



Baden-Württemberg

Automotive Manufacturers

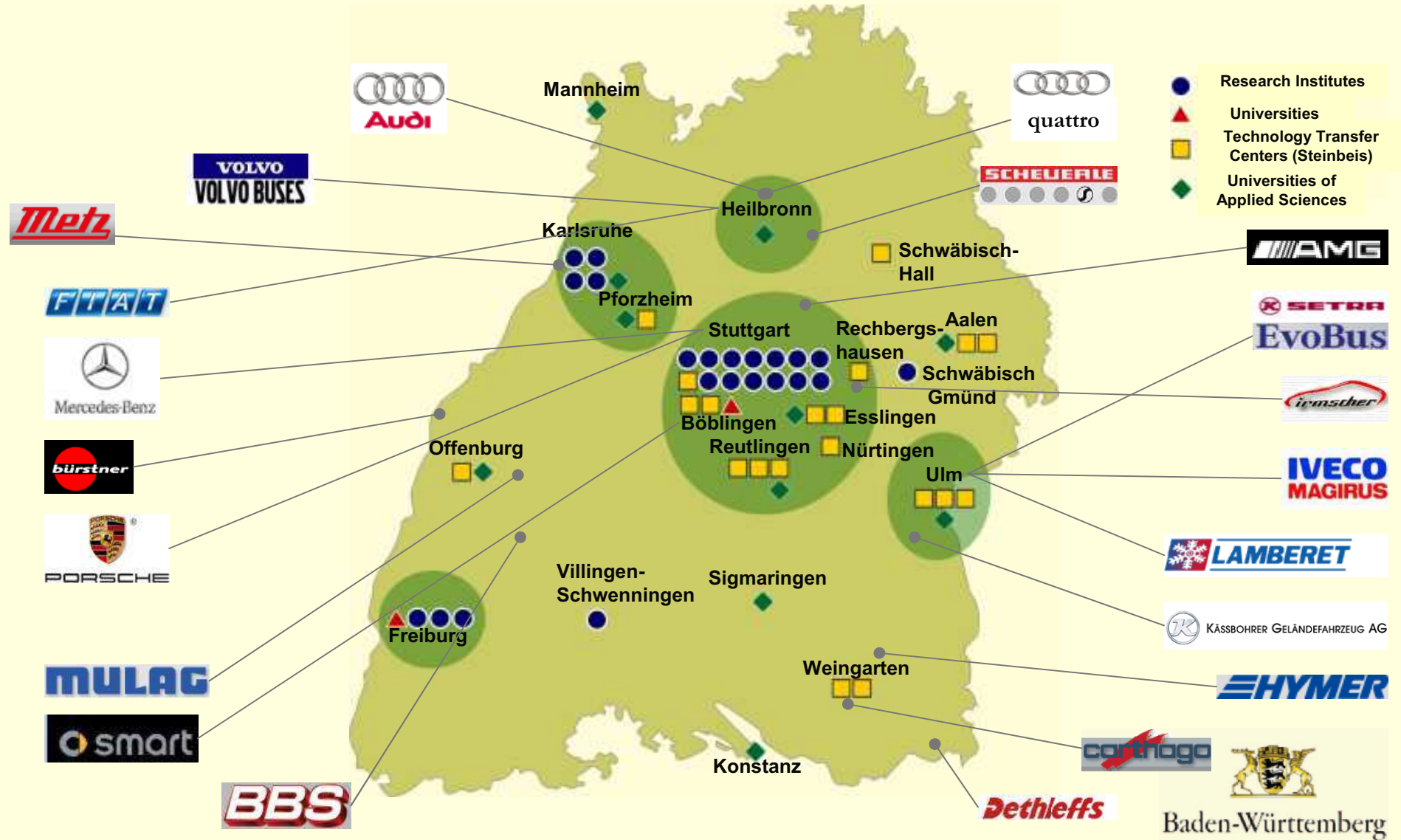
Automotive manufacturers – an innovative cluster in Baden-Württemberg

- One in five cars worldwide is produced by a German manufacturer. In Baden-Württemberg, vehicle and engine manufacturers as well as their suppliers earn just under a fourth of the annual industry sales revenue in Germany.
- The German automobile industry's greatest competitive advantage is its strength in innovation. One third of the worldwide patent applications in the automobile sector come from Germany.
- Baden-Württemberg is the most important location for automobile manufacturers in Germany:
 - With DaimlerChrysler AG and Porsche AG, Baden-Württemberg hosts the headquarters of two of the most innovative automobile manufacturers. In addition, Audi AG has one of its most important production sites in the state.
 - In commercial vehicles and autotuning, too, important companies, such as Volvo Busse Deutschland GmbH, Kässbohrer Geländefahrzeug AG, Mercedes-AMG GmbH or BBS Kraftfahrzeugtechnik AG, are present in the state.
- The unique concentration of automotive suppliers, research institutions, specialized study programs and technology transfer centers (Steinbeis) in Baden-Württemberg offers automobile manufacturers outstanding conditions.



