machinery manufacturers (John Deere Development Centre), uses state-of-the-art IT technologies and also contributes to the generation of renewable energy in the West Palatinate.

21

The region boasts 21 **scientific institutions** in relation to automotive, electrical and production engineering, electro mobility materials, as well as IT / AI.

4.0

With the Smart Factory and the SME 4.0 Competency Centre, the West Palatinate is one of Germany's leading regions in **Industry 4.0.**

When it comes to complex research projects, people are increasingly turning to networks or so-called "clusters" in which cooperation partners from science and industry pool their different competencies. An example of this is the Science & Innovation Alliance Kaiserslautern (SIAK)

Research foci at the Technical University of Kaiserslautern include innovative vehicle and mobility concepts, intelligent driving and operating comfort systems, as well as energy-efficient vehicles and assistance systems, among others.

A dense network of first-class research facilities ensures that research and development work has practical relevance, providing the transfer points where results are put into practice.

The plastics industry based in the West Palatinate is an impressive example of the ongoing adaptability of our companies to changing conditions.

Education, Research & Innovation

The competitiveness of the region is based on an innovative and flexible economy, but above all on a strong technological orientation in science, research and education. Several renowned research institutes in the field of information and communication technology are represented at the site, including two Fraunhofer Institutes, a Max Planck Institute and the German Research Centre for Artificial Intelligence (DFKI).

The Technical University and the University of Applied Sciences Kaiserslautern with its three locations in the region, as well as numerous vocational schools make the West Palatinate a priority region for training computer scientists, engineers and skilled workers in the Rhineland-Palatinate.

Technology transfer offices, patent information centres, the Science & Innovation Alliance, the Smart Factory, the SME 4.0 Competency Centre, etc. contribute to the integration of research institutions within the regional economy and help to ensure its competitiveness now and in the future.

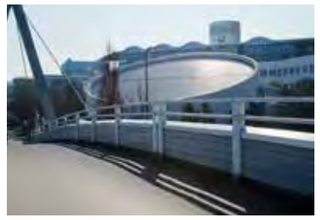
21.200

In 2018 there were around 14,900 students enrolled in more than 100 degree programs at **TU Kaiserslautern,** among those 2,650 were foreign students. A further 6,300 students were enrolled at the **University of Applied Sciences, Kaiserslautern** in some 60 degree programs.

Automotive, Automation and E-Technology

The importance of the sector in the West Palatinate

This industry arose from the iron industry and subsequent mechanical engineering. After the beginnings of iron production in the Middle Ages, the upturn began with industrialisation at the end of the 18th and predominantly, 19th centuries. Ferrous rocks, water power and wood from the forests provided good conditions for the emergence of this industrial sector, combined with the names Hacke and Gienanth, the so-called “Krupps” of the Palatinate.


The backbone of business location West Palatinate: renewable energies, a first-class research landscape and a central location in the heart of Europe, rife with transport connections

This was followed by the first manufacturers of vehicles (first bicycles) and above all machines. One of the most famous is the Pfaff company, founded in 1862 in Kaiserslautern. Such machines, which were increasingly manufactured here, were also used by the shoe industry in the Pirmasens area, as well as the textile industry. With the construction of the railway, the internationalisation of the markets and the better accessibility of other raw material sources, the iron industry lost importance, even if still today well-known manufacturers use traditional know-how for modern products (Gienanth, Hergerguss, Aco Guss etc.). Mechanical engineering continued to develop, along with the efficiency and quality of the machines, helping the West Palatinate assert itself over the decades over fiercer competition from other regions and countries. Kaiserslautern Ironworks (today General Dynamics), the Pfeiffer brothers (coal and cement mills), the casting and armature works (today: Aco Guss) and Pallmann Maschinenfabrik in Zweibrücken are some examples of this. The quality of the delivered products, based on the skills and knowledge of the workers, was their guarantee of success. And to those who used these products, the wagon construction was also important, as well as the state of repair of the rail vehicles (former railway repair shop, today RailMaint).

After the Second World War, although the industrial plants were badly damaged, the knowledge was preserved. It helped to locate new companies in the region who knew how to use this knowledge: foundation of the Opel plant in Kaiserslautern, John Deere and Kubota in Zweibrücken and many more.

With the boom of the automotive industry in the 50s and 60s, more and more suppliers emerged, who not only supplied highly specialised products to domestic manufacturers, but also increasingly to international ones. Whether it be for manufacturers of car seats (Keiper-Recaro, now predominantly Adient), turbochargers (KKK, today BorgWarner), catalysts (Corning), lubricants (Fuchs Lubritech), plastic parts (FWB) etc., the demands on technology, vehicle safety, efficiency and environmental friendliness are increasing and the suppliers in the region were always among the world market leaders. Further important producers settled in the vicinity of the West Palatinate (Ford in Saarlouis, Bosch and Eberspächer in Homburg, Daimler in Wörth, Tenneco in Edenkoben).

With globalisation and growing competition from so-called “low-wage countries”, there has been increasing pressure to reduce staffing levels, increase the number of pieces produced and keep the leading edge in terms of quality. This is only possible with increasing automation, control technology and the use of robots and sophisticated automated testing and quality assurance procedures. So the region benefited from the founding of the University of Kaiserslautern in the early 1970s, which then developed into a technical university. New processes and qualified personnel became increasingly important to the industry, as did cooperation in the development of new products and processes. The institutes (Fraunhofer, DFKI ...), which were gradually founded or settled here, played a special part in this. Application-oriented research and development were just as important as the numerous spin-offs that converted innovative ideas into successful companies.

Besides development in mechanical engineering, technology, materials science, physics and mathematics, the development of the IT sector played a very special role. Not only control software, but also design, computer simulation, and virtual product development in connection with technical know-how became the new strengths of the region. The conversion sites, which had become vacant in the 1990s, offered not only good framework and growth conditions for start-ups, but the development of new locations of the University of Applied Sciences, Kaiserslautern, in Pirmasens and Zweibrücken offered good opportunities to use these impetuses. This was also urgently needed given the loss of jobs in the military and especially in the footwear industry. With the support of the state of Rhineland-Palatinate, this was also a success.

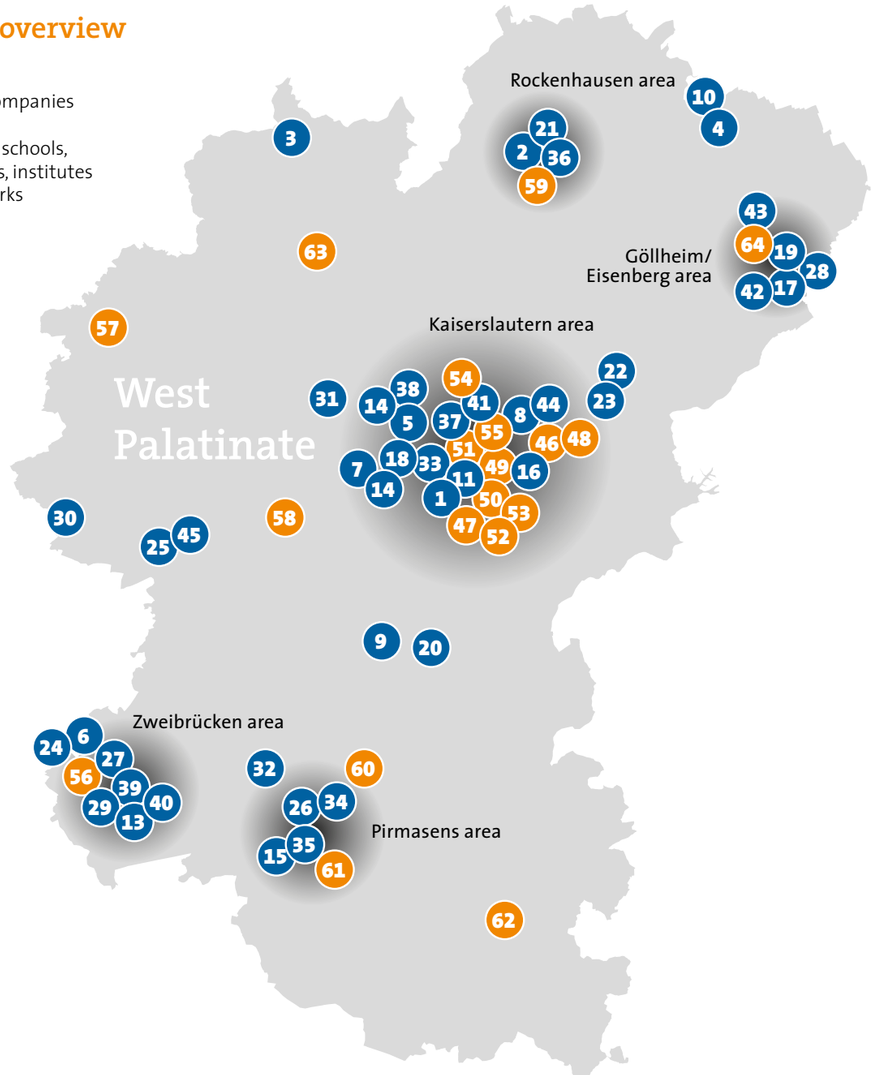
Building on the existing know-how, new business areas were created in which many traditional companies also found new prospects for the future. Kömmerling Chemische Fabrik GmbH, Hager-Tehalit, EMS, Walther Werke, HegerFerrit etc. were able to conquer new business fields with renewable energies. Others became developers and software companies (Human Solutions), specialising in weighing technology (Wipotec), plant engineering (Minitec), etc. Data processing, data storage, data security are further, newer business fields. In the West Palatinate, the connection between “classical” mechanical engineering and the rapidly growing IT sector has always been maintained, and is now being systematically cultivated and supported by transfer points and advice centres for small and medium-sized companies, young trainees and universities. The main foci are collaborative work and the collective effort to make the region as attractive as possible for companies and employees. The regional umbrella organisation ZukunftsRegion Westpfalz e.V. has been playing an important role since 2012. In recent years, we have seen international trends affecting this industry which is so important to the region. On the one hand, the discussion on climate

protection and the accelerated trend towards electromobility put pressure on companies whose products are linked to the internal combustion engine. On the other hand, new technologies are being developed for propulsion, energy storage, networking and the like. At the same time, we can see how medium-sized companies are catching the attention of larger national ones, but above all, international companies, and being taken over. Whether they be from the USA, China, Japan, Korea or, not least, France. It underlines their excellent performance and at the same time gives them the opportunity to be present on more international markets. In this respect, the ability to sustainably invest in research and development plays a critical role. This is required by new demands, whether on world markets, for new business models or in the individualisation of products. The automotive and automation industry in West Palatinate recognised this early and has adapted accordingly. It is also an attractive environment for other companies from this same and related industries.

At the same time, the steadily growing quantities of renewable energy generated in the region are pushing forward the development of sustainable energy, as well as its transport, distribution and storage in various forms. This increasingly includes the field of mobility, whether it be private transport, public transport or commercial vehicles.

