



Regional
Cluster Atlas
Baden-Württemberg
2008

Inventory of cluster-related
networks and initiatives



Baden-Württemberg

MINISTRY OF ECONOMICS



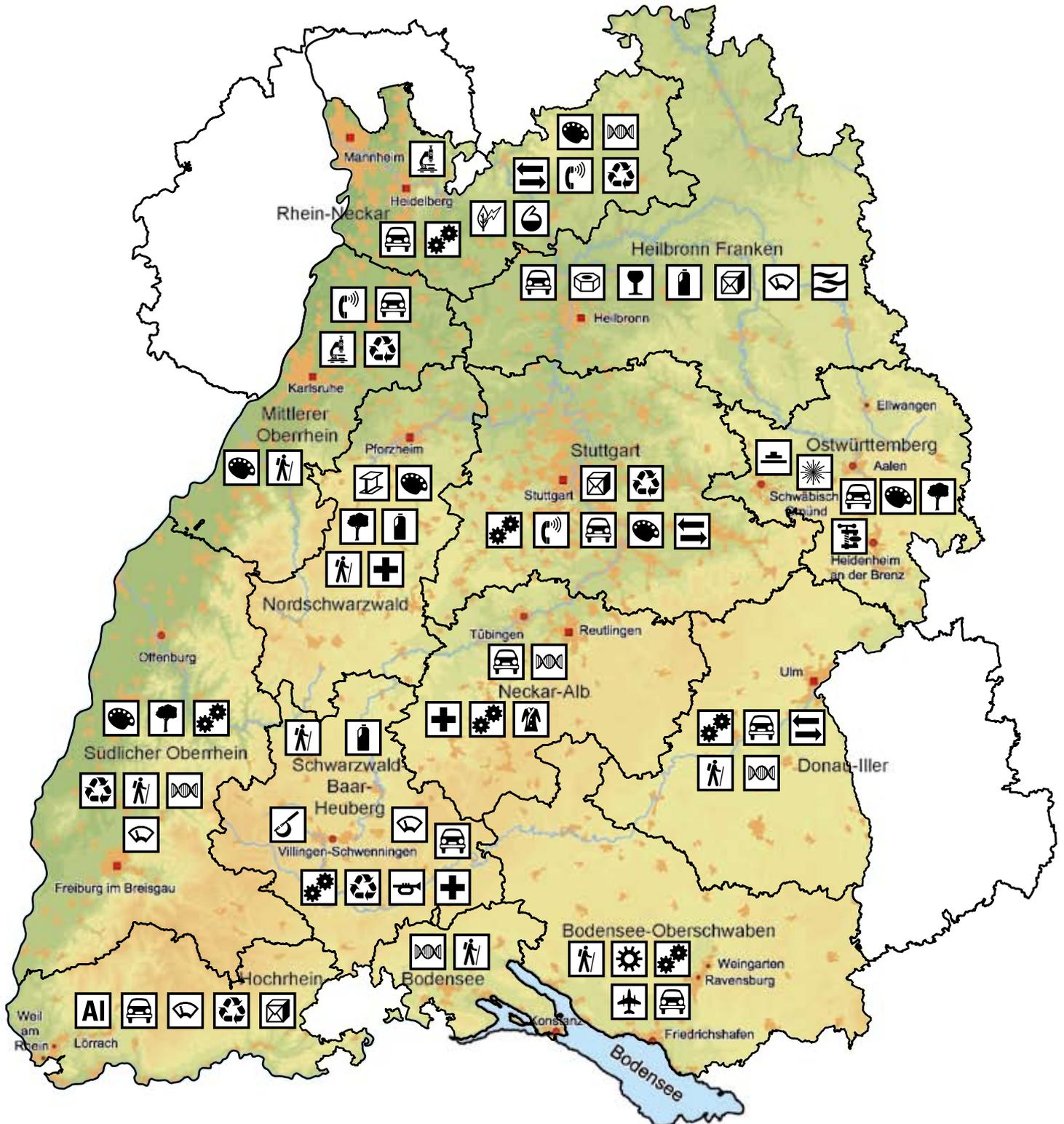
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Explanation of symbols for the regional cluster map Baden-Württemberg

 AI	Aluminiumverarbeitung Aluminum processing		Metall-/Stanztechnik Metal & die cutting technology
	Automotive Automotive		MSR-Technik Measurement & control technology
	Befestigungstechnik Fastening technology		Musikinstrumentenproduktion Musical instrument production
	Chemie Chemicals		Nanotechnik Nanotechnology
	Engineering Engineering		Oberflächentechnologie Surface technology
	Feinwerktechnik etc. Precision engineering, etc.		Organic Electronics Organic electronics
	Glas-/Labortechnik Glass and laboratory technology		Photonik/Optische Technologien Photonics/optical technologies
	IKT ICT		Produktionstechnik Production technology
	Kreativwirtschaft Creative industries		Textil und Bekleidung Textiles and clothing
	Kunststoffverarbeitung Plastic processing		Tourismus/Gesundheit Tourism/health
	Life Sciences Life Sciences		Umwelt-/Energietechnik Environmental and energy technologies
	Logistik Logistics		Verpackungstechnik Packaging technology
	Lüftungstechnik Ventilation technology		Wald-/Holzwirtschaft Forestry/timber industry
	Luft- und Raumfahrt Aerospace		Zerspanung/Umformung/Metallguss Chipping/founding/metal working
	Medizintechnik Medical engineering		

Regional Cluster Atlas Baden-Württemberg



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Introduction

Point of departure

The State Government of Baden-Württemberg has set itself the target of systematically driving forward development of a cluster policy.

Against this backdrop, the Ministry of Economics has commissioned the Institute of Economic Research in the Southwest – ISW Consult – to draw up a regionally oriented Cluster Atlas on behalf of the State of Baden-Württemberg for the first time using a moderated process. An atlas setting out regional clusters is particularly appropriate in the case of Baden-Württemberg, given that this Federal State may lay claim to a diversity and density of economic activity within its regions which is unmatched in all but a tiny minority of countries around the world. As there is no direct model or precedent for this Atlas, it may be considered as a true prototype.

Objectives of the cluster atlas

For the cluster policy stakeholders in the arena of state politics and players involved in the regions and relevant associations, the Cluster Atlas is intended

- To provide an ordered overview of regional clusters, existing and in some cases also planned cluster initiatives and cluster-relevant research, development and transfer institutes in the regions of Baden-Württemberg (transparency function),
- To provide basic information regarding the relevant underlying circumstances of regional clusters (aid to categorization),
- To provide a foundation for practical application of customer policy-related measures and projects (aid to organization) and
- To assist in determining possible affinities between clusters, as well as additional possible regional, supra-regional and cross-border networking,
- To permit the monitoring of regional cluster policy and provide an important source of information for cluster evaluation.

At the same time, this Cluster Atlas provides an informative basis for further development of strategies for marketing Baden-Württemberg as a location for foreign investors.

Data basis

The initial collection of data on the regional clusters in Baden-Württemberg took place in close cooperation between contact partners in the twelve spatial planning regions and the Baden-Württemberg Ministry of Economics. The clusters and potential or conjectured clusters consequently reflect the current assessment within the regions.

Several analyses provided the point of departure for the work. Although these provide a statement regarding regional clusters, they neither provide a basis for comparison nor are based on any statistically uniform foundation. Subsequently, intensive personal surveys carried out of representatives in the twelve regions and the associated coordination processes became the central foundation for the collection of data for the Cluster Atlas. The findings gained in this way were supplemented by the evaluation of relevant written and digital documentation from the regions. The regionally categorized company archive of ISW Consult and in-depth web and database research as well as internal empirical specialist information relating to Baden-Württemberg formed additional sources of information. The Cluster Atlas cannot be a static document, as new findings are continuously added, both about already registered clusters and also new clusters and cluster initiatives. As a result, the Atlas requires continuous updating.

Definition, demarcation and characteristics of regional clusters

A cluster is defined as the geographic concentration of companies, institutes of science and research and other support organizations working within a specific field of competence, which may possibly be working in competition with each other but which still operate a system of selective cooperation with a view to achieving a mutual added value.

The following can be specified (not exclusively) as essential determining criteria for regional clusters

1. Thematic market-specific proximity (horizontally: identical products, services, vertically: same value adding chain or parts of it),
2. Geographic or spatial proximity (fast accessibility, capacity for easy coordination),
3. Adequate number and density of companies (critical mass) and
4. At least national sales potential for products or services and consequently high export capability from the regional point of view.

These central points of momentum together allow the creation of a corporate cluster culture capable of engendering spatial cohesion. It is only by combining geographical and contextual proximity (1. and 2.) that it is possible to create scope for the initiation and implementation of shared ventures.

Modern clusters are also characterized by their geographical proximity to applied research, universities and colleges, transfer institutes and so on. These are of direct importance for the innovative further development of products and consequently for adding value within the cluster. Indirectly, they also help to provide an important source for future generations of specialists.

It should not be forgotten that regional economic clusters were formed on many occasions in the past also without the involvement of scientific institutes such as universities, research or transfer institutes. In many cases, it is discerning clients, their product and application experience and the resulting drive for improvements that form a central source of impetus for innovative product and process solutions.

Involved members of the cluster profit more from cooperation than they would if acting alone. The question of an explicit cluster initiative must be distinguished from the simple existence of a cluster. This type of initiative can be launched in order to bring together the cluster stakeholders to work systematically and in an organized way towards a common goal. Decisive factors in this type of initiative are its benefits and costs – based on the determined requirements and objectives. For this reason, the impetus for the formation of a cluster initiative must come from the corporations themselves and from other regional stakeholders, if there is any prospect of the benefits outweighing the added costs in the medium to long term.

An overview of regional clusters

This preliminary overview of identified regional clusters is intended to illustrate and clarify the extraordinary spectrum of Baden-Württemberg's economy in the various regions, and also simplify the task of thematically categorizing them under overriding subject and technology-related headings.

In this process, all clusters have been categorized by defining the value adding object of the central corporation, as well as the manufactured core products and services. The following table lists the names of the clusters next to a description of their respective field of activity.