Regional Centers - Cluster Automotive Manufacturers

(Relevant research institutes, universities and examples of important enterprises)



Automotive Manufacturers – Selected Companies

DAIMLERCHRYSLER



DaimlerChrysler AG, Stuttgart

<http://www.daimlerchrysler.com>



Audi AG, Neckarsulm

<http://www.audi.com>



Dr. Ing. h. c. F. Porsche AG, Stuttgart

<http://www.porsche.com>



Baden-Württemberg

Automotive Manufacturers – Selected Companies



Smart GmbH, Böblingen

<http://www.smart.com>



Volvo Busse GmbH, Heilbronn

<http://www.volvo.com/bus>



Iveco Magirus Brandschutztechnik GmbH, Ulm

<http://www.iveco-magirus.de>



Baden-Württemberg

Automotive Manufacturers – Selected Companies



FIAT Automobil AG, Heilbronn

<http://www.fiat.com>



EvoBus GmbH, Stuttgart

<http://www.evobus.com>



Kässbohrer Geländefahrzeug AG, Laupheim

<http://www.pistenbully.com>



Lamberet Kühlfahrzeuge GmbH, Ulm

<http://www.lamberet.com>



Baden-Württemberg

Automotive Manufacturers – Selected Companies



Hymer AG, Bad Waldsee

<http://www.hymer.com>



Dethleffs GmbH, Isny

<http://www.dethleffs.com>