Location overview

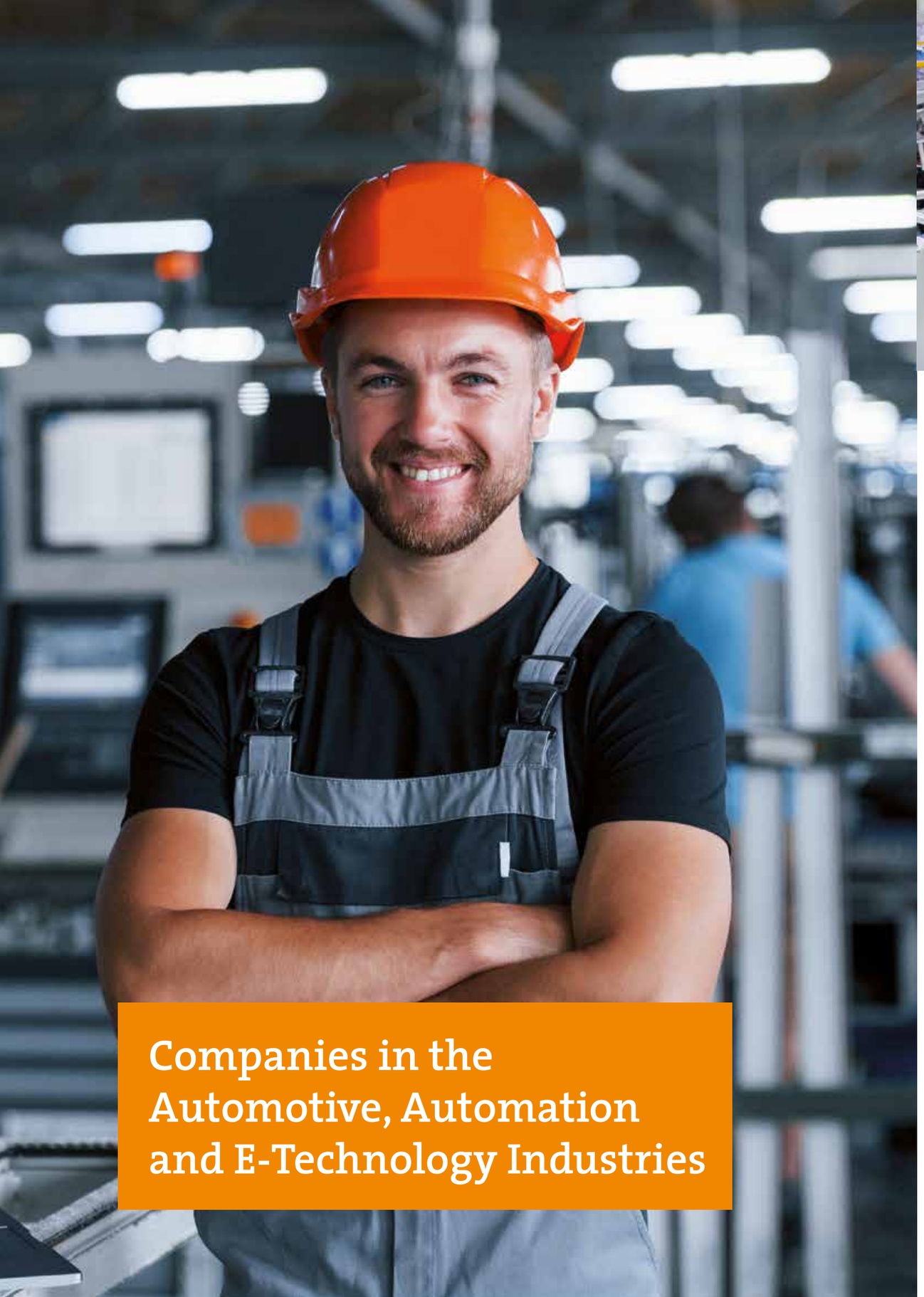
- Industry companies
- Vocational schools, universities, institutes and networks



No.	Company	Competencies	Information
1	ACO Guss GmbH	Cast parts	www.aco-guss.com
2	Adient Components Ltd. & Co.KG	Car seats	www.adient.com
3	BITO-Lagertechnik	Container and shelving systems	www.bito.com
4	BorgWarner Turbo Systems GmbH	Turbochargers for internal combustion engines	www.turbos.borgwarner.com
5	Coherent Kaiserslautern GmbH	Industrial lasers	www.coherent.de
6	comlet Verteilte Systeme GmbH	Embedded systems development	www.comlet.de
7	Corning GmbH	Environmental technology, filters	www.corning.com
8	Ellenberger GmbH & Co. KG	Machining technology	www.ellenberger.org
9	EMS Elektro Metall Schwanenmühle GmbH	Electrical connectivity solutions	www.ems-power.com
10	FEMEG GmbH & Co. KG	Compressor fittings, among others	www.femeg.com
11	flexstructures GmbH	Cabling system simulations	www.flexstructures.de
12	fepco GmbH	Innovative filter technology	www.fepco-filtration.de
13	Freudenberg	Filtration systems, among others	www.freudenberg.com
14	Fuchs Lubritech GmbH	Special lubricants	www.fuchs.com/lubritech
15	FWB Kunststofftechnik GmbH	Plastic parts e.g. for car keys	www.fwb-gmbh.com
16	General Dynamics European Land Systems	Mobile bridge systems	www.gdels.com
17	Gienanth GmbH	Cast parts	www.gienanth.com
18	GKN Kaiserslautern GmbH	Drive systems and solutions	www.gkndriveline.com
19	Greiner Schaltanlagen GmbH	Conductor rails, switchboards	www.greiner.eu
20	Hager Group	Charging stations, among others	www.hager.de
21	HSP Steuerungs- und Anlagentechnik	Switchboards, robotics	www.hspgmbh.de
22	Huissel Umformtechnik GmbH	Tool manufacture, forming technology	www.huissel.com
23	ITW Fastener Products GmbH	Brackets for cables and belts	www.itw-fasteners.com
24	John Deere GmbH & Co.KG	Agricultural machinery	www.deere.de
25	Klaus Backes GmbH	Machine and automotive components	www.backesgmbh.de
26	Kömmerling Chemische Fabrik GmbH	Bonding and sealing	www.koe-chemie.de
27	Kubota Baumaschinen GmbH	Construction machinery	www.kubota-baumaschinen.de
28	Langhammer GmbH	Transport and palletising systems	www.langhammer.de
29	MEC Elektronische Komponenten GmbH	Electronic components	www.mec-elektronik.de
30	MiniTec GmbH & Co. KG	Profiles, materials-handling technology, a.o.	www.minitec.de
31	Mkt Metall-Kunststoff-Technik GmbH Co KG	Metal-plastic composites	www.mkt.de
32	Mohrbach Verpackungsmaschinen GmbH	Packaging machines	www.mohrbach.com
33	Opel Automobile GmbH	Car engines	www.opel.de
34	PKM Packaging GmbH	Packaging line automation	www.pkm-packaging.com
35	psb intralogistics GmbH	Automated warehousing systems	www.psb-gmbh.de
36	rema fertigungstechnik GmbH	Precision parts	www. rema-fertigung.de
37	Robot Makers	Automation	www.robotmakers.de
38	SKS Welding Systems GmbH	Customised welding systems/robots	www.sks-welding.com
39	Schliessmeyer GmbH	Plastic components	www.schliessmeyer.de
40	Tadano Demag GmbH	Cranes and crane lorries	www.demagmobilecranes.com
41	Vision Electric Super Conductors GmbH	Superconductors, high-current conductor rails	www.vesc-superbar.de
42	Walther-Werke GmbH	Plug and socket devices, power distributors	www.walther-werke.de
43	WESTA Maschinen- und Gerätebau GmbH	Mechanical engineering, material handling	www.westa-gmbh.de
44	Wipotec GmbH	Weighing technology	www.wipotec.com
45	Wolf Werkzeugtechnologie GmbH	Drilling and cutting tools	www.wolf-gruppe.com

No.	Universities, Institutes, Networks	Information
46	Commercial Vehicle Cluster / we moove it	www.cvc-suedwest.com
47	DFKI German Research Centre for Artificial Intelligence GmbH	www.dfki.de
48	Rhineland-Palatinate Vehicle Initiative registered association]	www.fahrzeug-initiative.de
49	Fraunhofer IESE	www.iese.fraunhofer.de
50	Fraunhofer ITWM	www.itwm.fraunhofer.de
51	University of Applied Sciences, Kaiserslautern	www.hs-kl.de
52	Institute for Composite Materials	www.ivw.uni-kl.de
53	TU Kaiserslautern / Centre for Commercial Vehicle Technology	www.uni-kl.de/znt

	Vocational schools		
54	VS I – Technology, Kaiserslautern	60	VS Rodalben
55	VS II Economic and social affairs, Kaiserslautern	61	Landgraf Ludwig secondary school plus Pirmasens
56	VS Zweibrücken	62	Secondary school plus Dahn
57	VS Kusel	63	Secondary school plus Lauterecken-Wolfstein
58	VS Landstuhl	64	Gutenberg secondary school plus Göllheim
59	VS Donnersberg district		



Companies in the Automotive, Automation and E-Technology Industries

Adient Components Ltd. & Co.KG

World Market Leader Adient Alights on Two Sites in the West Palatinate

Adient is a real global player: as the world's largest car seat manufacturer, the company employs more than 75,000 people in 33 countries. Two sites in the West Palatinate, Kaiserslautern and Rockenhausen, contribute to international success.

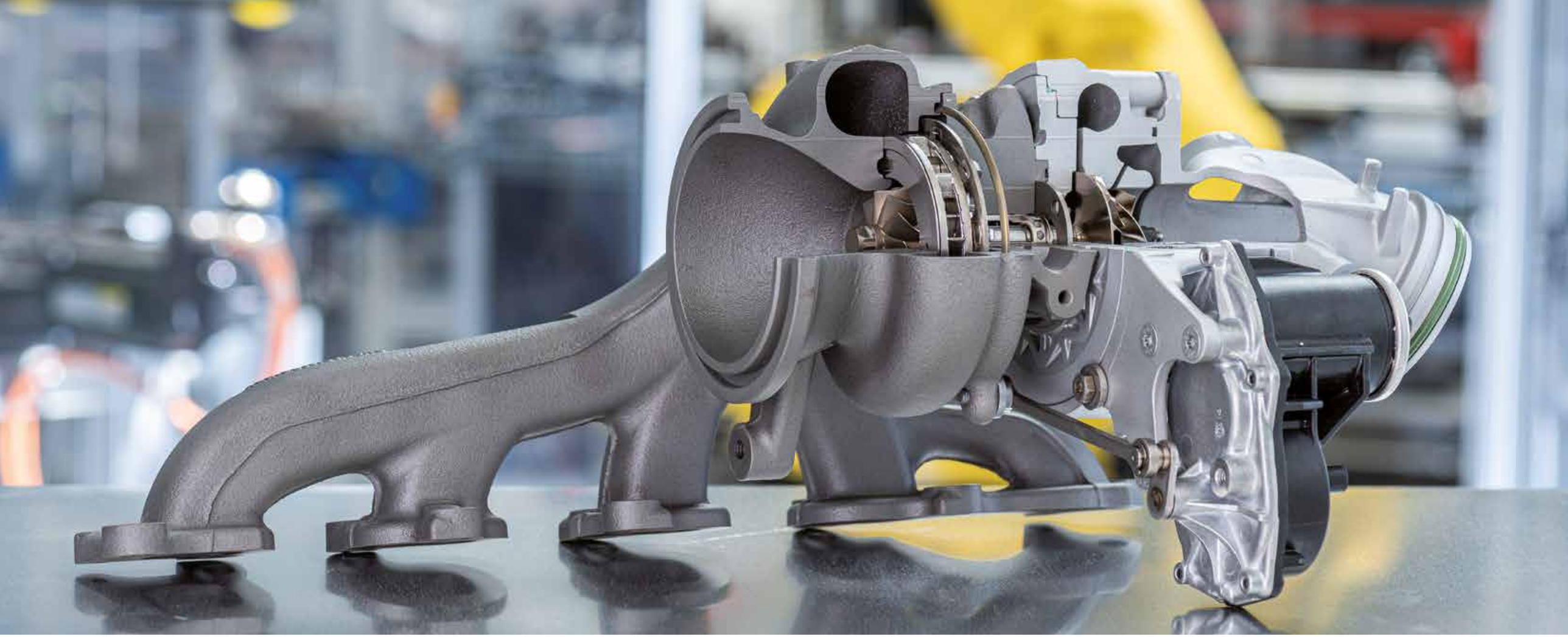
Car seats and the West Palatinate – a connection with tradition and future promise. For many decades, this has been true of the Adient production site in Rockenhausen, whose history dates back to 1964. Under Keiper (until 2011) and Johnson Controls (until the founding of Adient 2016), the plant in the Alsenz valley had gradually developed into a hotbed of high-tech industry. Nowadays, it plays a critical role for Adient: in Rockenhausen, individual parts, components and structures for vehicle seats are produced, and almost all major automobile manufacturers worldwide can be counted as customers. On an area of around 54,000 square meters, the site processes around 70,000 tonnes of steel every year. Currently more than 1,400 employees work in Rockenhausen – making Adient the largest employer in the region.