Overview 1: The regional clusters with a thematic outline of their field of activity

Cluster name	Demarcation
Automotive	<p>The value adding process centres on the development and manufacture of vehicles.</p> <p>The term, which is now in general usage, encompasses all value adding activities associated with the subject of vehicles. Consequently, the term is also used here to mean the entire field of automotive engineering, i.e. passenger cars, buses, commercial vehicles and their major components.</p>
Aerospace	<p>Value adding processes in the field of aerospace engineering are marked by a high level of differentiation. Overall, this field encompasses the development and manufacture of components, systems, devices, equipment and complete vehicles used in aerospace applications.</p>
Production technology	<p>In the field of production technology, clusters exist in various segments. This category encompasses investment goods used for the manufacture of industrial goods (consumer goods or also other investment goods). Production technology does not encompass solely individual items of plant and machinery, but also the handling, infeed, charging, removal, discharging components used to link them, as well as transport and storage facilities.</p>
Packaging technology	<p>The core value adding chain of the clusters involved with this subject area encompasses developers and manufacturers of packaging machines and their components. On principle, however, the application aspect, i.e. the manufacture of packaging / packaging materials as well as packaging and filling operations themselves are also integral to this cluster.</p>
Chipping/metal working/founding	<p>The term chipping encompasses all chip-producing machining processes for cutting or separating material particles (chips) to produce a workpiece with the desired shape. The focus here is on metalworking (incidentally alongside wood and plastics processing).</p> <p>Metal working is a production method used to selectively form the shape of solid bodies made of metal. The core competence within this cluster includes primarily drop forging as well as freeform forging of large forged items. A pioneering new technology known as hydroforming also has its origins within this cluster.</p> <p>The core competence of forging has concentrated in this cluster. Although this is one of the oldest production technologies, it offers enormous potential for innovation in the future for aluminium and magnesium-based alloys.</p>
Metal & die cutting technology	<p>The core competence of companies operating in this cluster is focused on punched components in various materials, die complexity and surface quality. The value adding chain in this cluster also encompasses the marketing of punched components including sales and logistics as well as the associated mechanical engineering processes.</p>

Cluster name	Demarcation
Aluminium processing	Aluminium processing, including upstream and downstream value adding stages, is also based in a clear regionally cohesive cluster. The resource water and thus primarily certain waterways play an important localizing role here.
Fastening technology	This cluster encompasses the development, manufacture and supra-regional sale of fastening technologies (screws, hardware), primarily for structural but also civil engineering and also furniture production.
Plastics processing	Plastics processing forms the focus of the plastics cluster. Essentially, this entails injection moulding in a variety of forms, but partially also extrusion and deformation. Added to this is the plastics machinery sector, and particularly in the field of injection moulding, the development and manufacture of complex tools.
Chemicals	In the chemicals industry, a large variety of basic materials and specific chemical products are manufactured. As a regional cluster dominated by one large-scale corporation, this cluster is located in the cross-border economic area between three states, which today operates under the common umbrella of the Metropolitan Region of Rhein-Neckar.
Glass/laboratory technology	The glass and laboratory technology cluster is involved in the development and manufacture of technical glass with the emphasis on laboratory-specific applications including metrology.
Surface technology	This cluster focuses on various processes used for surface finishing. Regional concentration of this type of company is not particularly frequent, partially due to the widely differing surface finishing processes involved.
Textiles and clothing	This cluster focuses firstly on clothing products and home textiles aimed at the consumer goods market and secondly on technical textiles for use in technical applications such as the investment goods industry. The value adding chain of this cluster also includes the textile chemistry (finishing) and associated mechanical engineering sector and its suppliers.
Measurement and control technology (Mechatronics/ Microsystems technology)	The development and manufacture of systems, devices and apparatus used in measurement and control engineering form the main focus of the instrumentation and control engineering cluster, whose products rely increasingly on mechatronic or microsystems technology components.
Ventilation technology	The ventilation technology cluster focuses on the development and manufacture of components and systems used in ventilation and air conditioning applications on wide-ranging different scales. These also encompass components central to this cluster such as drive (e motors) and control engineering.
Musical instrument production	This cluster focuses on the development and manufacture of musical instruments including upstream component production.
Forestry/timber industry	This is a cluster based on regenerative raw materials whose value added context ranges from reforestation and timber harvesting through different processing stages to high-grade end products (such as furniture) and which regularly also encompasses wood-working machine engineering.

Cluster name	Demarcation
Nanotechnology	This relates to a methodology aimed at mastering the nanodimension in various different fields. This currently – and increasingly in the future – results in applications for a wide range of different sectors. Despite this diversity it was agreed that the field of nanotechnology should be included in the Cluster Atlas as a potential for highly developed companies from various sectors of industry.
Precision engineering/ microengineering/micro- systems technology technik	A line of development in the field of miniaturization towards microsystems technology starts with precision engineered components through microengineered precision parts, components and systems to system products created using microsystem technology.
Photonics/optical technologies	The photonics / optical technologies cluster is concerned with the generation, amplification, formation, transmission, measurement and utilization of light. Its focus lies in laser material processing, optical metrology, microlithography, optical engineering used in medicine and biotechnology, optical communication engineering, lighting technology and display technology.
Organic electronics	Another term used to describe this cluster is „polymer electronics“ or in short „polytronics“, as this technology centres on the use of conductive polymers for electronic circuits. Important applications include for instance product markers such as RFID tags (= Radio Frequency Identification Tags), solar cells or organic LEDs (OLEDs). In production engineering terms this relates to printing techniques for large piece numbers in which polymer components are printed on film.
ICT (= Information and communication technology)	Information and communication technology is a cross-section technology based on hardware and software encompassing a large number of target markets and corresponding division into partial segments. Companies working within the ICT sector are consequently located everywhere. Despite this, cluster-shaped agglomerations do exist.
Engineering	This cluster combines a range of highly specialized services offered by engineering firms. These include fields such as consulting and project processing, development and design, simulation and prototype building or the planning and execution of specific tests. The main target markets in Baden-Württemberg are automotive, mechanical and also aerospace engineering.
Creative industries	„Creative industries“ is an imprecise term which cannot be coined conclusively but only by convention. The scope of this cluster ranges from various forms of design (fashion, product/industrial, print, web design) through photographic, film and music productions to literature and publications or print and online media. The creative industries can be defined as a regional cluster if an appreciable spatial concentration of companies is in evidence. For Baden-Württemberg, this type of concentration exists in the music industry, in film, design and the media.
Medical engineering	Medical engineering comprises a number of special markets whose companies are not always located in regional cluster groupings. The medical engineering industry in regional clusters always targets specific market segments with the development and manufacture of its products, for instance surgical instruments. The value adding chain includes suppliers of input products and components as well as independently organized and internationally oriented marketing.
Life sciences	The term biotechnology encompasses a wide range of applications. The developments of relevance here encompass almost exclusively people, animals and plants. This sector frequently targets the pharmacological market and in many cases – for instance in the case of bio implants – the biological medical engineering sector. To this extent, the plural cluster designation as a generic term is justified.

Cluster name	Demarcation
Tourism/health	The central focus of added value here is the offering of tourism services with supra-regional significance, from accommodation through recreation, mobility and entertainment to gastronomy and catering. Due to frequent combination with supra-regionally important health services (therapeutic/convalescent), clusters relating to tourism are coined under the combined term. This also encompasses central services offered under the heading of experience and wellness.
Environmental and energy technologies	The focus of a cluster for this sector must be based on corporations which develop and manufacture environmental and energy-related systems. In addition, environmental technology is frequently an „embedded“ technology, i.e. integrated in other plant and machinery.
Logistics	Logistical services exist in every modern economic area. Only appreciable accumulations of logistics companies whose services extend supra-regionally can be recorded as regional clusters. Consequently, here only those areas are recorded as logistic clusters which have been categorized by the current study carried out by SCI Verkehr GmbH as logistical core regions.

The structure of the cluster atlas

For reasons of practicality (interdependence between sectors, competence of different Chambers of Commerce) the Cluster Atlas is set out on the basis of the twelve spatial planning regions of Baden-Württemberg as specified in the State Development Plan. In two cases, these are cross-border regions (Rhein-Neckar and Donau-Iller regions).

The depiction of each region follows the following breakdown:

1. A brief characterizing introduction of each region with a symbolic location map,
2. Individual descriptions of each determined regional cluster,
3. A regional map showing approximate locations and designations for the regional clusters,
4. A brief breakdown of regional stakeholders in additional recognized potential clusters,
5. An overview showing associated cluster initiatives and
6. An overview of research and transfer institutes of relevance for the regional clusters.

The regional clusters are compared in a matrix-style overview, allowing the fundamental networking possibilities between clusters to be recognized.

Finally, a table provides the addresses of contact partners in the region to facilitate direct intercommunication.

Concluding remarks:

The Cluster Atlas is not a definitive or static reference work, but must be updated at reasonable intervals. This can entail, for instance, including additional clusters in the Atlas for which the information basis is currently insufficient.

The Atlas is focused clearly on regional perspectives. Consequently, no further reference is made to existing State-wide cluster institutes; However, these are included in the list of contact partners.

The region

The Stuttgart region forms the centre of Baden-Württemberg both in geographical and economic terms. Over one quarter of the State's workforce is employed in this region. In the international arena, the Stuttgart region may claim the position of the world's leading engineering location. It is supported by the extensive research and development capacity existing in the region, whose close geographical ties to the production of complex system goods forms the foundation for the strong international competitive standing of the region. The clusters of relevance in the region achieve – also in conjunction with allied clusters in adjacent areas – an almost unique real net output ratio.



The clusters

Automotive

The automotive cluster continues to play a central role in the Stuttgart region – focus on „premium segment passenger vehicles“ – with its large-scale manufacturing corporations and system suppliers of premier world ranking and a large number of highly competitive small and medium-sized supply enterprises. The value adding chain is almost completely represented within the region. The automotive cluster in the Stuttgart region radiates out to other parts of the State of Baden-Württemberg.

Production technology

Alongside the automotive cluster, production technology assumes an outstanding role in the region, and is characterized largely by small and medium-sized enterprises. This cluster remains highly competitive due to its sustained innovative drive. In terms of content, it is widely diversified with certain focal concentration in the fields of machine tools and automation engineering. In this cluster too, the Stuttgart region encompasses practically the complete value added chain.

Packaging technology

The region demonstrates a marked geographical specialization in the field of packaging technology in the Rems-Murr area; the economic location of Waiblingen holds a central significance in this context. Also characteristic here is the wide-ranging coverage of the value adding chain from suppliers through mechanical engineering firms to specialized engineering service providers.