Bürstner Caravan GmbH, Kehl

<http://www.buerstner.com>



Metz Aerials GmbH & Co. KG, Karlsruhe

<http://www.metz-apparatus.com>



Scheuerle Fahrzeugfabrik GmbH, Pfedelbach

<http://www.scheuerle.de>



Baden-Württemberg

Automotive Manufacturers – Selected Companies



Carthago Reisemobilbau GmbH, Ravensburg

<http://www.carthago.com>



Mulag Fahrzeugwerk Heinz Wössner GmbH & Co. KG, Oppenau

<http://www.mulag.de>



Mercedes – AMG GmbH, Affalterbach

<http://www.mercedes-amg.com>



BBS Kraftfahrzeugtechnik AG, Schiltach

<http://www.bbs.com>



Baden-Württemberg

Automotive Manufacturers – Selected Companies



quattro GmbH, Neckarsulm

<http://www.audi.com>



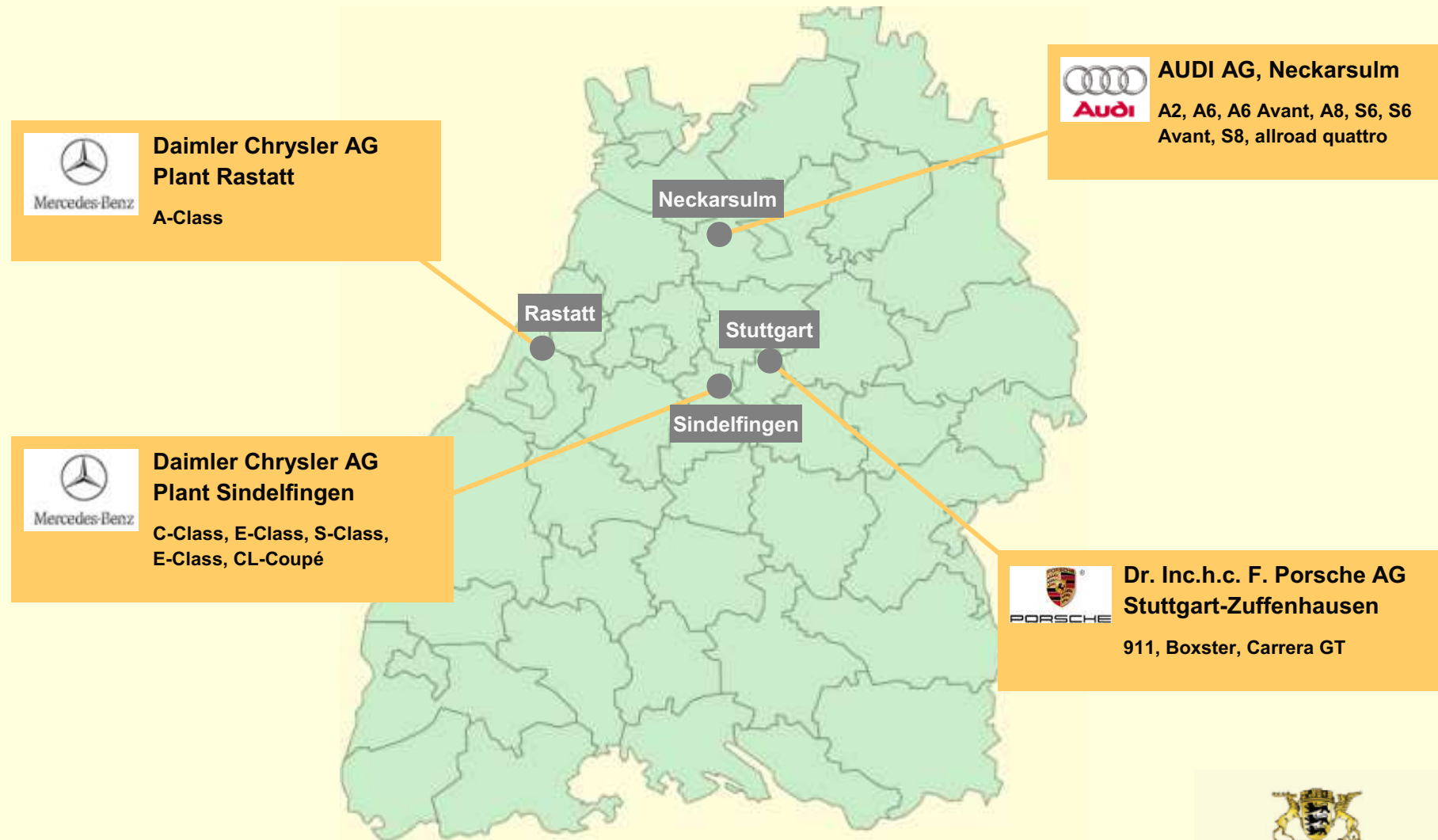
Irmischer GmbH, Remshalden

<http://www.irmischer.com>



Baden-Württemberg

Production sites of the automobile industry in Baden-Württemberg



**Daimler Chrysler AG
Plant Rastatt**
A-Class



AUDI AG, Neckarsulm
A2, A6, A6 Avant, A8, S6, S6
Avant, S8, allroad quattro



**Daimler Chrysler AG
Plant Sindelfingen**
C-Class, E-Class, S-Class,
E-Class, CL-Coupé