Martin Queck, General Plant Manager at Adient in Rockenhausen, says: "We have more than 80 percent share of the current world market in seat recliners for new vehicles". How does this impressive number come about? "Adient has made the Rockenhausen site the so-called Lead Plant for Recliners in its global production network, which means something like worldwide competence centre for seat recliners," explains Mr. Queck. The reason for this is that the Rockenhausen plant not only concentrates on leading technologies and manufacturing processes under the heading Industry 4.0, but above all on the know-how and experience gained from over 50 years of metal processing.

Tradition meets progress at the Adient site in Kaiserslautern. The premium brand for automobile seats is right at home in the technical centre founded in 1989 by Keiper Recaro: Recaro Automotive Seating, as a product group of Adient, delivers high-quality performance seats for the original equipment and retrofit markets for cars and commercial vehicles. In addition to central functions, the Hertelsbrunnenring is home to all major facilities for the development of complex rear seat structures – ranging from virtual seat development and simulation through prototyping and testing to the in-house crash simulation system.

Competencies:
· Leading provider of car seats worldwide
· Development and production of complete seating systems and standardised adjustment components

Contact:
Adient Components Ltd. & Co.KG
Industriestraße 1 · 67806 Rockenhausen
Tel. +49 (0)6361 86–0
www.adient.com



BorgWarner Turbo Systems GmbH

Turbocharging Towards Electrification

West Palatinate in transition: one of the most important turbocharger factories of automotive supplier BorgWarner is increasingly focusing on electrified mobility.

Worldwide, Kirchheimbolanden is mentioned in the same breath as BorgWarner's turbocharger business. The site is regarded as a control centre for the development and production of the latest turbocharging technologies. With its efficient turbochargers, the company supports technology trends like the hybridisation of vehicle engines. BorgWarner is thus riding the wave of transformation in automotive industry to move towards clean, low-emission mobility and actively drive it forward.

"Electrified mobility is already a reality in Kirchheimbolanden," reports plant manager Jürgen Adam. "The eBooster® for example, an electrically driven compressor, is manufactured locally. Innovations like these help to implement our vision of a cleaner, more energy-efficient world."

BorgWarner is one of the largest employers in the Donnersberg district. The company is aware of its social responsibility and, for example, volunteers as a partner of the "SOS Children's Villages" charity organisation. Three local aid projects are actively supported by crafts fairs and fundraising campaigns.

BorgWarner is able to attract motivated people to the company and to the region thanks to its variety of career models. In addition to apprenticeships in the fields of mechatronics, production and machining mechanics, BorgWarner also offers dual study courses in mechanical engineering, industrial engineering and electrical engineering. Interested parties can get a first-hand impression at events like the training exchange in Kaiserslautern.

Competencies:
a comprehensive range of turbochargers for cars and commercial vehicles, as well as a wide range of replacement turbochargers and parts for aftermarket customers throughout the entire world

Contact:
BorgWarner Turbo Systems GmbH
Marnheimer Strasse 85/87
67292 Kirchheimbolanden
Tel. +49 (0)6352 403–0
Email: info-eu@borgwarner.com
www.turbos.borgwarner.com

Corning GmbH

Climate Protection you can Touch – High-tech from the West Palatinate

From Kaiserslautern, Corning supplies the global automotive industry. Modern ceramic products reduce engine emissions worldwide, thus protecting our climate.

Corning GmbH belongs to Corning Inc., a high-tech company from the USA. We supply the automotive industry with ceramic honeycomb bodies, which are used as carriers for catalytic converters or particulate filters in motor vehicles.

Material knowledge and process technology in the field of ceramic substrates and filters are our expertise. We develop exhaust aftertreatment systems for the largest manufacturers of petrol and diesel-powered engines and vehicles. We supply Europe and the whole world from our competence centre in Kaiserslautern. We set standards with our state-of-the-art production and help reduce environmental pollution worldwide.

Responsibility, flexibility, respect and more: we live a culture of innovation, knowledge transfer and several generations. Our senior managers are always approachable and appreciate the contribution of each individual. This is how we acquire and develop the best talent. And build ourselves the reputation we enjoy as a world market leader and innovator.

CORNING

Competencies:
- Ceramics for mobile exhaust aftertreatment in cars and lorries
- State-of-the-art production processes
- Excellently trained employees
- Appreciative corporate culture
- Very good development prospects, both at the site and globally within the group

Contact:
Corning GmbH
Carl-Billand-Straße 1
67655 Kaiserslautern
Tel. +49 (0)631 35250
www.corning.com

comlet Verteilte Systeme GmbH

Software Engineering with Foresight

comlet Verteilte Systeme GmbH is a highly specialised development service provider in the field of embedded systems. Using years of project experience and know-how from many different industries, comlet develops sustainable and sophisticated software solutions according to specific customer requirements. Our customers rely on our competent and comprehensive all-round support!

comlet Verteilte Systeme GmbH was founded in 2001 by professors and graduates of the Department of Computer Science of the University of Kaiserslautern in Zweibrücken. Altogether more than 80 experts work at the locations in Zweibrücken, Darmstadt, Munich and Karlsruhe. In addition to traditional order development, we provide our customers with on- and off-site support.

As a technology partner and know-how supplier, we are able to tailor our offer to fit.

Commercial Vehicles, Automotive, Industrial Internet of Things, Smart Home & Living and Industrial – every industry and every branch has its peculiarities. In order to precisely meet all requirements, the experts from the departments of Configuration Management, Test Engineering & Validation, Distributed Security and System Architecture keep them in focus and coordinate closely with each other.

We offer a complete range of services for software development. This includes consulting, development, system integration, testing, maintenance and training.

comlet
Engineering your success

Competencies:
· Embedded Systems
· Infotainment
· IT Security
· Software Engineering
· Automotive
· IoT
· Commercial Vehicles

Contact:
comlet Verteilte Systeme GmbH
Amerikastr. 27
66482 Zweibrücken
Tel. +49 (0)6332 811100
Email: info@comlet.de
www.comlet.de

FEMEG Feinmechanik + Gerätebau GmbH & Co. KG

Precisely on Target

Versatility, flexibility, quality and efficiency – these are the four cornerstones of FEMEG GmbH & Co. KG. Since Mr Bernd Hofmann founded the company in 1967, the specialists for precision mechanics have developed into a capable supplier for various industries.

Whether its fittings for the drinking water supply, water meters or key components for turbocharger production in the automotive industry – renowned companies, such as BASF, Freudenberg, Siemens, Borg Warner, IHI-CSI, Bosch-Mahle, Voith, as well as municipal water utilities have long cherished FEMEG as a competent and reliable partner.

This success is principally safeguarded by a highly motivated team, distinguished on the one hand by their many years of expertise, and on the other hand by their constant willingness to innovate new methods and processes using new technologies. This proven expertise and the high standards of quality in the field of precision mechanics were also able to evolve particularly well thanks to the excellent infrastructure at the Kirchheimbolanden business location: on the one hand, the industrial area on Morschheimer Street was the perfect location to build the 8,000m² production facility with a state-of-the-art CNC machine park, where all the materials, such as steel, cast iron, aluminium and MS alloys are processed. On the other, the central location in the tri-city area of Mainz-Ludwigshafen-Kaiserslautern with a direct motorway connection to the A63 enables fast delivery. Ideal framework conditions which also ensure that FEMEG GmbH & Co. KG will be ready to meet the constantly growing demands of the markets and the exacting demands of technology in future.

Today, the company group includes, among others, Wutal Aluminiumguss GmbH in Stühlingen, a supercharger plant in Gommern, as well as Pollux electro mechanical systems GmbH and Enwas GmbH (energy, water, services) in Kirchheimbolanden. All in all, the Femeg group employs 650 workers, around 200 thereof in Kirchheimbolanden. Bernd Hofmann's success story as a founder and now 76-year-old entrepreneur, still fully in business, also wouldn't be complete without mentioning the purchase of the Kirchheimbolander castle and its mid-1990s reconstruction into a retirement home, in which Catholic charity organisation Zoar cares for 160 people. Not to mention the roughly 100 new jobs that were thus created in Kirchheimbolanden.

FEMEG
FEINWERKTECHNIK · ARMATUREN

Competencies:
· Precision parts for the automotive and chemical industries
· Production of water metres and fittings
· Compressor housings
· High pressure fittings
· Turbine housings
· Bearing housings

Contact:
FEMEG Feinmechanik + Gerätebau GmbH & Co. KG
Morschheimer Str. 7
67292 Kirchheimbolanden
Tel. +49 6352 400030
Email: verkauf@femeg.com
www.femeg.com

Innovative High-tech Textiles and High-tech Filter Media for the Automotive Industry

The automotive industry is heading into a future of global challenges. High-tech textiles from **Freudenberg Performance Materials** provide intelligent solutions to these challenges inside the vehicle. They make cars lighter, save fuel and thus ensure climate-friendly CO_2 values. Their field of application is the sophisticated design of surfaces: whether for roof liners, car carpets, door panels or sound absorption. In addition, they make the crucial component of carpet backing for car carpets – precisely shaped according to the manufacturer's wishes. Our solutions in the automotive sector not only stand for maximum quality, but also for maximum cost efficiency and the highest design standards.