ICT

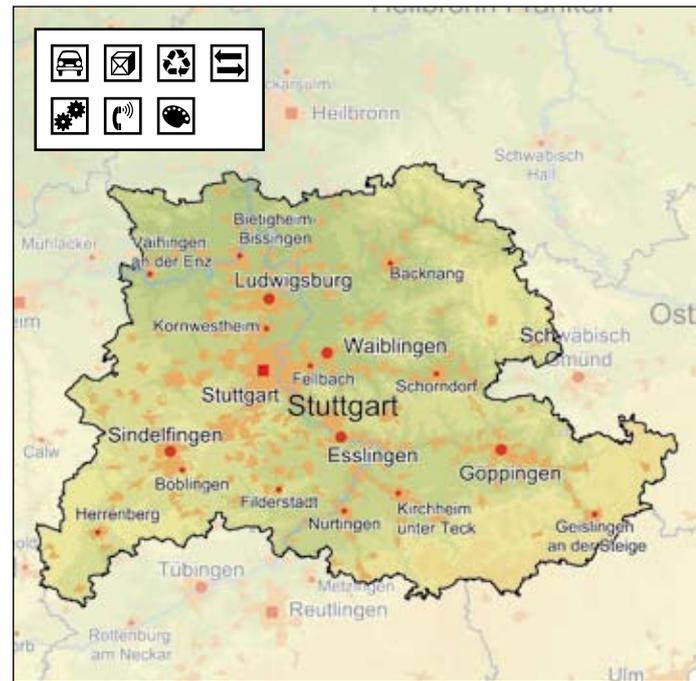
This cluster is characterized by a small number of large-scale enterprises on the one hand and a series of small and medium-sized enterprises on the other. The large-scale enterprises have since radically thinned out their vertical range of production. The functions remaining, which are largely dispositive in nature, are exposed to a high level of competition from other locations – also internally within companies. Development impetus originates largely from young small and medium sized IT firms.

Environmental and energy technologies

This is a sector driven primarily by universities and various initiatives. In terms of enterprises, considerable overlapping exists in particular with production technology or measurement and control technology. Specialist firms active in the environmental and energy technologies in the region are predominantly from the planning service provider / engineering sector.

Creative industries

A high potential of offered services, institutes and creative minds exists in the Stuttgart region from the fields of culture, the media, science etc. However, as far as cluster policy is concerned, demarcation of the „creative industries“ in this bandwidth is still too loosely defined. In particular, the value adding sectors of supra-regional significance need to be more thoroughly delineated. Examples of this are the specialist publishing houses and architects, as well as film, music and theatre-related activities.



Logistics

The Stuttgart region is one of Baden-Württemberg's three „logistical core regions“. Consequently, it is home to important infrastructure institutes working in the field of transport logistics and also numerous transport and logistical service providers.

The interview partners envisage additional cluster potential in the fields of **aerospace** with the cluster initiatives from the Stuttgart Region Economic Development Corporation (WRS), the Flugfeld Böblingen / Sindelfingen (centre between Böblingen and Sindelfingen), **health** and **life sciences**.

Networks and cluster initiatives

Regional clusters	Regional cluster initiatives
Automotive	CARS – Cluster Initiative of the Automotive Region Stuttgart BzA-BW – Fuel Cell Alliance Baden-Württemberg Virtual Dimension Center Fellbach (VDC) Vehicle Competence Centre of the Stuttgart Region Chamber of Commerce Cluster Initiative Electromobility (participation in Top Cluster Competition run by the Federal Ministry of Education and Research (BMBF))
Production technology	WRS Mechanical Engineering Cluster Initiative; Mechatronics Competence Network; Virtual Dimension Center Fellbach (VDC); Technical Textiles Competence Centre Manufacture-BW (participation in the Top Cluster Competition run by the BMBF)
Packaging technology	PEC – Packing Excellence Center, WRS Mechanical Engineering Cluster Initiative
ICT	NAC – Net Application Center Region Stuttgart, Open Source Region Stuttgart, Open Source Solution Park, BITZ – Backnang Innovation and Telcommerce Centre; KTMC – Telematics, Mobile Computing and Customer Care Competence Centre, SBS – Software Centre Böblingen / Sindelfingen
Environmental and energy technologies	KINET – Competence and Innovation Centre for Sustainable Energy Technology, KURS – Competence Centre for Environmental Engineering, Competence Centre for Regenerative Energy Utilization; BzA-BW – Fuel Cell Alliance Baden-Württemberg, BioRegio STERN Management GmbH; WRS Clean Energy Cluster Initiative
Creative industries	WRS Design Cluster Initiative, Film Commission Region Stuttgart, mediafaktor filder, Media Initiative Region Stuttgart, Popbüro Region Stuttgart
Logistics	KLOK – Logistics Competence Centre Kornwestheim; OpenEnlocc – Secretariat of the European Network of Logistics Competence Centres
Aerospace	WRS Aerospace Cluster Initiative
Health	Health Region of Stuttgart; WRS Health Cluster Initiative (BENEFIT); KTMC – Competence Centre for Telematics, Mobile Computing and Customer Care
Life sciences	BioRegio STERN Management GmbH

Cluster-relevant and other research and transfer institutes

Institute	Fields of activity
University of Stuttgart	In particular technical and scientific faculties: Construction and environmental engineering, chemistry, earth and biological sciences, ICT and electrical engineering, aerospace engineering, mechanical engineering, mathematics and physics. Research transfer through central administration.
University of Hohenheim	Faculties for natural, agricultural and economic sciences with various research centres such as the Life Science Centre or FZID (Innovation and Service Research Centre).
Esslingen University of Applied Sciences	Faculties for applied sciences, automotive engineering, information technology, mechanical engineering, mechatronics and electrical engineering, supply and environmental engineering, transfer through two institutes of applied research and 14 companies belonging to the Steinbeis Network.
Nürtingen University	University of economics and environmental studies; Transfer through the Institute of Applied Research in the fields of landscape architecture and environmental planning, agriculture, business studies and economics. Transfer through other companies of the Steinbeis network.
Stuttgart University of Applied Sciences	Architecture, civil engineering, surveying, information technology, mathematics; Transfer through two Institutes of Applied Research (IAF) and the Steinbeis Transfer Centre – technical consultancy for Stuttgart University of Applied Sciences.
Stuttgart Media University	Faculties for printing and media, electronic media, information and communication; Transfer through Institute of Applied Research and four companies in the Steinbeis network
State University of Music and the Performing Arts Stuttgart	Study programs in music, church music, school music, drama, elocution, puppet theatre
Film Academy of Baden-Württemberg, Ludwigsburg	Study programs in screenwriting, directing, image composition / cinematography, montage / editing, cinematic experimentation, animation, education and science, documentary film, feature film, advertising film, series formats, interactive media, production, animation & Vfx producing, creative producing, international producing, series producing, interactive media producing
Baden-Württemberg Academy of the Performing Arts, Ludwigsburg	Currently under development. Plans exist for study programs in theatre direction, acting and dramaturgy in cooperation with the Baden-Württemberg Film Academy
Transfer-oriented research institutes	<p>HSG Institute of Microsystems Technology (IMAT), Stuttgart Institute of Microelectronics (IMS), Centre for Solar Energy and Hydrogen Research (ZSW), Coatings Research Institute (FPL).</p> <p>Six institutes operating under the Fraunhofer-Gesellschaft (such as the Institute for Industrial Engineering IAO, Manufacturing Engineering and Automation IPA, Interfacial Engineering and Biotechnology IGB); Stuttgart location of the German Aerospace Centre (DLR) with five institutes</p> <p>Max-Planck Institute for Solid State Research, MPI for Metal Research.</p> <p>German Institutes for Textile and Fibre Research Denkendorf (DITF: Institute of Textile and Process Engineering (ITV), Institute for Textile Chemistry and Chemical Fibres (ITCF), Centre for Management Research (DITF-MR), see also under the Neckar-Alb region (p. 57).</p> <p>FKFS: Forschungsinstitut für Kraftfahrwesen und Fahrzeugmotoren Stuttgart, Foundation under civil law.</p>

The region

The Heilbronn-Franken region is the largest in Baden-Württemberg in terms of surface area, and forms the North-eastern section of the State. The region encompasses the city and borough of Heilbronn, the Hohenlohe District, the Schwäbisch Hall District and the Main-Tauber District. It is home to a population of just under 890,000. Between 1973 and 2005, the population rose by 23.7 per cent. Particularly astounding is the development in the number of jobs liable to social insurance contributions. During the period from 1974 to 2004, this number increased by 33.2 per cent. The extreme industrial dynamic of this region is particularly evident in comparison to the development of jobs created throughout the population as a whole. Industry in the Heilbronn-Franken region rests on a broad basis. Key sectors include mechanical and automotive engineering, electrical and electronic engineering, the food and luxury goods industry as well as the glass, paper and packaging industry. The large number of innovative industrial enterprises is supplemented by a high-performance wholesale and retail sector, expanding service providers, in particular in the IT sector, as well as excellent hotel and catering enterprises and a

nationally renowned spa and wellness industry.

Future development has been driven notably by the regional agenda process „Heilbronn-Franken 2020“. In addition, an organization by the name „Pact Future“ has been set up as a regional association of over 120 communities,

corporations and institutions. By representing common interests and the targeted promotion of projects in the spheres of demographics, education, infrastructure and innovation, these future-related issues have been actively addressed.



The clusters



Automotive

The automotive clusters in the Heilbronn-Franken region are focused on the Heilbronn area. In terms of products, practically every aspect is presented in the region: from passenger car production through the development and production of commercial and special-purpose vehicles, research and development through to different automotive supply companies, with the addition of certain investment goods manufacturers. To this extent, the entire automotive value-adding chain is represented in the region.



Plastics processing

A centre for plastics processing has evolved between Eppingen in the West and Heilbronn in the East. This encompasses over 50 companies whose core competence forms part of the injection moulding sector; in several cases, these also offer complete design and development services. Added to these are plastics-specific tool and mould building with supplementary related services.



Fastening technology

In Künzelsau and the surrounding area, a cluster has evolved since the 2nd World War which focuses on the marketing of fastening technology for the building sector. The wholesale trade, or rather one wholesaler in the region formed the starting point for the development of this cluster, which nowadays alongside logistical services also encompasses the screw and hardware production stage. To this extent, fastening technology is another example of geographically concentrated specialization in which a system of contracting out has provided a decisive impetus for growth and at the same time created competitive strength on a supra-regional level.