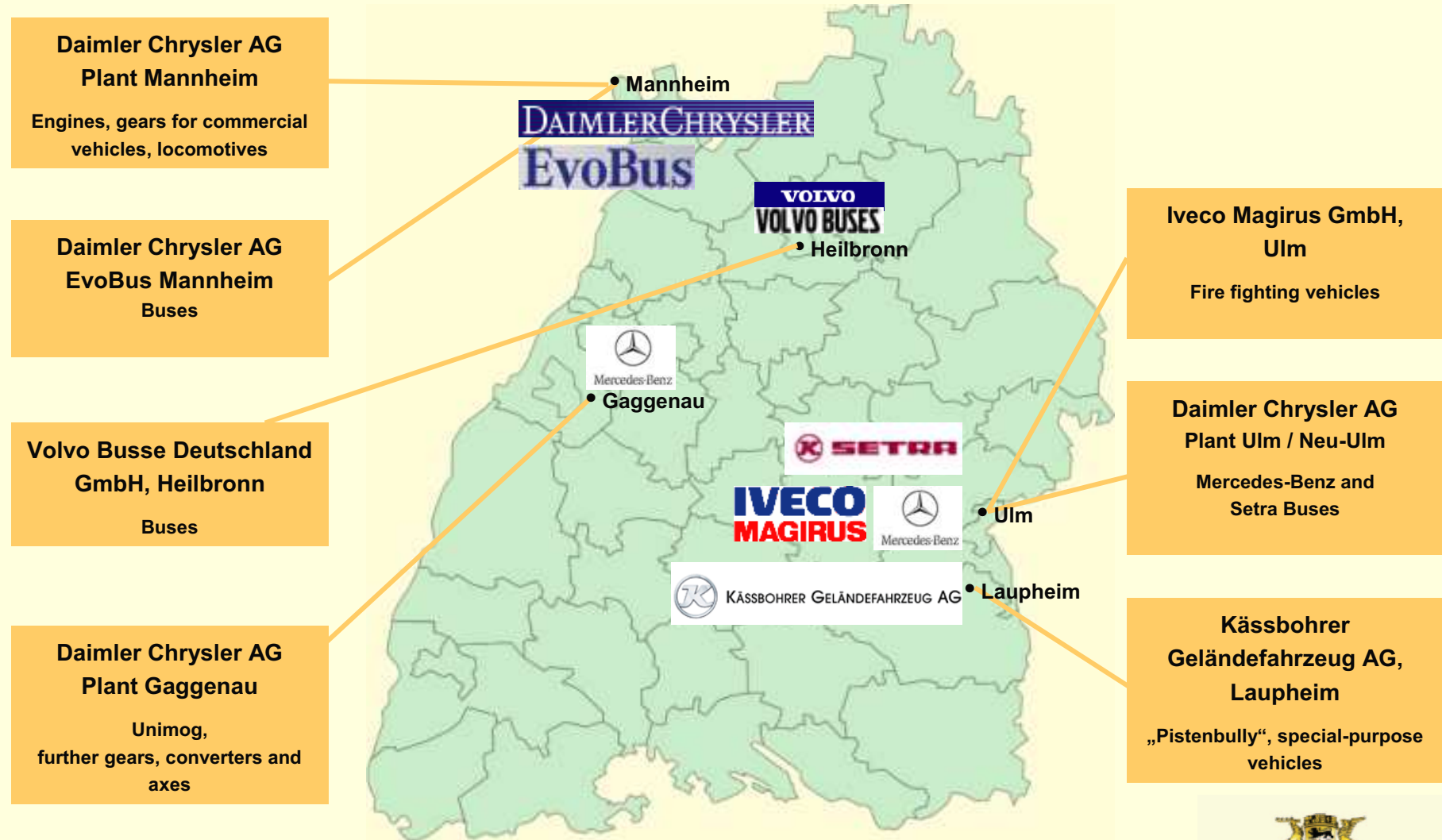


**Dr. Inc.h.c. F. Porsche AG
Stuttgart-Zuffenhausen**
911, Boxster, Carrera GT



Baden-Württemberg

Production sites for commercial vehicles and buses



Automotive Manufacturers – sites for special-purpose vehicles production



- Kässbohrer Geländefahrzeug AG (Laupheim)
- Karosseriefabrik Biberach GmbH (Biberach a.d.R.)
- Ernst Auwärter KG (Steinenbronn)
- Welte Fahrzeugbau GmbH (Umkirch)
- Schopf Maschinenbau GmbH (Ostfildern)
- Albert Ziegler GmbH & Co. KG (Giengen)
- Dautel GmbH (Leingarten)
- Scheuerle Fahrzeugfabrik GmbH (Pfedelbach)
- TKD GmbH & Co. KG (Kronau)
- John Deere Werke Bruchsal (Bruchsal)
- Metz Aerials GmbH & Co. KG (Karlsruhe)
- Mafi Transportsysteme GmbH (Tauberbischofsheim)
- Kurt Dinkel Fahrzeugbau GmbH (Wertheim)
- Spitzer Silo-Fahrzeugwerke GmbH (Elztal)
- Bürstner Caravan GmbH (Kehl)
- Mulag Fahrzeugwerk GmbH & Co. KG (Oppenau)
- Carthago Reisemobilbau GmbH (Ravensburg)
- Iveco Magirus Brandschutztechnik GmbH (Ulm)
- Wiedler Karosseriewerk GmbH (Albstadt)
- Hymer AG (Bad Waldsee)
- Binz GmbH & Co. (Lorch)
- Dethleffs GmbH (Isny)