Competencies:
Innovative textile solutions for
· Shaped car carpets and car mats
· Roof liners
· Sound absorption
· Reduced vehicle weight
· High comfort in vehicle

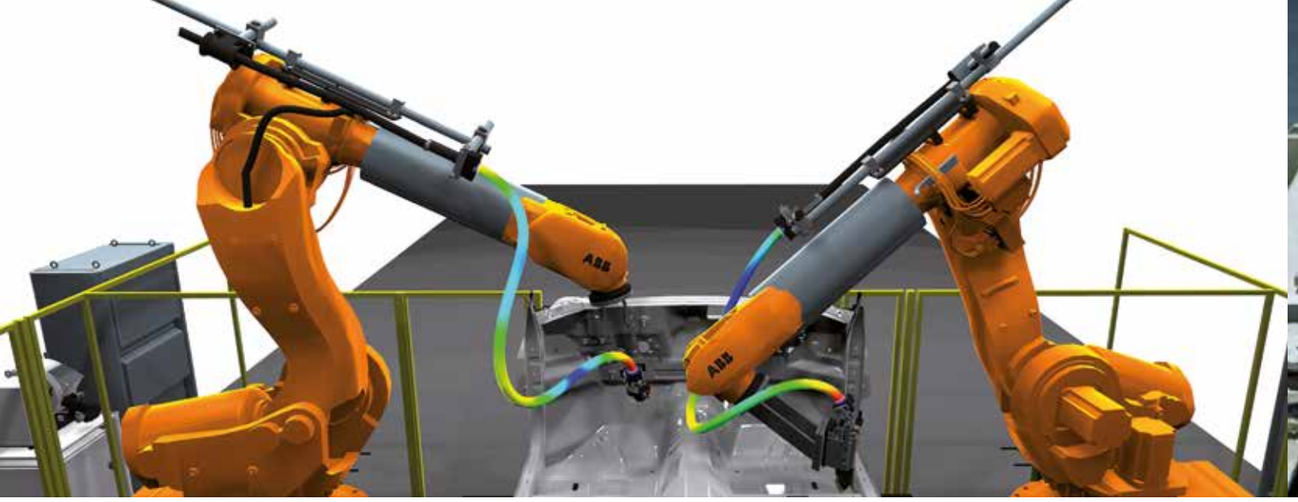
Contact:
Freudenberg Performance Materials SE & Co KG
Liebigstraße 2 - 8
67661 Kaiserslautern
Alexander Barnsteiner
Tel. +49 (0)631 5341596
www.freudenberg-pm.com

FREUDENBERG
INNOVATING TOGETHER

Freudenberg Filtration Technologies develops solutions to make processes more economical, conserve resources, protect people and the environment, and thus contribute to improving quality of life. At the Kaiserslautern site, we manufacture micronAir® cabin filters for well-known car manufacturers that reliably protect vehicle occupants from pollutants such as pollens, fine dusts and allergens, as well as unwanted odours. Engine intake filters based on fully synthetic high-performance filter media are also part of the production program in Kaiserslautern. Our activated carbon production plants enable us to produce flatware media tailored to the individual needs of every customer.

Competencies:
Excellent filtration solutions for
· Internal combustion engines & new mobility
· Industrial painting
· Agriculture and off-the-road vehicles
· Heavy-duty vehicles and buses
· Railways, shipbuilding, aviation

Contact:
Freudenberg Performance Materials SE & Co KG
Liebigstraße 2 - 8
67661 Kaiserslautern
Erik Kennel
Tel. +49 (0)631 5341 379
www.freudenberg-filter.com



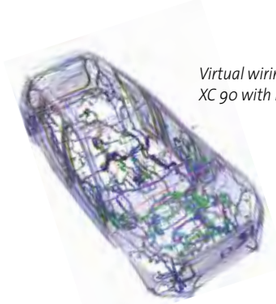
flexstructures GmbH

Make it Flexible

Our passion for innovative technologies is our guarantee for success.

Be it cables or hoses, flexible components require particular attention since they are quite often the sticking point that makes life hard for constructors in product development and production planning. This is where FleXstructures comes in. The software company founded in 2012 in Kaiserlautern takes a completely new approach from research to industry – and has thus become a market leader. Take for example the groundbreaking development of new algorithms which make it possible to accommodate and optimise sometimes kilometre-long cables and hose systems in ever smaller installation spaces, taking into account function and weight and used to test installations in the virtual vehicle. Using the IPS software, processes can now be solved in real-time, where previously this would have taken weeks and months.

The use of these new software solutions has become completely indispensable in the product development process for modern vehicles. Already more than one hundred vehicle manufacturers, suppliers and service providers worldwide rely on fleXstructures' products. With an international team on site in the direct vicinity of the Fraunhofer institutes, the German Research Centre for Artificial Intelligence and the Technical University, the company has most likely found the best spot on



Virtual wiring system design of a Volvo XC 90 with IPS cable simulation

Kaiserslautern's innovation street to continue providing their customers with leading technologies and services, to create attractive jobs, as well as to find and keep talent for research and development.

fleXstructures GmbH has already won several awards. Besides the Robotics Award 2017, the Success Award 2018 and the Innovation Prize 2019 also went to the young company.

Customers come from the automotive and automation sectors, but also from industrial sectors such as the motorcycle, agricultural machinery, commercial vehicle and railway industries. fleXstructures' software solutions support the customers in shortening their product development processes, saving on hardware and reducing their development costs. The customers benefit from a holistic concept encompassing software distribution, consulting and research.

Competencies:
- 3D mechanical design and protection of cables, cable harnesses and hoses
- Design optimisation in real-time
- Automated task planning and scheduling of robot stations
- Digital human model for planning assembly processes and ergonomic examinations

Contact:
flexstructures GmbH
Trippstadter Straße 110
67663 Kaiserslautern
Tel. +49 (0)631 68039360
Email ips.pr@flexstructures.de
www.flexstructures.de

General Dynamics European Land Systems–Bridge Systems GmbH

Tradition Meets Innovation

As a global leader in the area of development, General Dynamics European Land Systems–Bridge Systems (GDELS–Bridge Systems) realises welding assemblies and repair of complex aluminium structures, innovative products and system solutions in vehicle technology, as well as the construction of mobile bridge systems, and has already been honoured as one of the 100 most innovative medium-sized companies in Germany.

Innovation is part of the company philosophy and is particularly evident in the following areas:

- Application and use of new and modern materials (plastics, metals, fibrous materials)
- Autonomous driving in close cooperation with local companies and institutions, such as the Technical University of Kaiserslautern and the Fraunhofer Institute
- Use of innovative production methods and joining methods
- In cooperation with the Fraunhofer Institute, the company develops powerful calculation programs for permanent product optimisation
- Offer of welders' training and certification as a DAkkS accredited and AZAV certified educational institution

The company's core competency is its employees. Because of this, GDELS–Bridge Systems is committed to keeping their staff diverse, motivated and highly-qualified.

As a responsible employer, GDELS-Bridge Systems prioritises creating a healthy work environment through high safety standards and health promotion, as well as sustainable action through careful use of resources in day-to-day business.

Competencies:
- World market leader for mobile bridge systems
- Specialist in the development, welding assembly and repair of complex aluminium structures
- Worldwide service in the fields of automotive, welding technology, electrics, hydraulics, mechanics
- Order production
- Welder's training and certification

Contact:
General Dynamics European Land Systems–Bridge Systems GmbH
Barbarossastraße 30
67655 Kaiserslautern
Tel. +49 (0)631 36160
Email: info.bridges@gdels.com
www.gdels.com

John Deere

Commitment to People who are Connected to the Countryside.

With a turnover of 37 billion US dollars and more than 74,000 employees, John Deere is the world's largest producer of machines for agricultural, construction and forestry work, as well as lawn and property maintenance.

The strength of our company arises from the intermingling of the various cultures, experiences and skills of our employees, as well as the common goal of reliably delivering the highest quality every day. At John Deere, we share a passionate interest in agricultural machinery and its advancement as a high-tech and high-innovation product. Your ideas, experiences and, above all, your humanitarian values are important to us.

John Deere employees are working on today's most important agricultural high-tech project – feeding the world's population.

At the site in Zweibrücken, you will find John Deere's European competence centre for harvesting machines. Here, around 1300 employees develop and build combine harvesters and self-propelled forage harvesters.

In 2010, we opened our European Technology and Innovation Centre in Kaiserslautern. In doing so, we benefit not only from the proximity to the important production sites in Zweibrücken and Mannheim, but also particularly from the research expertise at the Kaiserslautern site. Strategic partnerships with universities and institutes, for example, in the areas of sensor technology, automation and electrification, make Kaiserslautern one of the most important locations of our internationally-operating company.

JOHN DEERE

Contact Zweibrücken
John Deere GmbH & Co. KG
Homburger Str. 117/125
66482 Zweibrücken
Tel. +49(0)6332 890
Email: etic@deere.de
www.deere.de

Contact Kaiserslautern
John Deere European
Technology Innovation Centre
Straßurger Allee 3 · 67657 Kaiserslautern
Tel. +49(0)631 36191–0
Email: etic@deere.de
www.deere.de




Hager Group

We Shape the Future. With All Our Energy.

The Hager Group is a leading provider of solutions and services for electrotechnical installations in residential, industrial and commercial buildings.

The core business ranges from power distribution and wiring to intelligent building control and security technology. Together with customers from industry and the electrical trade, the company works on future topics such as charging stations for electromobility, as well as technologies for the intelligent home and better energy efficiency.

The development of intelligent energy management systems is one of the key research foci of the Hager Group. Electro-mobiles will be essential elements of this system in the future. Together with AUDI AG, the company is working on an automobile-home network, connecting electric car, charging technology, and house energy management.

At the Heltersberg site, around 580 employees develop and produce cable management and room connection systems. Apart from this, charging stations for electric vehicles are also manufactured here. The latest expansion to the production range are building communication technology products from Elcom.

The Hager Group was founded in 1955 by Hermann and Dr. Oswald Hager together with their father Peter, and is still to this day an independent, owner-operated family business based in Blieskastel, Germany. The corporate form of a European Company (Societas Europaea, SE) underlines both the cultural diversity as well as the European roots of the Group.

Although, having said that, Hager Group has meanwhile become a global player: 11,500 employees generated sales of around 2 billion Euro (2018). In 22 sites around the world, components and solutions are produced, upon which customers from over 120 countries rely.

hagergroup

Competencies:
· Energy distribution and meter mounting systems
· Protective and switching devices
· Cable management and room connection systems
· Switch programs and building control automation
· Security technology
· Charging stations for electric vehicles
· Communication systems and individual input settings

Contact:
Hager Group
Heltersberg Site
Seebergstrasse 37
67716 Heltersberg
Tel. +49 (0)6333 9920
Email: info@hager.de
www.hager.de

HSP Steuerungs- und Anlagentechnik GmbH

Your Project is our Focus

HSP Steuerungs- und Anlagentechnik GmbH was founded over more than 25 years ago and has many years of experience in the development and production of special purpose machines and assembly lines. We offer our customers everything from consultation to completion to service all from one source.

Constructions & switchgear engineering
We create constructions for various areas of mechanical and plant engineering both for and with our customers. This includes the complete planning of hardware and software, as well as assembly and commissioning of the systems. We develop innovative and tailor-made switchgear for your individual automation solution.

Special purpose machines and prototypes
Machines for special production areasdo not grow on trees. HSP manufacturesspecial purpose machines and prototypes for internationally operating companies in the automotive and plastics industries. All our knowledge and experience in the areas of construction, switchgear construction, robotics, PLC programming and visualisation are incorporated in the planning, development and commissioning.

Robotics
When developing robot-based solutions, not only hardware, but also programming plays a crucial role in ensuring a self-contained, safe and smooth workflow. We plan and deliver tailor-made complete systems for you, including design and production of suitable gripper technology.

Programming & Software Development
Programmable logic controllers form a very important basis of automation technology. Professional PLC solutions enable advanced and convenient functions for more efficiency and safety in automation technology. Special requirements in the field of industrial automation often require a tailor-made software solution. We programme your individual application.