Ventilation technology

Over the last decades companies working in the field of ventilation and fan motor technology have settled in the Künzelsau area, in particular in the Jagst Valley. The largest of these have now evolved as global players. Their core products are air management systems ranging from specific motors through fans to complex air purification and management systems including the relevant control technology. Consequently, a substantial proportion of the specific value-adding chain has settled in the Künzelsau area.



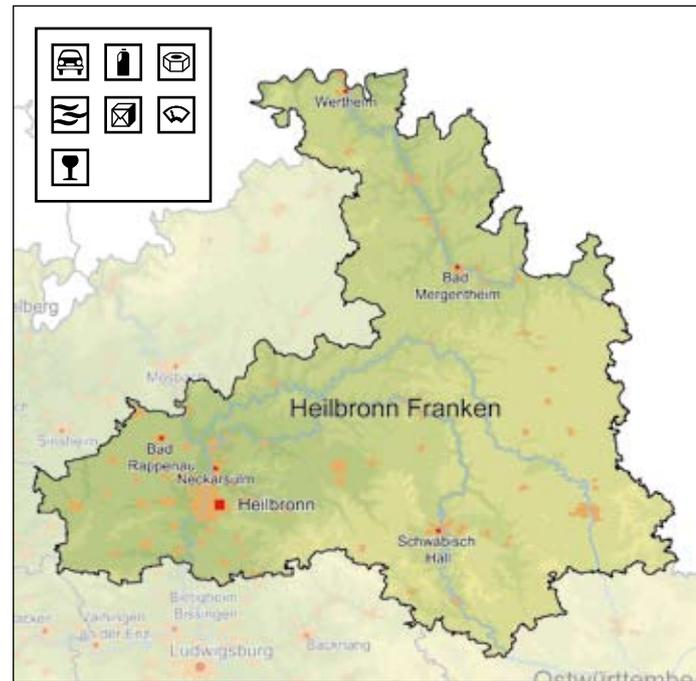
Packaging technology

Within the last 100 years, a whole series of successful and innovative packaging machine engineering firms have settled around the cities of Crailsheim and Schwäbisch Hall. Some of these have achieved world market leadership, others are well on the way to doing so. As a consequence of this process of concentration, an ever growing number of new companies are settling in this area, resulting in a general improvement and expansion of the offered range of products and services. This cluster employs around 7,000 people in the Schwäbisch Hall district alone. Exports account for over 80% among the packaging machine manufacturers. The region has also become a focus of international significance for packaging machine manufacturers.



Measurement and control technology

A series of companies working the measurement and control technology sector are located in the Hohenlohe / Schwäbisch Hall area, some of which only evolved over recent years. The spectrum ranges from the development and manufacture of valves through to control systems for solar systems.



Glass / laboratory technology

The glass industry cluster located in a small geographical area was only formed after the 2nd World War. The focus of this cluster is formed today by the town of Wertheim on the Baden-Württemberg side and Kreuzwertheim on the Bavarian side. The technical glass product spectrum ranges from glass fibre through thermometers and measuring instruments to high-tech solutions for science and industry. In the meantime, the manufacture of artistically designed glass has also gained a certain significance.

Interview partners also envisage additional cluster potential in the fields of **health, logistics** („Logistic Support Region“ in accordance with SCI study), **mechanical engineering, automation, viticulture/food production/nutrition/health², aerospace and process technology/mechatronics, ICT, renewable energy technology** and **forestry/timber**.

Networks and cluster initiatives

Regional clusters	Regional cluster initiatives
Automotive	„Automotive Dialogue“ – under the direction of the business promotion organization Wirtschaftsförderung Raum Heilbronn GmbH focusing on location marketing, cooperation, R&D and education / qualification.
Plastics processing	„Plastics Dialogue“ – under the direction of Wirtschaftsförderung Raum Heilbronn GmbH, initially primarily targeting location marketing.
Fastening technology	To date no dedicated initiative, but lively exchange between stakeholders etc., viewed literally as a „culture of respectful cooperation“.
Ventilation technology	To date no dedicated initiative, but lively exchange between stakeholders accompanied by the search for common objectives, for instance in the field of education and training. Significant companies have organized their activities under the Innovation Region Kocher-Jagst Initiative .
Packaging technology	The „Packaging Valley Germany“ brand and Packaging Valley Germany Association – new association founded as the result of an entrepreneurial initiative at the end of 2007 with the focus on regional packaging technology companies as a common platform for planned activities focusing on education and training, marketing and PR as well as the promotion of innovation processes.
Measurement and control technology	To date no actual initiative, but a lively exchange between companies etc. („culture of respectful cooperation“).
Glass/laboratory technology	„Technology and Glass Research Association“ (FTG) – an institute of German Federation of Industrial Research Associations supported by medium-sized enterprises, which carries out research and development for industry in close cooperation with the Fraunhofer Institute of Silicate Research (ISC) .
Health	Health Region Heilbronn (Topics: Communication, knowledge transfer, networking and joint marketing in the health system within the region)

1 Logistical study performed by SCI Verkehr GmbH for the Baden-Württemberg Ministry of Economic Affairs.

2 The subject „Health“ is deliberately listed here twice, the second time in reference to various aspects of nutrition.

Regional clusters	Regional cluster initiatives
Logistics	Currently no more detailed information ¹
Mechanical engineering	Currently no more detailed information
Automation	Currently no more detailed information
Viticulture/food production/ nutrition/health	Currently no more detailed information
Aerospace	Currently no more detailed information
Process technology/ mechatronics	Currently no more detailed information
ICT	Winners of the MFG KREATEK competition: IT service management innovation cluster – initiated by the Institute for Electronic Business (IfEB) of Heilbronn University
Regenerative energy technology	Currently no more detailed information
Forestry/timber industry	Currently no more detailed information

Cluster-relevant and other research and transfer institutes

Institute	Fields of activity
Heilbronn University with Reinhold-Würth University (RWTH) Künzelsau	<p>Technical studies courses: Mechanics and electronics with automotive systems engineering, electronics and information technology, mechanical engineering, mechatronics and microsystems technology, robotics and automation, process and environmental technologies, technical management, medical information technology, information management in medicine, software engineering. Selected economically oriented courses: Managerial economics, transport management and logistics, electronic business, business management, business administration in transport and logistics (master's degree), economics and technology.</p> <p>Sister university RWTH Künzelsau: Drive engineering and mechatronics, energy management, industrial engineering, technical management, building systems technology, managerial economics and culture, leisure, sports management, managerial economics and marketing. Transfer in particular through ten companies belonging to the Steinbeis Network and the Institute of Applied Research.</p>

¹ Here and in the following, wherever the indication „Currently no more detailed information“ appears, the following applies in respect of cluster potential: No more detailed information exists, as at the time of compilation of this Cluster Atlas these areas developments were still at an extreme early stage.

Institute	Fields of activity
German Aerospace Centre (DLR) in Lampoldshausen	<p>The DLR location in Lampoldshausen, which today employs a workforce of around 220, was established in 1959 as a test site for testing liquid rocket engines and went into operation in 1962. The work of the DLR in Lampoldshausen focuses on the planning, construction and operation of test beds for space propulsion systems on behalf of the European Space Agency ESA in cooperation with the European space industry.</p>
Fraunhofer Institute of Silicate Research, Würzburg, Bronnbach Branch	<p>Focal activities: New test methods and modern machining technologies specifically for the laboratory glass sector, as well as conservation and coating programs for endangered items of cultural heritage, closely interlinked with the Technology and Glass Research Association (FTG).</p>
Academy of Cooperative Education Mosbach, Bad Mergentheim Branch	<p>The Academy of Cooperative Education in Bad Mergentheim offers study programs in „International Business“ and „Health Management“.</p>
Weinsberg State College and Experimental Centre for Viticulture and Fruit Farming	<p>This institute run by the State of Baden-Württemberg works as a training college (viticulture, oenology, fruit farming and distillery) and quality testing centre. The Weinsberg State Vineyard is affiliated to this institute.</p>
Training and Technology Centre of the Heilbronn Chamber of Trade (BTZ Heilbronn)	<p>Planned competence centre: Technology of renewable energies</p>

The region

Geographically speaking, the Ostwürttemberg region is characterized by the Ostalb mountains and the courses of the Rems, Kocher, Brenz and Jagst Rivers, which are linked at the same time to their relatively early industrial development, in particular in the fields of mechanical engineering, metalworking and machining. For many years, due to the innovative drive of its powerful backbone of small and medium-sized enterprises and a large number of global players, what is known as the „Region of talents and patents“ has been the number two region in the German patent statistics. Ostwürttemberg is bound together by strong links to the Bavarian economic area and to Stuttgart, and benefits from the A7 motorway running through the centre of the region as a main north-south traffic artery. The current clusters link up in many areas directly to the evolved industrial structures. This applies to surface

technology, but also to the automotive, chipping, metal working and founding or design sectors. The photonics cluster, conversely, has relatively recent roots. Regional areas of competence are also being strengthened and expanded within the framework of the Future Initiative Ostwürttemberg 2015 (www.zio.ostwuerttemberg.de).



The clusters



Photonics/optical technologies

The regional photonics cluster which encompasses around 60 companies is largely defined by the broad-based Zeiss Group and Aalen University of Applied Sciences. The cluster is also characterized by recent developments and products and by interlinked value adding processes. Otherwise, the offering from within the region may be classified rather as horizontal in nature. It is based on a broad range of photonic technologies which are deployed as intermediate or end products in a wide range of different application fields.



Surface technology

In this cluster, which although mature still offers scope for further development, the refinement of surfaces forms the value adding focus, for example for jewellery or metal cutting tools. The refinement technologies used are highly varied and range from classical techniques through to ultramodern laser machining methods.



Automotive

Involvement in the automotive sector in this region concentrates particularly on the supply industry. The product spectrum offered by the well over 200 largely small and medium-sized enterprises which lead the market in their respective sectors range from individual parts to complex system components. The target products are both passenger cars and commercial / special-purpose vehicles. The sector also encompasses automotive engineering services from design through to testing and inspection services, as well as investment goods manufacturers as suppliers of production technology for the automotive sector.



Creative industries (Design)

The jewellery and clock industry looks back on a long tradition in the Ostwürttemberg region. Schwäbisch Gmünd is also the seat of the University of Design. Over recent years, a whole series of design service providers, in particular design bureaus, have concentrated in particular in the town of Schwäbisch Gmünd. The offering concentrates on industrial and product design, communication and jewellery design.