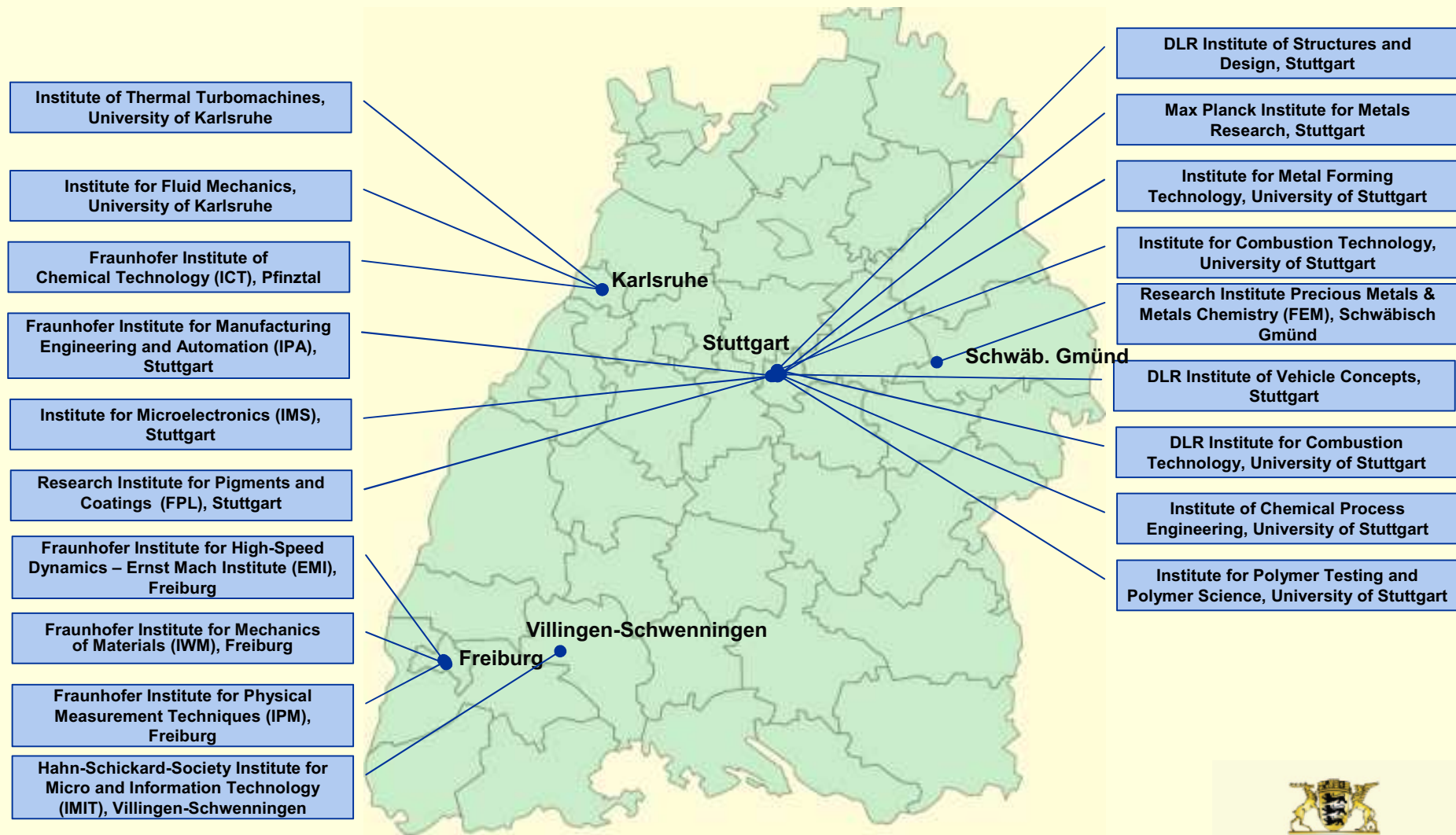
Automotive Manufacturers – sites for car tuning



- quattro GmbH (Neckarsulm)
- Mercedes AMG GmbH (Affalterbach)
- Oris Fahrzeugteile Hans Riehle GmbH (Möglingen)
- Lorinser GmbH (Winnenden)
- Irscher GmbH (Remshalden)
- BBS Kraftfahrzeugtechnik AG (Schiltach)
- KW Automotive GmbH (Fichtenberg)
- bd breyton-design GmbH (Stockach)
- Kicherer Fahrzeugtechnik OHG (Stockach)
- Chiptuning Diesel Auto (Stockach)
- Car Creation KFZ-Tuning GmbH (Heilbronn)
- CarLine Tuning GmbH (Sinsheim)
- Keskin Tuning e.K. (Mannheim)
- Reiling Tuning GmbH (Kieselbronn)
- Zauber Auto - Tuning GmbH (Langenbrettach)
- Wendland Motorentchnik GmbH (Rangendingen)
- Evotech GmbH (Ludwigsburg)
- Autohaus Stieber GmbH Stieber Tuning (Stuttgart)
- Lenk Opel Tuning GmbH (Aichwald)
- Speer Chiptuning (Filderstadt)