Commissioning,maintenance & service worldwide
We carry out commissioning, maintenance and repairs worldwide. The expertise of our employees is always up-to-date in order to assist our customers in all matters.

Competencies:
· Electrical engineering
· Switchgear construction
· Special purpose machine construction
· Robotics
· PLC programming, software development
· Visualisations
· Worldwide maintenance & service

HSP Steuerungs- und Anlagentechnik GmbH

Contact:
HSP Steuerungs- und Anlagentechnik GmbH
Kreuzwiese 5
67806 Rockenhausen
Tel. +49 (0)6361 9294–0
Email: postbox@hspgmbh.de
www.hspgmbh.de

ITW Fastener Products GmbH

Products for the Vehicles of Today and Tomorrow

At home anywhere. Travelling with us on every street worldwide.
ITW is a global partner for the largest car manufacturers and their suppliers.

As part of the internationally successful ITW company group with more than 50,000 employees in 56 countries, ITW has the resources and resilience of a global company. There is hardly a vehicle today that doesn't have some part of the rigorous engineering and mature product quality of ITW Global Fasteners in there somewhere.

Our speciality is the development and production of innovative plastic fasteners for the automotive industry. These include cable mountings and cable fastenings, covers and panel fixings, among other things. Areas of application are e.g. the vehicle interior, brake and fuel systems, the engine and drive area and the body work. Our products contribute to a powerful overall package in vehicle design.

Our decades of experience in plastic design and injection moulding technology has led to the development of trendsetting solutions that offer the user numerous advantages: Design improvements, simplification of assembly processes, optimisation of processes, time savings and, last but not least, cost reduction for the same quality and product improvement.

We offer a universal and time-monitored concept, starting with the component development, then the provision of prototypes, tool construction, part production, right up to manual or fully automatic assembly.

Our in-depth understanding of automotive assembly operations and our significant engineering expertise enables us to always find the best possible solution for our customers. As a global player, we offer innovative products, individual services and effective support.

Competencies:
Innovative fastening solutions for the automotive industry.
· Component development
· Provision of prototypes
· Tool planning
· Production / fully automatic assembly

Contact:
ITW Fastener Products GmbH
Am Pulverhäuschen 7
67677 Enkenbach-Alsenborn
Tel. +49 (0)6303 805–0
Email: EFC.Enkenbach@itw-efc.com
www.itw-fasteners.com

Klaus Backes GmbH

Precision, Flexibility & Reliability in Series and Piece Production

Back in 1974, when Klaus Backes began the contract manufacture of machine components and tools , customer satisfaction and meticulous precision were already top priorities.

This flexible response to customer requirements is still a central part of our company ethos. Our success speaks for itself: with more than 150 highly trained employees in our two plants, we produce precision turning, milling and grinding parts, die-cut and bent parts, tools, as well as precision mechanical assemblies in serial or single-component production.

Efficient work processes and modern business organisation are key to our more than competitive costs. Our employees are highly qualified and are regularly trained. This guarantees that they are familiar with the newest standards in technology. Because: we are no strangers to Industry 4.0.

An excellent staff is our most important future capital, so we attach great importance to training our own skilled workers regularly, thus creating the basis for highly trained staff.

Do you expect more from your suppliers than the usual standard? Challenge us – the more demanding your task, the better. Because in addition to series production with absolute precision according to your specifications, first-class quality and on-time delivery, we offer you the added value that makes the decisive difference.

Our high standards are also apparent in the audited quality management systems, according to whose criteria we work. Besides the qualification according to IATF 16949, ISO 9001: 2015, the environmental certification according to ISO 14000 is important to us.

Competencies:
· Precision turning and milling parts for series or single production, as well as die-cut and bent parts
· For the automotive industry, agricultural mechanical engineering, energy and fastening technology, hydraulics, pneumatics and many other industries

Contact:
Klaus Backes GmbH
Eisenbahnstraße 11
66892 Bruchmühlbach-Miesau
Tel. +49 (0)6372 8068–0
Email: mail@backesgmbh.de
www.backesgmbh.de

Kubota Baumaschinen GmbH

For Earth, for Life

Kubota is one of the globally operating and internationally leading producers in plant construction and mechanical engineering. The Kubota Baumaschinen GmbH in Zweibrücken produces construction machinery for the European market and is one of the mainstays of the Group.

The name of the company refers to its Japanese founder Gonshiro Kubota – and stands for a vital co-existence between tradition and innovation: customer-orientation and continual development have ensured that after 124 years of company history, Kubota is more modern, versatile and successful today than ever before.

The headquarters of the Kubota Group is located in Osaka/Japan. With roughly 40.000 employees in more than 110 countries, the Kubota Group achieved a turnover of over 16 billion US dollars in 2017. In addition to agricultural engineering as its main business, Kubota produces a variety of other products, such as filtration systems, irrigation systems, steel pipes, roofing systems and large valves.

In Europe, Kubota achieved a turnover of 2.2 billion Euro with 4,400 employees. The European organisation consists of nine production plants and various distribution, service and sales units offering tractors, construction machinery, industrial engines, agricultural machinery, multi-purpose vehicles and lawn care equipment. The European headquarter is located in Nieuw Vennep, the Netherlands.

Kubota's success story began in 1989 in Zweibrücken. Today, Kubota Baumaschinen GmbH is one of the world's leading manufacturers of state-of-the-art compact excavators. In addition, the company has also been developing and manufacturing wheel loaders at its Zweibrücken site since 2014. These powerful machines have a strong foothold in the most diverse fields of application and are used worldwide. The fact that Kubota outright relies on the Zweibrücken site is evidenced by its investment of around 2.5 million Euro in a new warehouse and production hall for wheel loaders and is a clear endorsement of the local location.

Competencies:
Production of
· Compact excavators
· Wheel loaders
· Track dumpers
· Europe-wide comprehensive dealer network for sales and logistics

Contact:
Kubota Baumaschinen GmbH
Steinhauser Straße 100
66482 Zweibrücken
Tel. 49 (0)6332 –4870
Email: info@kubota-baumaschinen.de
www.kubota-baumschinen.de

KÖMMERLING Chemische Fabrik GmbH

Leading Technology in Adhesives and Sealants

KÖMMERLING Chemische Fabrik GmbH, headquartered in Pirmasens, Southwest Palatinate is a leading international manufacturer of high-quality adhesives and sealants.

Since the company was founded in 1897, KÖMMERLING has repeatedly set milestones in modern bonding and sealing with the development of new technologies. We are enthusiastic about innovative solutions for improving energy efficiency. We replace mechanical connections, make products lighter, longer-lived and quieter. With exceptional product quality and worldwide service, we have developed into a recognised system supplier for glass, transport, industrial assembly and renewable energies. Especially for the transport industry, we offer future-oriented system solutions of the highest quality which eliminate the need for welding, screwing and riveting.

In order to meet the demands of modern vehicle construction, we rely on technically mature, customer-specific solutions. Whether for automotive construction or vehicle repair, for cars, lorries, buses, caravans, rail vehicles etc. – KÖMMERLING products improve energy efficiency, lower emissions and increase comfort.

KÖMMERLING offers innovative solutions for automotive hot topics like lightweight construction, e-mobility, comfortable and functional vehicle interiors, as well as electronic assistance systems. Weight-reduction is critical for efficient mobility. Modern lightweight constructions are realised through the use and combination of new materials. With our innovative adhesive technologies, we provide a key component for the full implementation of the weight-saving multi-material mix.

Being future-oriented, we offer system solutions for the efficient protection of cells and electrical components, especially for battery-operated electric vehicles, for better thermal management in the battery pack and to reliably bond and seal the battery box.

Innovative adhesives and sealants for the best energy efficiency and mobility – this excites us and our customers!

Competencies:
· Adhesives and sealants for the best energy efficiency and mobility
· Innovative solutions for vehicle construction and repair
· Modern lightweight solutions for the implementation of multi-material mixes
· System solutions for battery-operated electric vehicles

Contact:
Kömmerling Chemische Fabrik GmbH
Zweibrücker Straße 200 · 66954 Pirmasens
Christoph Müller – Business Development Manager Engineering Adhesives EIMEA
Tel. +49 (0)6331 562456
Email: christoph.mueller@koe-chemie.de
www.koe-chemie.de

MEC Elektronische Komponenten GmbH

Top Performance in Assembly of Printed Circuit Boards

From automotive technology to medical technology or alternative energy solutions, it all depends on a small detail: the electrical brain, i.e. the assembled printed circuit board. If this fails then the whole system is down. So, the choice of a supplier of electronic components is of central importance.

For 35 years, MEC Elektronische Komponenten GmbH with 140 employees, has stood for intelligent and individual solutions: from development to series product, MEC GmbH is a competent partner for all the value creating stages of electronic manufacture. Consistent improvement of manufacturing processes and a high degree of automation guarantee fault-free production no matter how complex the assembly. The resulting increase in productivity means that MEC GmbH offers a fair, internationally competitive, price-performance ratio. Thanks to state-of-the-art technologies, excellent service and constant investments in the machine park, we can cover assembly of printed circuit boards to meet all needs.

Many top international companies rely on the know-how of MEC GmbH. Many millions of circuit boards have already been assembled for customers in Europe, Asia and America from the automotive sector to medical technology and renewable energies. Resting on our laurels is not an option: MEC GmbH sees every new project as a chance to celebrate success with the customer and further develop ourselves.

Competencies:
· Assembly of printed circuit boards (samples & series)
· EMS services of all kinds
· Automotive industry, solar technology, medical technology, navigation systems, network technology, sanitation, industrial technology, energy supply
· ISO 9001 and IATF 16949 certified
· Know-how since 1984

Contact:
MEC Elektronische Komponenten GmbH
Straßburger Ring 10
66482 Zweibrücken
Tel. +49 (0)6332 99130
Email: info@mec-elektronik.de
www-mec-elektronik.de

MiniTec GmbH & Co. KG

Simple Solutions for Complex Systems

Since its foundation in 1986, MiniTec has steadily grown from a miniature guide track specialist into a leading technology company. Today, 400 experts at 12 locations develop tailor-made solutions for our customers' problems.

An integral part of MiniTec's company ethos is to keep all the essential competencies and components in-house and to optimise them to meet our high quality standards. This applies to our modular system, as well as our linear technology. Thanks to a strict modular principle, we achieve efficiency with utmost reliability by avoiding superfluous product diversity and simultaneously developing complementary CAD software. The benchmark of our profile system is: the Art of Simplicity.

We create sophisticated solutions for a wide variety of tasks from diverse sectors of industry on the basis of our profile system. Important industrial companies worldwide are our customers. Together with leading research institutes like DFKI and the Fraunhofer Institute, we are working on pioneering developments in ergonomics and industry 4.0. As a consequence of the exacting technical standards, we have this motto for our complete solutions: the Engineers Choice.

Our solutions are every bit as individual as our customers' requirements. As a full-service manufacturer, we implement intelligent systems for a diverse range of tasks in all important industrial sectors on the basis of our profile system.

The main customers of MiniTec are renowned manufacturers and suppliers of the automotive industry, solar technology manufacturers, as well as providers of automation systems, packaging machines, general mechanical engineering and assembly technology. Prominent examples include test equipment for the Airbus A380, ergonomically and rationally optimised production facilities for electronics manufacturers, assembly lines for car seats and back-end assembly lines for solar modules.