Forestry/timber industry

The highly forested region benefits from excellent competence in the processing, working and manufacture of end products manufactured from the raw material wood. Other points of emphasis include the manufacture of paper, cellulose and packaging products, as well as complementary mechanical engineering with worldwide acclaim and market contacts.



Chipping/metal working/founding

Processes such as the manufacture of tools and machines for chipping and metal working look back on a long tradition in the region. There are over 400 companies, some of them world renowned, based in Ostwürttemberg. The core competence of a large number of small and medium-sized enterprises lies in the field of founding. This technology offers enormous potential for future innovation. Aalen University of Applied Science enjoys an international reputation with its Metal Founding Research Centre.



Further cluster potential is envisaged by the interview partners in the fields of mechanical engineering and health

Networks and cluster initiatives

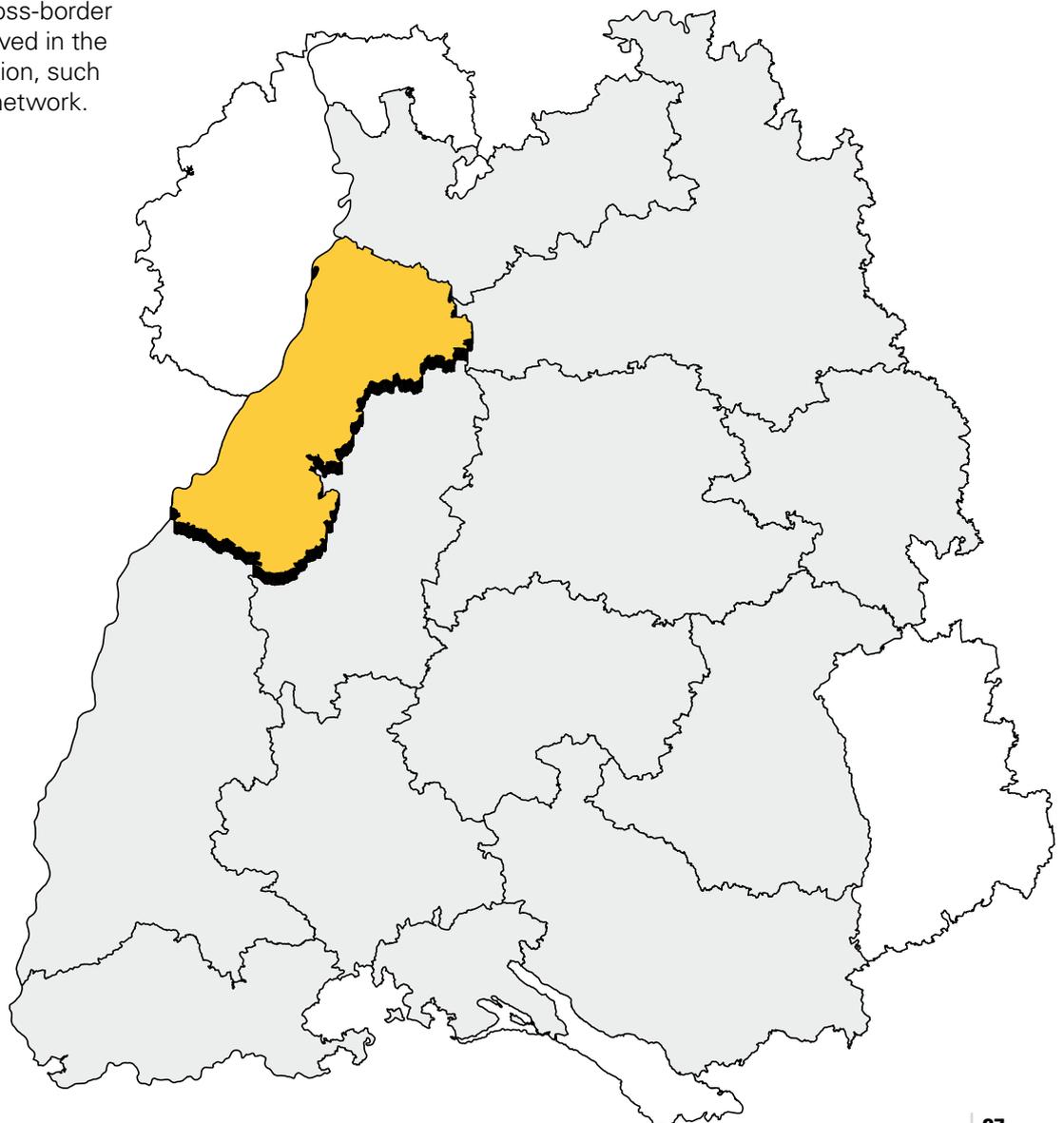
Regional clusters	Regional cluster initiatives
Photonics/optical technologies	„ Photonic Valley Ostwürttemberg “ – the photonics initiative of the Association for Economic Promotion of East Württemberg (WiRO) and Photonics BW e.V. aimed at representing the interests of the industrial location, for instance through joint marketing communication, providing stimulus for R&D, promotion of joint training endeavours and support for incubating businesses with the Photonics Starter Package.
Surface technology	„ Surface Technology Initiative “ – centred on the Research Institute of Precious Metals & Metal Chemistry (FEM) in Schwäbisch Gmünd. Other institutes and associations as well as the Centre for Surface Technology alongside Aalen University of Applied Science offer a course in surface and material technology training, technology transfer as well as cooperation projects.
Automotive	„ Automotive Initiative “ – under the direction of WiRO, representing the interests of the industrial location and forging links between corporate activities. Like Aalen University of Applied Science , which works in close cooperation with a large number of companies in the introduction of new technologies and research projects, the region participates in the State-wide cluster initiative „Automotive Southwest“.
Creative industries (Design)	Cooperation of the University of Design Schwäbisch Gmünd with the regional design industry. Courses at the Vocational Academy of Heidenheim include service management specializing in the media industry.
Forestry/timber industry	Potential has been ascertained in the field of timber and paper and an initiative has been launched.
Chipping/metal working/founding	This technological field has been further expanded within the framework of the Future Initiative Ostwürttemberg 2015 . In the field of chipping, for instance, presentation of competences in a Chipping Atlas has been planned, while a Centre for Machining Technology is being established in conjunction with Aalen University of Applied Science . In the field of founding, a Competence Centre for Light Alloy Founding is currently in the planning stage. The Metal Founding Research Centre at Aalen University is an internationally acclaimed research institute.
Mechanical engineering	Currently no more detailed information
Health	Currently no more detailed information

Cluster-relevant and other research and transfer institutes

Institute	Fields of activity
Aalen University of Applied Science	<p>Technical studies courses: Mechanical engineering and material science, chemistry, electronics and information technology as well as mechatronics. Ophthalmics and acoustics, optoelectronics / laser technology, plastics technology and surface technology / material science.</p> <p>Economically oriented training courses such as industrial engineering and business administration for small and medium-sized enterprises.</p> <p>Transfer through the Centre for Optical Technologies (ZOT), the Institute of Applied Research (IAF), the inter-university Centre for Applied Research ZAFH PHOTONⁿ and 14 companies of the Steinbeis Network.</p>
University of Design Schwäbisch Gmünd	<p>Training for communication, interaction and product designers.</p>
Heidenheim University of Cooperative Education	<p>Selected study programs in technical and economic subjects: Information technology, mechanical engineering, informatics, industrial engineering, service management specializing in media management.</p>
German Precious Metals Research Institute (FEM)	<p>German Precious Metals Research Institute (FEM) in Schwäbisch Gmünd, established since 1922, is an independent not-for-profit institute working in the field of metallurgy and surface technology. The work of this Institute focuses on the application of various coating technologies. The sphere of activities ranges from short-term problem solutions to comprehensive development projects.</p>

The region

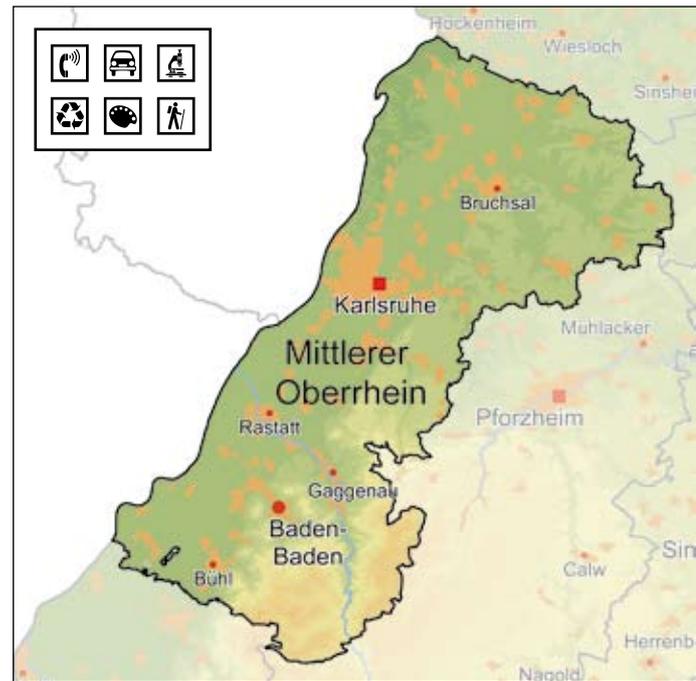
The Mittlerer Oberrhein region with Karlsruhe as its regional centre directly adjoins the French Departement Bas-Rhin and the State of Rheinland-Pfalz. Karlsruhe and its environs in particular are among Europe's leading locations in the fields of ICT and nanotechnology. Due to the geographic location, not only cross-regional but also cross-state and cross-border cooperations have evolved in the Mittlerer Oberrhein region, such as the NICE-PAMINA network.



The clusters

ICT

The ICT cluster in the Karlsruhe area has evolved over the past 25 years and forms the network with the greatest development potential in the region. The high-tech entrepreneurial network Cyberforum offers comprehensive support to start-ups and emerging companies. Value adding processes focus on information technology (IT), primarily in technical software. This applies in the main to the business-to-business segment, and below it to the IT and media sector itself. Through the „NETWORK OF IT-Clusters Espace PAMINA“, the region also falls within a cross-border IT cluster focusing on innovative IT and high-tech sectors. In the form of the „iRegion Karlsruhe – creating the net economy“ cluster, which took part in the Top Clusters competition run by the Federal Government, the region offers the potential to evolve on a Europe-wide basis as one of the leading clusters of the net economy (internet-based services and applications). Already today, the iRegion Karlsruhe is acclaimed in the European arena as an innovative driving force in the IT sector. Based on the European network „CLOE – Clusters Linked over Europe“ coordinated by the City of Karlsruhe, steps are under way to expand international networking in the field of cluster management.