Automotive Manufacturers – Research Institutes



Automotive Manufacturers – Relevant Study Courses (Universities)



Automotive Manufacturers – Relevant Study Courses (Universities of Applied Sciences/Fachhochschulen)

Fachhochschule Mannheim:

- Business Engineering
- Mechanical Engineering
- Electrical Engineering

Fachhochschule Karlsruhe:

- Automotive Technology
- Business Engineering
- Mechatronics
- Mechanical Engineering
- Electrical Engineering
- Sensor and Control Systems

Fachhochschule Pforzheim:

- Design

Fachhochschule Esslingen:

- Automotive Engineering
- Business Engineering
- Mechanical Engineering
- Electrical Engineering

Fachhochschule Offenburg:

- Business Engineering
- Automotive Engineering
- Systems Technology
- Mechanical Engineering
- Mechatronics

Fachhochschule Reutlingen:

- Mechatronics
- Mechanical Engineering



Fachhochschule Heilbronn:

- Automotive System Engineering
- Mechatronics
- Mechanical Engineering
- Electrical Engineering

Fachhochschule Aalen:

- Business Engineering
- Mechatronics
- Mechanical Engineering
- Plastics Technology

Fachhochschule Albstadt-Sigmaringen:

- Business Engineering
- Mechanical Engineering

Fachhochschule Ulm:

- Automotive Engineering
- Business Engineering
- Electrical Engineering
- Mechanical Engineering

Fachhochschule Konstanz:

- Business Engineering
- Mechatronics
- Mechanical Engineering
- Electrical Engineering



Automotive Manufacturers – Steinbeis Technology Transfercenters (STZ)



Automotive Manufacturers - Research



Fraunhofer Institute for Physical Measurement Techniques (IPM), Freiburg

<http://www.ipm.fraunhofer.de>

As R&D partner to the industry, Fraunhofer IPM develops optical sensor and imaging systems as well as systems based on thin film technology. For industrial applications we offer customized components, prototypes or systems ready for use. IPM scientists develop novel technical solutions for bioanalytical applications, process measurement or railroad measurement. Further research focuses are the measurement of geometrical parameters as well as laser imaging.



Fraunhofer Institute for High-Speed Dynamics – Ernst Mach Institute (EMI), Freiburg

<http://www.emi.fhg.de>

The Fraunhofer Institute for High-Speed Dynamics, also known as the Ernst-Mach-Institut (EMI), focuses on the physical and technical aspects of high-speed mechanical and fluid dynamic processes. This includes the experimental and numerical analysis of shock waves in solids, liquids, and gases; fluid-flow and combustion processes; impact and penetration processes over a wide range of velocities from 10 m/s to 10 km/s; the behaviour of structures under shock and impact; the behaviour of elastic media at high strain or high strain rates of dilatation.



Fraunhofer Institute of Chemical Technology (ICT), Pfinztal

<http://www.ict.fhg.de>

Fraunhofer ICT in Germany is a unique research and development facility on energetic materials, energetic systems, polymer technology, applied electrochemistry and environmental engineering comprising the entire span from basic research tasks to application investigations and product introduction on behalf of customers' needs.



Baden-Württemberg

Automotive Manufacturers - Research



Fraunhofer Institute for Manufacturing Engineering and Automation (IPA), Stuttgart

<http://www.ipa.fhg.de>

Solutions for organizational and technological functions in the production sector of industrial companies form the main areas of research and development work at the Fraunhofer Institute for Manufacturing Engineering and Automation IPA. The Fraunhofer IPA achieves this objective by developing, testing and piloting methods, components and equipment, through to the implementation of complete manufacturing systems and plant. This majority of this work is carried out under contract to industry. The institute also works on projects funded under public-sector research programs.



Fraunhofer Institute for Mechanics of Materials (IWM), Freiburg

<http://www.iwm.fhg.de>

The Fraunhofer Institute for Mechanics of Materials IWM develops solutions to increase the safety, availability, and lifespan of components and systems ranging from microelectronic devices to power plant components. The Institute develops concepts to make optimum use of new materials as well as cost-effective and environmentally compatible shaping and precision-machining processes.