Competencies:
· Automation and special purpose machine construction in the fields of conveyance, assembly, testing and soldering
· Fire fighting technology
· Solar technology
· Consulting, construction and assembly
· Software and training

Contact:
MiniTec GmbH & Co. KG
MiniTec Allee 1
66901 Schönenberg-Kübelberg
Tel. +49 (0)6373 8127–0
www.minitec.de

Opel Automobile GmbH – Kaiserslautern Plant

Traditional Site with the Latest Technology

The plant in Kaiserslautern has been producing top quality vehicle components for over 50 years. Under the new owner, Groupe PSA, the traditional Opel site is preparing itself for the future.

As an important pillar of Groupe PSA's global production network, the Kaiserslautern plant reliably supplies its sister plants with vehicle components and engines. The heart of the site is the press plant. The majority of the sheet metal parts manufactured here are sent to both of the two welding areas of the plant for further processing: in the production of body components, the pressed parts are assembled in highly flexible welding cells, for example for dashboard supports (top right photo) – a highly complex component, for which 40 individual parts are manufactured and welded together. Engine bonnets made of aluminium are also produced here (large photo). The experts for the production of front and rear wheel carriers, as well as seat structures, work in the chassis components production part of the plant. Around 19 million axles and 40 million seat structures have been manufactured at the West Palatinate production site to date.

The plant has also been producing engines since 1980. At the moment, 1.5 and 2.0 litre diesel engines are produced on site. Well over nine million engines "Made in Kaiserslautern" have rolled off the production line so far.

The Kaiserslautern plant also stands for innovative technologies. For the production of seats, a collaborative robot is integrated into the production line and works there together with the employee on seat structures (bottom right photo). The press plant is currently producing a system for hot forming steel. Kaiserslautern is the only PSA group production site that will use this technology.

Competencies:
· Processing high-strength steels & aluminium
· Press die construction
· Welding operations (aluminium welding, spot welding, MIG / MAG welding)
· Axle and seat manufacture
· Engine assembly and processing
· Machining of engine parts

Apprenticeships – an investment in the future
The Kaiserslautern Opel site offers young people innovative and qualified professional training that closely interlinks theory and practice. This way, apprentices gain experience in production areas early on. This is the optimal foundation stone of a successful professional career with diverse development prospects.

Contact:
Opel Automobile GmbH – Kaiserslautern Plant
Opelkreisel 1
67663 Kaiserslautern
Tel. +49 (0)631 355-1652
Email: ik.kl@opel.com
www.opel.de

SKS Welding Systems GmbH

Made in Germany – Made by SKS

With its many years of experience, SKS sees itself as one of the most innovative system partners of the automotive and supplier industry. Since the 1980s, SKS Welding Systems has been using pioneering technologies to optimise arc welding processes.

Above all, the industry appreciates SKS' innovative strength and capacity for forward-looking and customer-oriented development work. SKS designs welding machines, welding torches and the associated arc welding processes, which sustainably expand the possibilities of automated robot welding.

The formula for success: The combination of a modular welding machine produced with high-performance components and a functional torch series for a wide range of applications. The systems are supplemented by flexible software solutions for welding data documentation – from stand-alone operation to network integration. In addition, the welding machines and torch systems are compatible with all common welding robots of well-known manufacturers. What makes SKS products particularly special is their maximum availability and their persistent service lives.

In 2009, SKS built its own production facilities in order to deliver top quality precision parts and to guarantee maximum availability of welding machines. In 2012, a new company building was established in Kaiserslautern, in 2018, the production capacity was doubled. This makes SKS the first choice for welding.

SKS welding machines are used by renowned automotive manufacturers and suppliers. Like the OEMs, Tier 1 and Tier 2 suppliers also manufacture exhaust, seat, axle, battery tray and bodywork with SKS welding systems.

Competencies:
- Development, production and sales of welding machines and components for automated/ robotised welding
- Welding Torch System
- Process development for GMA (single wire, double wire), MIG soldering
- Software/IT development

Contact:
SKS Welding Systems GmbH
Marie-Curie-Straße 14
67661 Kaiserslautern
Tel. +49 (0)6371 7986–0
Email: info@de.sks-welding.com
www.sks-welding.com

Robot Makers GmbH

When Mobile Machinery Becomes Intelligent

While Google (Waymo), Uber or Tesla take care of road traffic, Robot Makers GmbH work off the beaten track.

"Mission Complete" is displayed by the intelligent mulch system that has just freed several dozen rows of grape vines from the tall grass. Now the machine waits for new instructions from the operator. The innovative control systems of the technology leader from Kaiserslautern have turned this vehicle into an intelligent mobile machine that can independently carry out recurrent maintenance work in the vineyard.

"Improve safety, increase efficiency, increase ease of use," Carsten Hillenbrand and Dr. Bernd Helge Leroch break down the purpose of their intelligent systems into three basic objectives. The fact that the technology is also able to achieve these objectives is shown, for example, by the implement automation VineyardPilotAssistant, which was developed together with the company Braun Maschinenbau from Landau. With certain combinations of equipment, the intelligent control system doubles the speed of work while optimising the results and also reducing damage to the valuable vines. The same applies for the RowCropPilot, which reliably controls a caterpillar vehicle in steep slope viticulture, thus keeping the operator off of the hillside danger zone.

But the systems of Robot Makers GmbH show strengths in other areas besides viticulture: "Our technology is suitable for use in almost all mobile machinery and implements that do their work off the public roads," says managing director Bernd Helge Leroch. So far solutions have been realised for material handling, road production, the municipal sector, stage technology and even in the area of fully automated parking garages. The degree of automation varies from assistance systems to relieve the operator to (partially) autonomous functions and systems.

Competencies:
Control technology for the realisation of intelligent mobile working machines, assistance systems, (partially) autonomous systems, automation of mobile machines

Contact:
Robot Makers GmbH
Merkurstraße 45
67663 Kaiserslautern
Tel. +49 (0)631 2040130
Email: info@robotmakers.de
www.robotmakers.de

SCHLIESSMEYER – Innovationen in Kunststoff

Customer-oriented. Driven by Innovation. Value-based.

For over 50 years, SCHLIESSMEYER GmbH has been successfully supplying renowned customers from the automotive, aviation, mechanical engineering, appliances, construction and agricultural machinery, medical technology and packaging industries.

As a full-service provider, we assume all stages of the value-creation chain from planning to finished product: concept development, industrial design and product development, over plant and control mechanism construction, tool and special purpose machine construction, packaging development, right up to series production.

With first-class technologies, impressive innovations and targeted investments, we guarantee our customers a distinct competitive edge. International tool procurement in combination with in-house toolmaking means we achieve top quality at competitive prices.

In the 2K injection moulding process, highly complex construction parts made with hard-soft combinations are manufactured. From simple completions to complex assemblies, we manufacture assembly work of any kind from a single source. For larger numbers of pieces, we rely on industrial robots for the precise insertion of adhesive and foam strips, as well as masking and protective films or metal parts in injection moulds.

We apply layers in a variety of decors and colours with hot embossing and in-mould decoration.

Our machine park can cover injection weights from 1g to 3,645g, the maximum clamping force is currently 1,000 tons. In order to guarantee efficient and fully-automated production, the machines are equipped with robot handling systems.

All business and production processes are subject to strict quality management in accordance with DIN ISO 9001, as well as the VDA's automobile directive 6.1. Our environmental management is certified according to DIN ISO 14001 .

SCHLIESSMEYER is a flexible, reliable and engaged partner to our customers.

Competencies:
· Full-service provider
· Product development to series production
· Injection moulding up to 1,000 tons
· 2K injection moulding
· Toolmaking
· Surface decoration
· Assembly work

Contact:
Schliessmeyer GmbH
Am Funkturm 10
66482 Zweibrücken
Tel. +49 06332 9225–36
Email: carrera@schliessmeyer.de
www.schliessmeyer.de

Tadano Demag GmbH

At Home in Zweibrücken – in Use Worldwide

Zweibrücken-based crane manufacturer Tadano Demag, with around 1,500 employees, is one of the biggest employers in the region. Since the 1. August 2019, the company has belonged to the Japanese Tadano Group, which aspires to long-term global market leadership in the lifting industry.

Both companies share a long entrepreneurial tradition in the development and production of lifting technologies: for 200 years, the Demag brand has stood for the development of intelligent and innovative lifting solutions, and Tadano celebrates its 100th anniversary this year.

Tadano Demag develops, manufactures and sells innovative lattice boom crawler cranes and telescopic cranes with lifting capacities of up to 3,200 tonnes on its almost 100,000 square meter plant premises in Zweibrücken. These are used worldwide in power plant construction, in infrastructure projects, in refineries and in the construction of wind farms.

A Superlative Manufacturer
At the Zweibrücken site, Tadano Demag manufactures the world's largest crawler crane to enter series production: the CC 8800, which can lift loads of 1,250 tonnes up to 200 meters. This means Tadano Demag is also able to construct the tallest wind turbines worldwide. Such customer-oriented solutions make Tadano Demag a worldwide success.

Qualified employees develop innovative solutions
Tadano Demag owes its great innovative strength to its qualified employees: 80 percent of the workforce are skilled workers and one in ten workplaces is located in the areas of development and construction. In brief: the "smartest" minds in the industry work in the engineering departments. And to keep it that way, Tadano attaches great importance to the qualifications of its skilled junior employees. To this end, the company maintains a well-equipped training workshop in Zweibrücken for its apprentices, who regularly achieve top positions in national and international competitions.

Flexibility as a competitive advantage
With this mix of innovative power, customer orientation and qualified employees, Tadano Demag can react flexibly to the respectively current requirements of the markets. This is what makes the cranes from Zweibrücken so successful – at home and in the world at large.

Competencies:
· Development and production of
  - city cranes up to 45 t
  - all-terrain cranes up to 1,200 t
  - lattice boom crawler cranes up to 3,200 t
· Development of innovative control systems for the crane world, e.g. telemetry systems

Contact:
Tadano Demag GmbH
Europa Allee 2
66482 Zweibrücken
Tel. +49 (0)6332 83–0
Email: Info.Demag@tadano.com
www.demagmobilecranes.com

WIPOTEC GROUP

World-class Weighing Technology

Over 1,000 employees worldwide, over 700 thereof in Kaiserslautern: the WIPOTEC GROUP offers a wide range of dynamic high-tech weighing and inspection technology for industrial use.

WIPOTEC Group is one of the world's leading suppliers of intelligent weighing and inspection technology. At the headquarters in Kaiserslautern, the technology leader for high-precision weighing technology develops and produces unique machine solutions and technologies for OEMs and end customers from a diverse range of industries.

Founded in 1988 as WIPOTEC Weighing and Positioning Systems GmbH with the core business of development, production and integration of ultra-fast precision weigh cells and weighing systems, today, the company group has an extensive range of weighing and product inspection solutions. As a in-line product inspection specialist WIPOTEC delivers systems for weight monitoring in combination with modern camera technology, metal detection, foreign object search, content and shape control with X-ray scanners, as well as label monitoring.

The range of solutions complements product tracking systems for the pharmaceutical industry and solutions for courier, express and postal services and intralogistics, which can read bar codes and record dimensions and weights of the shipments.