Automotive

The technology region of Karlsruhe is home to factories belonging to the Mercedes-Benz group, and on the other side of the Rhine, directly opposite to Karlsruhe, is the world's biggest truck factory belonging to Mercedes-Benz in Wörth. In addition, a supplier network was established in Karlsruhe as long ago as 2005 in the form of the Automotive Engineering Network Southwest (AEN), which now encompasses more than 70 partners from the supply, equipment, mechanical engineering and research industries. AEN members are located throughout the area from Mannheim to Freiburg and Heilbronn to the Südpfalz region. At the Karlsruhe Institute of Technology (KIT), an initiative by the name CART has been formed whose role is to concentrate the automotive engineering-related activities of 30 institutes and organizations within the University and the Karlsruhe Research Centre. A large number of other institutes are also involved in the region in research and development work within the automotive sector. These include for instance the Fraunhofer Institute of Chemical Technology (ICT), which is internationally acclaimed as a competence centre in the field of airbag technology, the Fraunhofer Institute of Information and Data Processing (IITB) or the Research Centre for Information Technology (FZI).

Nanotechnology

With its focus of excellence at Karlsruhe University, the Institute of Nanotechnology and the supra-regional competence network for nanotechnology materials NanoMat at the Karlsruhe Research Centre, the focus of excellence within Baden-Württemberg has evolved in this region. Cooperative arrangements between research and entrepreneurial development with corporations from Karlsruhe and the surrounding area as well as the neighbouring Rhein-Neckar region provide the basis for an excellent cluster quality both in the national and international arena. The Nanotechnology Network of the Rhein-Neckar Metropolitan Region and the Karlsruhe Nanoforum have currently reformed under the designation „NanoValley.EU“. The central coordination office has been transferred to NanoMat at the Karlsruhe Research Centre and started its operations. This association, which enjoys the backing of research institutes, universities, industrial corporations and institutes for the promotion of industry, has provided the foundation stone of an offensive strategy for positioning and promoting what is one of Europe's most prolific research regions in the field of nanotechnology against the backdrop of global competition between technology regions.

Environmental and energy technologies

The value adding chain focuses here in the connection between information technology and the energy sector, in increasing energy efficiency and in the application of new techniques for biomass and geothermal energy generation. In this field, a group of experts has formed around the Karlsruhe Energy Forum since 2006.

Creative industries

The Baden-Baden area is home to the Südwestrundfunk radio broadcasting corporation and the Festspielhaus concert hall, but also offers positive perspectives for a creative industries cluster. In addition, the Event Academy which is currently in its formative stages also offers scope for enhancing this potential.

Tourism/health

The Northwest of the Black Forest represents an important part of the Mittlerer Oberrhein region. Tourist attractions in the area are clearly focused on Baden-Baden, whose cultural offering is of significance on the supra-regional level.

Additional cluster potential is envisaged by the interview partners in the field of **safety technology**.

Networks and cluster initiatives

Regional clusters	Regional cluster initiatives
ICT	<p>„Cyberforum e. V.“: This high-tech entrepreneurial network was established in 1997 as a Private Public Partnership and is the oldest and largest network in the ICT sector existing in Baden-Württemberg. With its 640 members, the Cyberforum is among Germany's biggest and most successful networks. On the cross-border level, to date a platform under the umbrella of the PAMINA region has been formed on the basis of an EU project: the NICE-PAMINA (NETWORK OF IT-Clusters Espace PAMINA). In addition, the „Mobile Region Karlsruhe“ is a special interest group within the Cyberforum encompassing around 50 corporations and research institutes in the field of mobile communication.</p> <p>iRegion Karlsruhe – creating the net economy (finalist in the BMBF Top Cluster competition)</p>
Automotive	<p>Automotive Engineering Network (AEN) Southwest – This initiative run by the Karlsruhe Office for the Promotion of Trade and Industry and Karlsruhe University sees its role as a communication platform for companies and institutions operating in the field of automotive engineering, although for the entire Southwest region.</p>
Nanotechnology	<p>Nanoforum – Network made up of R&D as well as industrial partners, coordinated by NanoMat and the Karlsruhe Office for the Promotion of Trade and Industry. Currently, the Nanoforum is joining with the neighbouring nanotechnology network operating in the Rhein-Neckar metropolitan region to form a NanoValley.EU.</p>
Environmental and energy technologies	<p>Energy forum – This forum encompasses a pool of around 200 experts from the fields of science and industry. Based on the research results achieved in the fields of geothermics, biomass and energy efficiency, Karlsruhe currently leads the field in energy research.</p>

Regional clusters	Regional cluster initiatives
Creative industries	European Media and Event Academy (EurAka) – This is a not-for-profit organization run under the auspices of the city of Baden-Baden. Its remit is the development, coordination, support and execution of education measures for the media and events sector. Its training program encompasses the „three pillars“ of initial training, further training / qualification and higher education.
Tourism/health	Currently no more detailed information
Security technology	KA-IT-SI – The „ Karlsruhe IT Security Initiative “ was founded in 2000 in order to provide a platform for senior management and IT security personnel in the field of IT security in the corporate environment.

Cluster-relevant and other research and transfer institutes

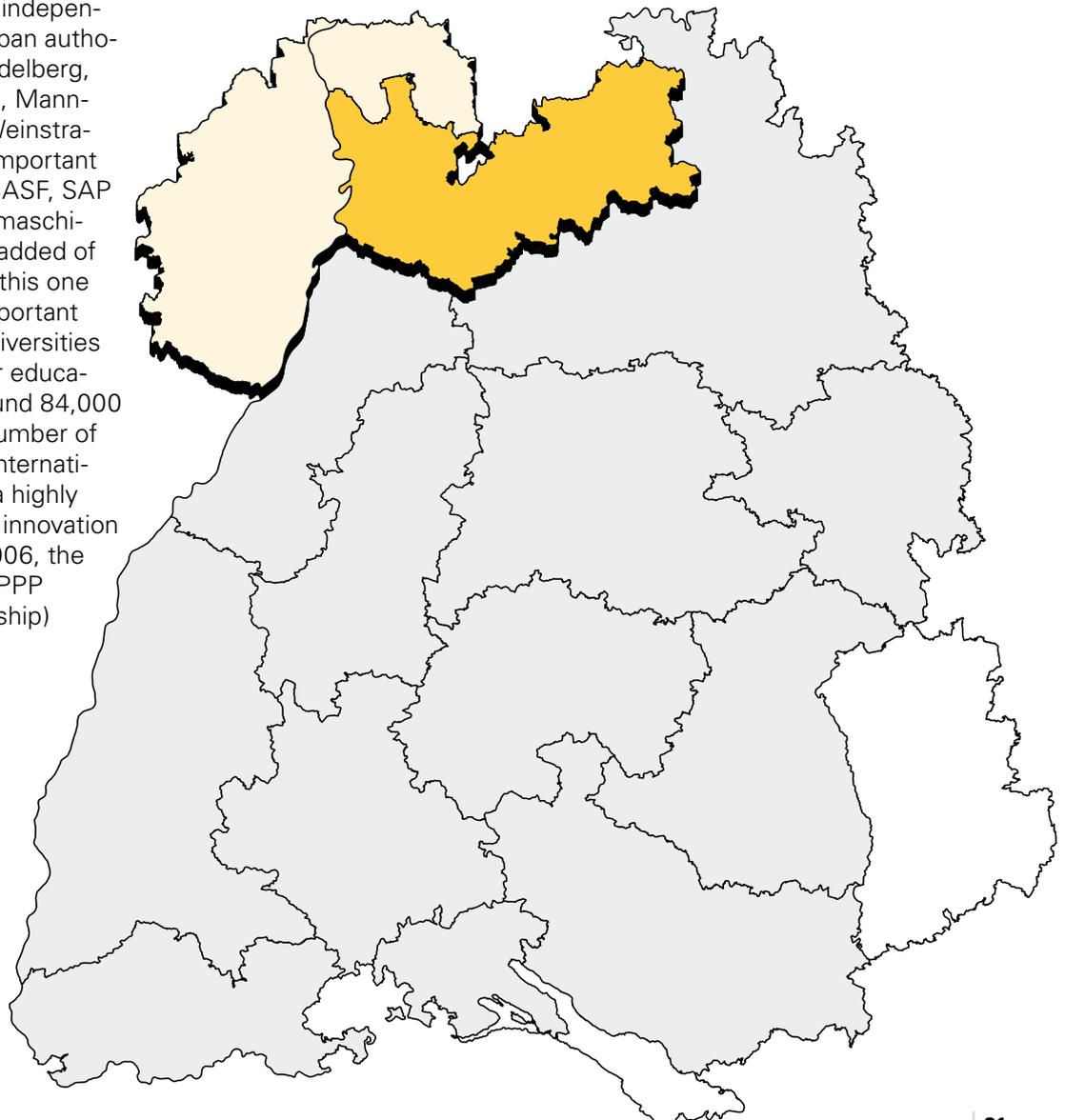
Institute	Fields of activity
Karlsruhe Institute of Technology (KIT)	<p>The Research Centre and University established the „Karlsruhe Institute of Technology“. The KIT employs a workforce of 8,000 and manages an annual budget of 600 mill. €, combining the strengths of the two partners. In analogy to the renowned MIT in Boston / Massachusetts, the KIT aims to utilize the synergy effects generated by the exchange between industry and science.</p> <p>Karlsruhe University will be merged into the KIT. It offers the opportunity for academic qualification and research capacity in the faculties of architecture, civil engineering, geo and environmental sciences, chemistry and biosciences, electrical engineering and information technology, humanities and social sciences, computer science, mathematics, physics, economics and business engineering. Transfer through the University's department for research promotion and technology transfer.</p> <p>The Karlsruhe Research Centre, one of Europe's biggest science and engineering research institutes, will be merged into the KIT. It is broken down into five research faculties, matter and materials, earth and environment, health, energy and key technologies.</p>
Karlsruhe University of Applied Sciences	University specializing in technology and economics with the faculties architecture and construction, geomatics, mechanical engineering and mechatronics, electrical and information engineering, informatics and commercial information technology, as well as economic sciences.
Transfer-oriented research institutes	Three institutes belonging to the Fraunhofer Association (Chemical Technology, Information and Data Processing, Systems and Innovation Research); International University of Bruchsal ; FZI Research Centre for Information Technology ; Centre for Art and Media ZKM . 20 companies belonging to the Steinbeis Network are also located in Karlsruhe.