Baden-Württemberg

Automotive Manufacturers - Research



DLR Institute of Structures and Design, Stuttgart

<http://www.st.dlr.de/bk>

The main research activities are concerned with studying the crashworthiness and impact behaviour of composite structures through structural impact tests and crash simulation studies. The long term research projects are concerned with aircraft structures, particularly helicopter and aircraft fuselage subfloor structures. Further work is done on the fields of fibre reinforced polymers and ceramics, hot and lightweight structures.



DLR Institute of Combustion Technology, Stuttgart

<http://www.dlr.de/vt>

The Institute of Combustion Technology develops design principles for industrial combustion processes. Particular emphasis is placed on reducing harmful substances such as soot, nitrogen oxides and unburned hydrocarbons. The institute also conducts research into unsteady combustion, increasing the reliability of the combustion process, and fuels. Its main areas of expertise are: (1) combustion test facilities, (2) laser measurement technology and analytics, (3) modeling and simulation.



DLR Institute of Vehicle Concepts (IFK), Stuttgart

<http://www.dlr.de/fk/>

The IFK's research of alternative engines and energy conversion is grounded in its skills in prototype manufacturing, test stands and measurement techniques, electric engines and energy storage, technical analysis, and modeling and simulation. The IFK employs scientists and engineers experienced in the fields of vehicle technology, renewable energy, and hydrogen technology. At present, the IFK is working on projects relating to the development of fuel cell engines for cars, test stands for fuel cell systems, and novel hybrid concepts. The fields of lightweight construction and hybrid design and assembly integrate construction and simulation abilities with the possibility for design, testing, and actual implementation of prototypes.



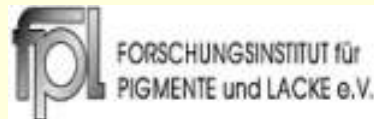
Baden-Württemberg

Automotive Manufacturers - Research



Hahn-Schickard Society Institute for Micro and Information Technology (IMIT), Villingen-Schwenningen <http://www.hsg-imit.de>

Companies appreciative of innovation have been entrusting HSG-IMIT since 1988 with their product ideas. Beginning in 1996 the volume of industry business in research and development has doubled every year. The main assets are concentration on main competencies, experience in the realization of innovations and excellent technical facilities. Internationally the HSG-IMIT and its 80 employees enjoy an outstanding position as important interlocutor for experts and organizers of and speakers at technical congresses.



Research Institute for Pigments and Coatings (FPL), Stuttgart <http://fpl.uni-stuttgart.de>

The Forschungsinstitut fuer Pigmente und Lacke e. V. (Research Institute for Pigments and Coatings) has conducted research for the pigment and paint users for over 50 years. The work of the FPL is also focused on analysis and application technology as well as teaching and continuing education in the field of coatings in general. Research is partly funded by governmental agencies and its purpose is to effectively support and stimulate product and application innovation in industry especially in small and medium-sized companies. Contract work is performed bilaterally and in direct cooperation with industry.



Baden-Württemberg

Automotive Manufacturers - Research



Institute for Fluid Mechanics, University of Karlsruhe

<http://www-isl.mach.uni-karlsruhe.de>

The Institute teaches and researches fluid mechanics for aerospace technologies, motor vehicles, fluid machines, and for biotechnology and medical technology. Its main areas of research are aeroacoustics, including the numerical and experimental localization of sound sources, further development of the theory of local disturbances in boundary layers for airfoil and motor vehicle flows, and within the scope of bio-fluid mechanics, flow in the human heart and bioanalytics.



Research Institute Precious Metals & Metals Chemistry (FEM), Schwäbisch Gmünd

<http://www.fem-online.de>

Since 1922 the Research Institute for Precious Metals and Metals Chemistry (**fem**) in Schwäbisch Gmünd / Germany is a well known independent non-university non-profit institution in the field of metallurgy, materials science and surface technology. Main aspects of its work are the application of different coating technologies (electrochemistry / electroplating, anodisation and lacquering of aluminium, PVD and PACVD techniques) in combination with our extensive testing facilities for materials and coatings as well as for materials analyses.