Lived sustainability: WIPOTEC sets not only technical standards for industrial companies in the region, but also ecological standards by building with energetic recovery in mind and generating renewable energy: Already today, the central production site supplies 85% of its own energy requirements with its own alternative energy sources (solar energy, medium depth geothermal energy 150m and deep geothermal energy 1500m, solar thermal energy, groundwater cooling, underground energy storage).

Competencies:
- World leading supplier of intelligent weighing and inspection technology
- Designed, constructed and manufactured in Germany
- Entire value chain: Hardware and softwaredevelopment, in-house production, after-sales service
- Premium quality and derived customer benefit in high-performance applications

As an attractive training company and partner for dual study courses with the University of Applied Sciences, Kaiserslautern, the innovative high-tech company offers a multitude of career opportunities for people in the future-orientated West Palatinate region.

WIPOTEC

INNOVATION. PASSION. FIRST.

Contact:
WIPOTEC GmbH
Adam-Hoffmann-Str. 26
67657 Kaiserslautern
Tel. +49 (0)631 34146–0
Email: info@wipotec.com
www.wipotec.com

Universities, Institutes & Networks

Commercial Vehicle Cluster - Nutzfahrzeug GmbH

Commercial Vehicle Expertise

"Working together to shape the future of the commercial vehicle industry"

The Commercial Vehicle Cluster (CVC) is a cooperation among the leading players in the commercial vehicle industry. Its goal is to position the Southwest of Germany and especially Rhineland-Palatinate as the leading competence centre of the commercial vehicle industry.

On the one hand, CVC offers a platform for networking, cooperation and information exchange. On the other, the existing expertise of CVC members is used in a targeted manner in order to identify and work on future topics in the commercial vehicle industry. Excellent research facilities and innovative companies develop solutions together to sustainably strengthen the competitiveness of the commercial vehicle industry.

The expertise of the members of the CVC covers all stages of the value chain, from research to production of commercial vehicles. This provides CVC partners with unique opportunities to collaborate on the development and commercialisation of innovations. The CVC head office initiates projects, arranges suitable partners and accompanies the implementation of such cooperation projects.

From a technological perspective, focus is put on the strategic priorities of "innovation management", "engineering" and "production systems". A variety of activities are implemented in this context. But more and more non-technical topics are being addressed, such as product and producer liability or new business models. For the above mentioned priorities, the CVC, for example, commissions studies, initiates projects and organises special symposia, working groups or workshops as needed. Through its transfer instruments (e.g. newsletter, technology site visits, annual conference or specialist conferences), the resulting knowledge and expertise is distributed and made available exclusively to the cluster.

With head office's assumption of the "We move it" initiative of the Ministry of Economic Affairs, Transport, Agriculture and Viticulture, networking within the vehicle industry will be further intensified. The business ecosystem of the automotive industry is designed to complement the work of the CVC, but also the Rhineland-Palatinate vehicle initiative. Together with partners from universities, research institutes, chambers, associations and other institutions, framework conditions are being created to leverage the structural changes in the vehicle industry for the benefit of the Rhineland-Palatinate as a business location.

CVC SÜDWEST

Range of services:
- Workshops, working groups & trade events
- Regular newsletter with free publication options for contributions
- Platform for networking with politics, business, research and business development
- Conveying expertise
- Assistance in the acquisition of funds
- Assistance in strategy definition processes

Contact:
Commercial Vehicle Cluster –
Nutzfahrzeug GmbH
Europaallee 3–5
67657 Kaiserslautern
Tel. 0631 41486 250
Email: info@cvc-suedwest.com
www.cvc-suedwest.com

DFKI German Research Centre for Artificial Intelligence GmbH

Innovative Software Technologies Based on AI

Artificial intelligence (AI) is an important key technology for the competitive ability of German and European suppliers in the areas of automotive, industry 4.0 and autonomous driving.

DFKI is Germany's leading business-oriented research institution in the field of innovative software technologies based on artificial intelligence methods. DFKI projects cover the entire spectrum from application-oriented basic research to market and customer-orientated development of product functions. The range of services includes the technological transfer of internationally award-winning research results, as well as market studies, expert opinions and feasibility studies. Additionally, there is the implementation, maintenance and care of the AI solutions developed by the DFKI and their scientific evaluation.

At the Kaiserslautern site, DFKI uses its broad methodological knowledge and unique hardware equipment to set up industry-specific transfer labs for renowned companies. In the past two years alone, several such laboratories have emerged, two of them with manufacturers and suppliers in the automotive sector (Continental, IAV), with the goal of jointly developing innovative AI service modules for various markets and target groups. Right now, AI plays a critical role in field of autonomous driving. The surroundings of the vehicle must be detected using various sensor systems, from which conclusions are then drawn for vehicle control. Regarding intelligent environment detection, the DFKI Kaiserslautern is conducting research into methods for robust distance and motion determination, as well as semantic interpretation. Furthermore, methods of detecting people within the vehicle interior are being researched to provide the basis for human-machine interaction technologies for highly automated and fully automated driving. DFKI cooperates with well-known car manufacturers and suppliers on numerous projects, among others, the German Association of the Automotive Industry (VDA)'s AI flagship initiative.

Deutsches Forschungszentrum für Künstliche Intelligenz GmbH

Competencies:
· Smart data & intelligent analytics of measured data
· Driver assistance systems & autonomous driving
· Industry 4.0 & innovative plant systems
· Visual computing & augmented vision
· Deep learning & autonomous systems
· 5G & real-time networking technologies

Contact:
German Research Centre for
Artificial Intelligence (DFKI)
Trippstadter Str. 122 · 67663 Kaiserslautern
Tel. +49 (0)631 205750
Email: info@dfki.de
www.dfki.de

Rhineland-Palatinate Vehicle Initiative registered association

The Automotive Network

The vehicle initiative, founded in 2013 and supported from the beginning by the Rhenish Ministry of Economic Affairs, Transport, Agriculture and Viticulture, is a network that, as a registered association, is managed by the General Assembly, the Management Board and Executive Board.

The association pursues the goal of increasing networking within the industry and promoting the exchange of information on its central topics. This industrial networking is successfully promoted through continual exchange with politicians, representatives of vehicle manufacturers, as well as representatives from the scientific community.

The activities of the association serve to strengthen the competitiveness of our companies and to inform on trends and development opportunities, so that the Rhineland-Palatinate's vehicle industry can sustainably grow. The development of networks between those responsible in the industry, the transfer of knowledge and joint cooperation projects are all central concerns of networking activities. The member structure is purposefully built up from the entire automotive value chain and additionally supplemented with competent partners from other areas, so that our companies in the association can find everything necessary for successfully running a company, from the suppliers up to the legal advice. Besides production topics, lightweight construction, new business models due to digitalisation and drive technologies, among other things, the development of skilled workers in the industry is an important topic to which the network is indelibly devoted.

In the European Interreg project PAE, which was developed on the initiative of the cluster organisations of the automotive and mobility industry of the wider region and its neighbouring areas, our association aims to comprehensively ensure the cross-border and international perception of this sector and to increase the export share in the turnover of SMEs.

Interreg Grande Région | Großregion PAE

Fahrzeug-Initiative Rheinland-Pfalz e.V.

Competencies:
· Contact and exchange platform
· Knowledge and technology transfer
· Port of call for new entrepreneurs and start-ups
· Regional and transregional networking with leading know-how and technology leaders
· Seminars and training on technology and
· Active support for development projects

Kontakt:
Fahrzeug-Initiative Rheinland-Pfalz e.V.
Dr.-Ing. Dietrich Rodermund (CEO)
Europaallee 3–5 · 67657 Kaiserslautern
Tel. +49 (0)631 55098710
Email: rodermund@fahrzeug-initiative.de
www.fahrzeug-initiative.de

Fraunhofer Institute for Experimental Software Engineering IESE

Practical IT Research for the Digital Future

Software is part of our lives. Embedded in modern vehicles, flexible production environments or everyday objects such as Smartphones, software has become indispensable to today's products and systems.

The Fraunhofer Institute for Experimental Software Engineering IESE in Kaiserslautern is one of the world's leading research institutions in the field of software and system development. The products of its cooperation partners are essentially determined by software. The spectrum ranges from vehicle and information systems to intelligent solutions for automated production and healthcare. Solutions are flexibly scalable and tailor-made. This means the institute is a competent technology partner for companies of all sizes: from small businesses to large corporations.

Fraunhofer IESE supports the development of software systems that can be relied upon in every respect. Engineering methods in the areas of processes, requirements, data and architecture are advancing under the quality criteria of safety, security and user experience. In industrial practice, the experts at Fraunhofer IESE contribute their know-how to companies and partners, especially in the fields of information systems, embedded systems and smart ecosystems.

Under the guidance of Professor Peter Liggesmeyer, the Fraunhofer IESE has been providing significant contributions to strengthening the IT site in Kaiserslautern for over 20 years. The Fraunhofer Group for Information and Communication Technology works together with other Fraunhofer Institutes on pioneering key technologies. At Fraunhofer IESE, more than 200 employees are researching solutions for the flexible production of the future or to secure autonomous driving, among other things. Fraunhofer IESE thus contributes to Germany's international competitiveness as a business location.

Competencies:
· Software and system development
· Automotive and transport systems
· Automation and plant construction
· Information systems
· Smart farming & digital ecosystems
· Industry 4.0 & big data

Fraunhofer IESE

Contact:
Fraunhofer Institute for
Experimental Software Engineering IESE
Fraunhofer-Platz 1 · 67663 Kaiserslautern
Tel. +49 (0)631 68006000
Email: info@iese.fraunhofer.de
www.iese.fraunhofer.de

Fraunhofer Institute for Industrial Mathematics ITWM

Practical Mathematics

The Fraunhofer Institute for Industrial Mathematics ITWM is the largest research institute in the Rhineland-Palatinate: 320 employees work on the mathematical solutions to technical problems.

They create depictions of the real world and transfer them to the virtual world of models and to software. This kind of problem solving is of central importance in all industries, not just for large corporations, but also for small and medium sized companies. Since most of the latter do not have their own research departments, they like to rely on the simulation expertise of the Fraunhofer ITWM.

Vehicles in the digital age
Even though the Institute has customers from a wide spectrum of industries, a great many software products developed in Fraunhofer ITWM find their application in the automotive industry. It is very clear that the research focus is "Digital Commercial Vehicle Technology". Here, among other things, the researchers develop flexible virtual test concepts for vehicles and in doing so, focus on the interaction between vehicle, environment and human being. Virtually testing vehicles as a total system reduces the number of prototypes made and thus reduces development costs. This is also the goal of the "Virtual Measurement Campaign"; based on the analysis of geo-referenced environmental conditions, statements can be made about the specific requirements a vehicle will encounter over a certain distance.

Simulation and Production
Quality control in production, whether it be of paint layers, air filters or brake pads, is just as much a part of the Institutes' range of services as simulations of vehicles driving through water or bubble formation during refuelling. E-mobility is also not left out: faster charging lithium-ion batteries, secure charging stations and a scalable charging infrastructure (for example in parking garages) are among the research topics here.