Rhein-Neckar

The region

The metropolitan Rhein-Neckar region is composed of partial areas of three Federal States: Baden-Württemberg, Hessen and Rheinland-Pfalz. It encompasses seven rural districts (Bad Dürkheim, Bergstraße, Germersheim, the District of Rhein-Pfalz, the District of Neckar-Odenwald, the District of Rhein-Neckar, Südliche Weinstraße) and eight independently administered urban authorities (Frankenthal, Heidelberg, Landau, Ludwigshafen, Mannheim, Neustadt a. d. Weinstraße, Speyer, Worms). Important corporations such as BASF, SAP or Heidelberger Druckmaschinen and a gross value added of 61.8 billion Euro make this one of Germany's most important economic areas. 22 universities and institutes of higher education with a total of around 84,000 students and a large number of research institutes of international standing provide a highly fertile environment for innovation and progress. Since 2006, the region has operated a PPP (Public Private Partnership)

model which is unique anywhere in Germany, in which the company Metropolregion Rhein-Neckar GmbH, the Future Metropolitan Region of Rhein-Neckar Association and the Region Rhein-Neckar Association cooperate to coordinate and promote the purposeful development of the region.



The clusters

Life sciences

An innovative cluster with a leading role within Europe has become established in the region in the field of life sciences comprising large-scale enterprises, research-intensive small and medium-sized enterprises and research and university institutes focusing on molecular medicine, biotechnology, pharmacy and diagnostics.

Chemicals

The chemicals cluster is characterized by globally active companies and a large number of small and medium-sized enterprises, and plays a key role in the metropolitan region. Vertical supply networks in the region are dominated by „lead corporations“. On the horizontal level, the cluster is supplemented by a number of highly specialized small and medium-sized enterprises.

Organic electronics

World market leaders and leading scientific institutes in the fields of material research, and the development of components, systems and applications have joined together to form the Organic Electronics Forum, and so created an internationally leading cluster in the field of organic electronics and its applications. Due to the formation of a complete value adding chain and the equal cooperation between science and the economy, this cluster promises high innovation potential.

Environmental and energy technologies

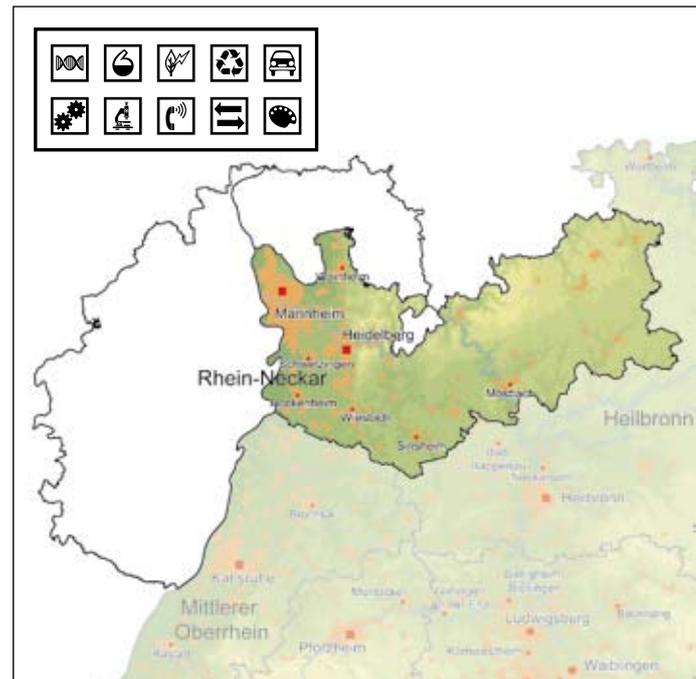
Encompassing 600 companies and renowned institutes of research and education, the environmental and energy technologies cluster represents a significant economic factor and offers optimum conditions for the region to assume a leading position among its international competitors. Alongside well developed value adding chains, a successfully operating network already exists between science, industry and politics / administration. The fields of excellence are defined as: Energy efficiency in buildings; Energy efficiency in industry; Environmental and energy concepts for regions; Deep geothermics.

Automotive

The automotive cluster located in the Rhein-Neckar metropolitan region is concentrated on commercial vehicle manufacture (trucks, buses, rolling stock, tractors). The major manufacturers which form the centre of the cluster enjoy a leading international standing. The supply sector in this segment is also characterized by a high real net output ratio. In addition, the supply enterprises operating within this cluster additionally service the entire value adding chain for passenger vehicle production. In particular the region's engineering competence and its specialist component manufacturers enjoy an excellent reputation both in the national and international arena.

Production technology

The „production technology“ cluster is shaped by the „mechanical and automotive engineering“ cluster and has a highly heterogeneous structure throughout the region. Leading large-scale corporations work in close cooperation with regional university and research institutes to develop innovative production systems.



 **Nanotechnology**

The Nanotechnology Network of the Rhein-Neckar region and the Karlsruhe NanoForum have currently reformed under the designation „NanoValley.EU“. The central coordination office has been transferred to NanoMat at the Karlsruhe Research Centre and started its operations.

 **ICT**

Europe’s biggest software company holds an outstanding position within the region, providing major impetus for the region’s value adding chain also in the vertical direction. The IT cluster is additionally highly diversified.

 **Logistics**

The Mannheim /Ludwigshafen Harbour Centre with its intermodal link is the second biggest in Europe. The Mannheim railway yard is the second biggest in Germany. 120 train arrivals and departures are processed here every day. The journey time to the Rhein-Main Airport hub Frankfurt is only 21 minutes, ensuring an optimum link to the international rail, water and freight network.

 **Creative industries (music business)**

This young cluster has evolved in Mannheim from the link between the developing pop music scene, the State Pop Academy, municipal support for pop music, the College of Music and a specific new business incubation centre.

The interview partners consider additional cluster potential to exist in the fields of process technology (Buchen region) and **health**.

Networks and cluster initiatives

Regional clusters	Regional cluster initiatives
Life sciences	BioRegion Rhein-Neckar-Dreieck e.V. emerged as one of the winners from the BioRegio competition staged by the Federal Government in 1996. BioRN – Cell-based & Molecular Medicine in the Metropolitan Region of Rhein-Neckar (finalist in the BMBF Top Cluster Competition)
Chemicals	Currently no more detailed information
Organic electronics	Forum Organic Electronics is a cluster in the Metropolitan Region of Rhein-Neckar and neighbouring districts in which companies and universities work jointly on the development of future technologies. Alongside a large number of smaller firms, this region is home to three world market leaders in their respective fields in the cluster network with BASF SE, Heidelberger Druckmaschinen AG and SAP AG. Forum Organic Electronics is also the title of the competition entry from the Metropolitan Region of Rhein-Neckar. It was selected as a finalist in the first round of the BMBF Top Cluster Competition.
Environmental and energy technologies	Energy Efficiency Agency of the Metropolitan Region of Rhein-Neckar gGmbH (E2A) , Ludwigshafen; UKOM e.V. – Environmental Competence Centre Rhein-Neckar , Heidelberg; Urban plus – Living, Environment and Employment Alliance in the Rhein-Neckar Area

Regional clusters	Regional cluster initiatives
Automotive	Commercial Vehicle Cluster Southwest , Kaiserslautern; Automotive Cluster Rhein-Main-Neckar , Darmstadt.
Production technology	Competence Centre for Modern Production Systems (KMP) : A cooperative association between the University of Mannheim and the enterprises Daimler, John Deere, Freudenberg and Heidelberger Druckmaschinen for the further development of production systems.
Nanotechnology	Research institutes, universities, industrial enterprises and institutes for promotion of the economy together with the jointly sponsored network NanoValley.EU have laid the foundation for establishing an international standing for what is one of Europe's most research-intensive regions in the field of nanotechnology.
ICT	IT&Media Network Rhein-Neckar with its network partners Gesellschaft für Informatik e.V., Bonn, VDE Kurpfalz, Mannheim, and IT Forum Rhein-Neckar e.V., Ludwigshafen; Film Commission Rhein-Neckar .
Logistics	Cooperation between the State-owned harbour company Rhein-Neckar-Hafengesellschaft Mannheim mbH and the harbour operator Hafenbetriebe Ludwigshafen am Rhein GmbH guarantees coordinated infrastructure planning and an adapted logistics concept.
Creative industries (music business)	Musikpark Mannheim, Pop Academy Baden-Württemberg, regioactive.de
Process technology	Currently no more detailed information
Health	Health Region/Health Network Rhein-Neckar (Topic areas: Prevention, care, IT application, evaluation, patent involvement)

Cluster-relevant and other research and transfer institutes

Institute	Fields of activity
Heidelberg University	Awarded the title University of Excellence, Heidelberg offers a wide-ranging range of scientific subjects, with outstanding strengths in the faculties of science, in particular organic electronics and medical engineering (joint institute with the University of Mannheim), mathematics and information technology; Transfer through the UniTT (= University Technology Transfer) in the Research Department.
University of Mannheim	Law, economics and social studies
University of Koblenz-Landau	Landau campus, in particular science and environmental studies; Transfer through the Administrative Office / Department A1

Institute	Fields of activity
Mannheim University of Applied Sciences	Faculties: In particular biotechnology, electrical engineering, IT, mechanical engineering, process and chemical technology, industrial engineering, medical engineering (joint institute with the University of Heidelberg), design. Transfer through the Institute for Applied Research (IAF) , Department of Research and Development and three companies of the Steinbeis network.
Ludwigshafen University of Applied Sciences	University for business studies.
Worms University of Applied Sciences	Business studies, tourism and transport, informatics; Transfer through the Centre for Technology Transfer and Telecommunications (ZTT) .
Mannheim University of Co-operative Education	Business administration, engineering, information technology.
Pop Academy Baden-Württemberg GmbH	Study programs in music business and pop music design.
Transfer-oriented research institutes	German Cancer Research Centre (DKFZ) within the Helmholtz Association; Transfer through the Technology Transfer Office. European Molecular Biology Laboratory (EMBL); Transfer through EMBLEM GmbH. Max-Planck Institute for Nuclear Physics; Max-Planck Institute for Astronomy; Max-Planck Institute for Medical Research; Transfer through Max-Planck-Innovation GmbH, Centre of Competence for Medical Technology at the University Clinic of Mannheim, Central Institute of Computer Engineering, Mannheim Business School, SRH University of Applied Sciences Heidelberg, East Asia Institute.