Baden-Württemberg

Automotive Manufacturers - Research



Institute for Metal Forming Technology (IFU), Universität Stuttgart

<http://www.uni-stuttgart.de/ifu>

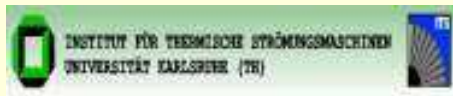
The IFU's research and development activities center on metal-forming technology - in particular on forging, machine development, hydroforming, and FEM process simulation. International conferences highlighting new developments in forging and sheet-metal forming are organized in collaboration with the Forschungsgesellschaft Umformtechnik mbH (FGU) (metal-forming technology research).



Institute for Combustion Technology (ITV), University of Stuttgart

<http://www.uni-stuttgart.de/itv>

The ITV's research aims to achieve a detailed understanding of the fundamentals of combustion technology, in particular the efficient, environment-friendly operation of combustion systems, such as engines, gas turbines and firing systems. The Institute's three departments focus on the theoretical principles of physics and chemistry, experimental methods and the simulation of industrial combustion systems.



Institute of Thermal Turbomachines, University of Karlsruhe

<http://www.its.uni-karlsruhe.de>

The Institute of Thermal Turbomachines deals with the variety of issues arising from the thermodynamic process of gas turbines with its high pressures and temperatures. The key aspects of research activities are strongly associated with gas turbine components such as combustion chamber, turbine, rotor and bearing chamber. Thus, in a broader sense, they are concerned with flows in complex geometries taking especially into account the phenomena of two phase flow, chemical reaction, turbulent mixing, wall cooling methods and heat transfer as well as the interaction of flow and structure. In this regard new numerical and theoretical approaches are developed and sophisticated experimental investigations are carried out. The results obtained enter directly into new designs.



Baden-Württemberg

Automotive Manufacturers - Research



Institute of Chemical Process Engineering, University of Stuttgart

<http://www.icvt.uni-stuttgart.de>

Main fields of research and teaching are: Chemical Reaction Engineering, Physico-chemical operations including Membrane Technology, Apparatus and Plant Design and Technology. Special emphasis is laid upon mathematical modelling and numerical simulation of the considered processes in direct combination with a detailed experimental analysis. Research activities in Chemical Reaction Engineering cover fixed-bed and monolithic reactors for catalyzed gas-phase reactions under steady state and dynamic operating conditions, especially for high temperatures.



Institute for Microelectronics Stuttgart (IMS CHIPS), Stuttgart

<http://www.ims-chips.de>

IMS CHIPS stands for synergetic competence in teaching, research and development and certified production of innovative microelectronic systems. IMS operates one of the most modern production and development lines for highly complex silicon microchips. Apart from technicological services to several semiconductor manufacturers, IMS supports especially small- and medium-sized enterprises as well as research institutes to solve technological problems.



Baden-Württemberg

Automotive Manufacturers - Research



Institute for Polymer Testing and Polymer Science (IKP), University of Stuttgart

<http://www.ikp.uni-stuttgart.de>

The institute focuses on all key aspects of polymers, including strength, aging, and the relationship between manufacturing, morphology, properties (mechanical, dynamic, thermal, emission, permeation) and design. IKP's research concentrates on the fundamentals of polymer engineering and real-world challenges. Not only is it a leading institute when it comes to ensuring that products and processes are environmentally, technically and economically sound, it is also a front runner in rapid prototyping/tooling.



Max-Planck-Institut für Metallforschung, Stuttgart

<http://www.mf.mpg.de>

The Max-Planck-Institut für Metallforschung has consistently played a leading role in materials research since its inauguration in 1921. Its research activities comprise theoretical and experimental investigations of synthesis, structure, microstructure and properties of materials. Today, the Institute is well positioned to continue its leading role in modern materials research. Its goal is to create the foundations to better tailor material properties necessary for a given structural or functional application ("materials by design"). To this end, progress is needed on several levels of research and development, ranging from basic questions of atomic and molecular behavior to materials engineering.



Baden-Württemberg

Automotive Manufacturers – Technology Parks



Science Park I + II Ulm

Science Parks I+II in Ulm promote and support young, innovative companies in the automotive industry through synergies with research institutes.

Science Park I in the science city of Ulm offers young companies a base for starting in a professional environment. Science Park II is a rapidly growing network comprising the university, university of applied sciences, and numerous research, development and production facilities of innovative branches of industry, above all the DaimlerChrysler Research Center. The companies in the science park - including Siemens and Takata - already have around 45,000 square meters of usable space available, and an expansion is being planned.

<http://www.sciencepark-ulm.de>



Baden-Württemberg