Competencies:
· Modelling, simulation and optimisation
· Mathematics for vehicle development
· Image processing
· Quality assurance
· Material characterisation and testing
· Data analysis / machine learning

Fraunhofer ITWM

Contact:
Fraunhofer Institute
for Industrial Mathematics ITWM
Fraunhofer-Platz 1 · 67663 Kaiserslautern
Tel. +49 (0)631 31600–4674
Email: presse@itwm.fraunhofer.de
www.itwm.fraunhofer.de

Hochschule Kaiserslautern - University of Applied Sciences

Innovative Teaching and Learning – Vision, Development & Design in the "Connected Age"

As a university of applied sciences we represent the interface between industry, technology and research. Firmly rooted in the region, we teach in a targeted and cooperative way, moulding highly qualified academics for the jobs of today and tomorrow.

Technical issues in science, economy, and not least, in industry 4.0 are becoming ever more complex. Yet education and research at the University of Applied Sciences, Kaiserslautern finds high-performance, application-oriented and forward-looking answers to them. We focus on the real needs of the economy, with well-grounded practical study programs and interdisciplinary development of solutions for the digital age. With over 200 partner companies, we realise our vision of responsibility, networking, diversity and incentive as a powerful driving force in the region. The automotive competencies are particularly clear in highly specialised units.

For example, the institute for e-mobility researches and teaches the development of energy-efficient systems in applied engineering sciences with cooperation partners such as engineering and test service providers. Projects enthuse the students and enable them to use acquired know-how in tangible ways and thus actively contribute to the revolution in individual mobility.

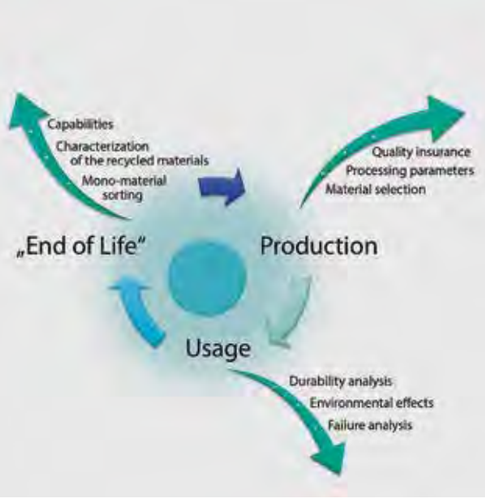
In the context of automotive projects, the working group *HCI2B* is working on a highly flexible driving simulation environment for researching human-technology interactions. Students and researchers develop innovative operating concepts and software frameworks for practice in a variety of settings.

In the research area of *highly-efficient technical systems (HTS),* the focus is the optimisation of complex networked technical solutions. Experts from electronics, computer science and mechanical engineering develop interdisciplinary innovations from the idea through to the product and right up to the system approach. In the field of sensor technology, the interdisciplinary interaction between applied life sciences and micro- and nanotechnologies is being examined in the main research area of integrated miniaturised systems (IMS) and through the development of miniaturised systems and their research for use in practice.

Competencies:
· Human-computer interaction
· E-mobility and energy-efficient systems
· Software-intensive systems
· Sustainability for products and services
· Digitalisation and industry 4.0
· Flexible study formats for lifelong learning

Hochschule Kaiserslautern
University of Applied Sciences

Contact:
Hochschule Kaiserslautern
University of Applied Sciences
Schoenstraße 11 · 67659 Kaiserslautern
Tel. +49 (0)631 37 24 – 0
Email: presse@hs-kl.de
www.hs-kl.de



Institute for Composite Materials

Composites Fit for the Future

Composite materials combine the positive properties of several materials into a new material. Innovative processes assure performance and sustainability over the entire product life cycle.

The Institute for Composite Materials (IVW) is a non-profit research institution of the state of Rhineland-Palatinate and the Technical University of Kaiserslautern. For nearly 30 years, it has been researching the foundations for future applications of composites that are critical for production technologies and healthcare, e.g. for the mobility of the future, as well as for the areas of energy, climate and environment. New materials, construction methods and production processes are examined and, after working out a fundamental understanding thereof, tailored to their respective applications.

At the IVW, the entire process chain is in focus, from material basics through characterisation and simulation, the construction methods and the production technology right up to component testing and recycling. New ideas and innovative concepts are not only an essential part of the institute's research and development, but rather also lead to spin-off companies, particularly in the West Palatinate.

Newly gained knowledge is transferred, especially for use in science, but also in teaching, to the interested public and industrial applications.

The IVW develops technologies for innovative and sustainable vehicle structures using fibre composite and hybrid construction, enabling particularly efficient, fuel-saving, long-lasting, low-maintenance and safe vehicles.

Research foci:
· Polymer composites
· Biocomposites
· Material analyses
· Profitability analyses
· Component development
· Processing technology
· Connection procedures
· Lightweight structures
· Hybrid structures

Institut für Verbundwerkstoffe

Contact:
Institut für Verbundwerkstoffe GmbH
Erwin-Schrödinger-Str. 58
67663 Kaiserslautern
Tel. +49 (0)631 2017–100
Email: info@ivw.uni-kl.de
www.ivw.uni-kl.de

Centre for Commercial Vehicle Technology (ZNT) – TU Kaiserslautern

Commercial Vehicle-Specific Solutions

The Centre for Commercial Vehicle Technology (ZNT) is an interdisciplinary platform for commercial vehicle-specific research, development and services at the Technical University of Kaiserslautern.

Since its foundation in 2007, the ZNT has developed into a national and even international competence cluster for commercial vehicle technology through its numerous research activities and cooperative projects with the commercial vehicle industry. The ZNT is thus one of the mainstays of the Commercial Vehicle Alliance Kaiserslautern (CVA) and an important institution in Kaiserslautern's research landscape. In order to further increase and secure its competence in commercial vehicle technology at the Kaiserslautern site, the ZNT works closely with companies in the commercial vehicle industry, as well as the industry-oriented Commercial Vehicle Cluster Südwest (CVC) and the Kaiserslautern Fraunhofer Institutes.

The scientific objective of the ZNT is to make a significant contribution to solving the future technological challenges of the commercial vehicle industry. Through the integration and active participation of nearly 15 working groups from the disciplines of mechanical engineering, electrical engineering and computer science, commercial vehicle-specific issues can be analysed with regard to their different aspects and successfully dealt with.

ZNT's main research objective is the development and production of commercial vehicles which are more energy and resource efficient, have an increasing level of intelligence and are operated in a networked environment. The individual activities undertaken to answer the research questions take into account the entire product life from conception right up to recycling and can be summarised in the key topics of energy and resource efficiency, human-vehicle system, intelligent networked vehicles and value-added services. Research aspects in these areas are, for example, electromobility and electrification of vehicles and ancillaries, vehicle-to-vehicle communication, autonomous driving, optimised energy and operational management of vehicles and fleets, lightweight construction using innovative materials and manufacturing technologies, as well as increasing functional system reliability and safe operation through innovative assistance systems as well as IT-based value-added services.

Research foci:
· Innovative drives, electromobility, alternative fuels
· Assisted and automated driving and work
· Networked systems and services
· Lightweight construction, bionics, new production technologies
· Vehicle and mobility concepts of the future
· Optimised energy and operational management

znt.

Technische Universität Kaiserslautern

Contact:
Zentrum für Nutzfahrzeugtechnologie
Technische Universität Kaiserslautern
PO box 3049
67665 Kaiserslautern
Tel.: +49 (0)631 205 5220
Email: info@znt.uni-kl.de
www.uni-kl.de/znt

Kaiserslautern Racing Team - KaRaT

Racing Car Development and Motorsport Studies

As the only team to represent the Rhineland-Palatinate in the international Formula Student, after a few years the KaRaT succeeded in achieving respectable placements in the competition. The team is supported in their development of an electric racing car by the Technical University and University of Applied Sciences, as well as by many reliable partners from the region.

Founded as an association in 2007, the Kaiserslautern Racing Team has developed over the years into an established part of the Technical University and University of Applied Sciences, Kaiserslautern. While from 2008 to 2012, the competition was to design cars with internal combustion engines, every year since 2012, a new high-powered car with 80kW electric drive and carbon-fibre monocoque has been developed and manufactured.

The annual project offers students from both universities the opportunity to develop parts using high-performance materials, as well as integrating modern lithium-ion batteries and a 400V drive. Every year, according to the rules of the Formula Student, the team also develops the microelectronics as well as the software, for example the power control and the driver interface, all of which serve security and reliability. This gives student a good opportunity to test their skills in practise before they start working in the field.

Thanks to the development of a solid base, consisting of two engines on the rear axle, large batteries in the sides, and an aerodynamic package of front and rear wings, the team was able to present the competition's most energy efficient car several times over and also always impressed the judges in the static disciplines, particularly in terms of cost efficiency. The team placed in the top 5 of the respective competitions a total of four times.

To bring a reliable electric car to the racetrack with extremely limited funds and within a year is actually an impossibility. Yet with a combination of creativity, diligence and passion, KaRaT succeeds in accomplishing the stated objectives year after year.

In 2019, the team took the next step and started to develop the software and hardware for a driverless car. The system orients itself independently through learned object recognition via LIDAR and 3D camera on the race circuit and is to be integrated into racing cars as of 2020.

KaRaT
KAISERSLAUTERN RACING TEAM

Competencies:
· Development of a driverless system
· Polymer composite component development & lightweight construction
· CFD & FEM simulations
· Electric drive systems

Contact:
Kaiserslautern Racing Team e.V.
Gottlieb-Daimler-Str. 47
67663 Kaiserslautern
Tel. +49 (0)631 205-4026
Email: office@karat-racing.de
www.karat-racing.de

ZukunftsRegion Westpfalz

The association *ZukunftsRegion Westpfalz* [Region of the Future West Palatinate] is a regional initiative which is committed to pooling forces in the West Palatinate and implementing joint projects in order to strengthen the region's future viability. Thanks to the support of the Chamber of Industry and Commerce for the Palatinate and the Rhineland-Palatinate state government, within just a few years a movement has emerged with over 300 members from business, science, politics and civil society.

www.zukunftsregion-westpfalz.de

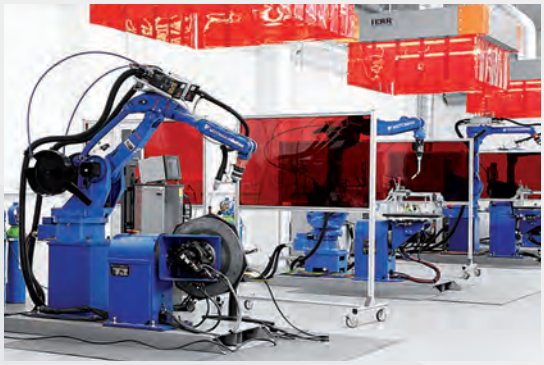
Photo: Fraunhofer IESE

ZukunftsRegion
Westpfalz

Never was an industry as fast-moving as the automotive industry in recent years. Changed user behaviour, the trend toward electrification and the increasing digitalisation of the production processes have brought about a profound upheaval.

With a mixture of centuries old experience in metal working, famous German mechanical engineering expertise, as well as outstanding skills in software development and automation, the Western Palatinate boasts the best preconditions to come out on top in this global transformation process as one of the winning regions.

This brochure presents the regional network of capable companies and innovative research institutions, whose areas of expertise are interlinked. Ideal points of reference for entrepreneurs and investors who are on the search for a suitable environment for their investment.



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UND WEINBAU

ZukunftsRegion Westpfalz e.V.
Bahnhofstraße 26–28 · 67655 Kaiserslautern · Tel. +49 631 20560110
Email: info@zukunftsregion-westpfalz.de · Web: www.zukunftsregion-westpfalz.de