The region

The Nordschwarzwald region is positioned at the Centre of Baden-Württemberg. This region is home to a large number of highly specialized companies whose areas of competence today are linked in some cases to the craftsmanship and industrial heritage of the Black Forest, for example the still important jewellery and clockmaking industry. A particular regional characteristic is the high level of affinity between the existing clusters.

The Nordschwarzwald region also executes a bridging function between the neighbouring regions of Karlsruhe and Stuttgart and cultivates wide-ranging contacts with the industry, university and research institutes located in these regions as well as the resulting clusters.



The clusters



Plastics processing

Around 400 predominantly small and medium-sized enterprises operating in the field of plastics processing provide the critical mass for the existence of a cluster. With the exception of plastic manufacture, the complete value adding chain is represented in the region – from injection moulding machine construction and the relevant tool manufacture to plastics processing.



Metal & die cutting technology

The value adding chain is almost fully represented in the region, including all upstream and downstream supply sectors: Material, die cutting technology, mechanical engineering and presses, tooling, refinement, quality assurance, organization, process optimization and worldwide logistics.



Forestry/timber industry

The timber industry in the Northern Black Forest forms the basis for this cluster. In addition, internationally leading manufacturers of woodworking systems are domiciled in the region. Further processing sectors include a number of major furniture producers, which in turn cultivate close links to metal / die cutting technology (furniture hardware), surface processing and also plastics clusters.



Medical engineering

This cluster represents a major sector of industry for the region. This has evolved from the jewellery / precision mechanics industries and demonstrates an advanced level of competence particularly in the field of precision engineering. The evolving cluster encompasses the fields of implantology, orthodontics, dental technology, instrumental analysis and the manufacture of materials (precious metals, ceramics), recycling and disposal. The core competences in the field of medical engineering include endoscopy, the manufacture of medical instruments and devices as well as analytical systems for clinical diagnostics and life sciences.



Tourism/health

Complementing the specialist expertise in the medical / dental technology sector, the Nordschwarzwald region is home to a large number of clinics with diagnostic imaging systems, some of which are unique in Germany. There are many renowned experts working in the region, particularly in the field of joint surgery. Many years of experience also exist in the prevention and convalescent sector; this is one of the original homes of modern physiotherapy. The region is also characterized by modern concepts of vocational rehabilitation and permits the execution of holistic individually determined therapy concepts. The large number of inpatient and outpatient care institutions are complemented by a spa and mineral bathing culture in many certified locations (such as the „Thermal Spring Quartet“ Bad Herrenalb, Bad Liebenzell, Bad Teinach, Bad Wildbad) with a long tradition. Given the scenic beauty of the countryside in this region, the topic area of „health tourism“ is also covered.

A large number of tourism service providers (hotels, restaurants, leisure economy) offer a range of leisure activities across the region for a large number of different target groups. Alongside traditional positioning of the region as a destination for health and other tourists, a large number of entertainment and sporting attractions exist in the region, particularly also for weekenders and day trippers (such as hiking, wellness spas, mountain biking, eco tourism, vineyard landscape). With a very high density



of excellent hotels, spas and mineral baths, the region is well established to welcome tourists in the „Wellness“ sector. The highlight: An example is Baiersbronn, where there are three hotel restaurants with a total of seven Michelin stars.

Creative industries (jewellery/design)

Based on the jewellery and clock industry, a number of broad-based creative industries have evolved, encompassing design (jewellery design, industry design, interior design), precious metal working, manufacture of jewellery, clocks and watches, stainless steel recycling (refining).

Other evolving clusters to watch in the region are the fields of **industrial process technology** and **information/communication technology**.

Networks and cluster initiatives

Regional clusters	Regional cluster initiatives
Plastics processing	Plastics Innovation Network – INNONET. The members of the plastics processing cluster initiative meet at regularly held workshops to discuss company-related topics and projects, currently in the fields of training and education, technology and corporate processes. The Network is represented for example with joint presentations at trade fairs. The initiative is moderated and coordinated by WFG Nordschwarzwald GmbH.
Metal & die cutting technology	There is a long tradition of close cooperation between cutting technology specialists in the Nordschwarzwald region. This network initiative gave rise in 2003 to the „Stamping Days Pforzheim“ exhibition, the first and only event of its kind on the subject of high-performance die cutting technology. The existing network structure is currently under the process of systematic expansion. An endowed professorship in the field of die cutting technology provides the assurance of academic training and technology transfer.
Forestry/timber industry	The existing state-wide organization Network Wood Industry Baden-Württemberg counts among its members a large number of Nordschwarzwald-based companies active in the woodworking sector, and was established largely with their assistance.
Medical engineering	This cluster is currently in the development stage. Within the framework of the state-wide higher education expansion program Hochschule 2012, an application has been made for a course in Medical engineering at Pforzheim University which will involve study and research into the development and design of medical appliances, medical information systems, dental technology and biomedical components and bioanalytical metrology.
Tourism/health	Within the framework of the Nordschwarzwald 2020 strategy process, a health industry cluster is evolving in the Nordschwarzwald health region. A comprehensive study which has now been completed entitled „Focus on Health Tourism“ (Leader+-Project ¹) testifies to a solid foundation for the development of this cluster. The two nature reserves Schwarzwald Mitte-Nord and Stromberg-Heuchelberg are located within this region. Schwarzwald-Tourismus GmbH is responsible for marketing the region as a tourist destination.

¹ = a project of the EU community initiative LEADER.

Regional clusters	Regional cluster initiatives
Creative industries (jewellery/design)	A large number of jewellery, watch and clock manufacturers are located in the environs of the city of Pforzheim. The renowned Faculty of Design at Pforzheim University offers a variety of courses and research activities encompassing fields such as jewellery design, fashion, industrial and transport design. Together with the Goldsmith Technical College , the Jewellery Museum which is unique in the world, and the new Schmuckwelten shopping and experience centre for fine jewellery, a unique network exists in the creative industries sector which is already linked to the activities of the cluster existing in the Metropolitan Region of Stuttgart and is set to be further developed in the near future.
Industrial process technology	Currently no more detailed information
ICT	Currently no more detailed information

Cluster-relevant and other research and transfer institutes

Institute	Fields of activity
Pforzheim University	Technical studies courses: Electrical engineering / information technology, technical informatics, mechanical engineering, industrial engineering. Selected study programs in economics: Purchasing and logistics, international business, marketing communication, business informatics. Study programs in design: Industrial design, jewellery and everyday objects, transportation design, creative direction. Transfer through the Institute of Jewellery Technology, the Erni-Bühler Foundation and ten companies belonging to the Steinbeis Network.
University of Cooperative Education, Horb Branch	Technical studies courses: Applied informatics, electrical engineering (from autumn 2008), mechanical engineering (including specialization subjects design and development, plastics technology, production technology), information technology. Transfer through two companies of the Steinbeis network.
SRH University of Calw	Study programs in media and communication management as well as tax accountancy and auditing.
International University of Calw	Postgraduate study programs in arts therapy and creative pedagogy.
Technology centres	Innotec Pforzheim , N.E.T.Z. Nagold (N.E.T.Z. = Nagold Business Incubation and Technology Centre), Technology Centre Horb , Telegis Sternenfels
Environmental Academy Freudenstadt	Qualification and higher education in the field of industrial environmental protection (study programs in environmental technical management, environmental operations, waste management, water protection, emission protection, hazardous materials, management, energy), technical radiation protection and occupational safety.
Academy of Tourism, Freudenstadt	The Academy of Tourism is an information turntable, a discussion forum and a future workshop designed to sharpen the competitive edge and improve the economy of enterprises active in the tourism industry. The topic of health and wellness tourism has been addressed in high-calibre events held annually since as long ago as 2003, featuring experts and examples of best practice.

The region

As well as the Rhine Plain and the joint border with France (Région Alsace), the Südlicher Oberrhein region in the west of Baden-Württemberg also encompasses large parts of the central and southern Black Forest area to the East. To the South lies the conurbation of Freiburg, to the North is the Offenburg area, which is a population focus within the rural region of Ortenau. From the point of view of cluster formation, the region presents itself as highly heterogeneous. In addition, a large number of regional and cross-border structural policy projects exist.



The clusters



Creative industries (ICT / Media)

Over nine per cent of all those in employment in the Südlicher Oberrhein region work in the media and IT sector between Achern and Weil am Rhein. In the Offenburg / Ortenau area, a specialist sector has grown up around the media company Burda, which focuses on the fields of publishing, printing and direct marketing. The IT / Communication sector forms an important component of this specialist field. In the university town of Freiburg, printing and publishing houses such as Haufe, Herder and Rombach as well as renowned software producers such as Lexware are located.



Production technology (mechanical engineering/metalworking/precision engineering)

Ortenau is the site of a long-standing geographic specialization in the field of mechanical engineering. The companies active in this sector serve widely differing markets (e.g. automotive, commercial dishwashers, hoisting technology, tunnel boring machines). Nevertheless, common themes exist from technical development and design methodology through staff qualification and training to quality assurance.



Tourism/health (Southern Black Forest tourism region)

This cluster is based beyond the region of Südlicher Oberrhein and actually encompasses the entire Black Forest and parts of the Rhine Valley within the Black Forest region, including the cities of Karlsruhe, Baden-Baden, Offenburg and Freiburg (therefore see also information on the regions Mittlerer Oberrhein, Hochrhein-Bodensee, Schwarzwald-Baar-Heuberg and Nordschwarzwald).

This cluster is currently undergoing a positive process of upheaval in terms of its offering, which ranges from classical spa and convalescent tourism to health and wellness tourism. From the cross-border tri-national viewpoint, the tourism cluster known as the „Upper Rhine Valley“ encompasses the whole of the Rhine rift valley with Südpfalz, the Karlsruhe region and Alsace on the French side and Northwest Switzerland with the Basel area to the South.



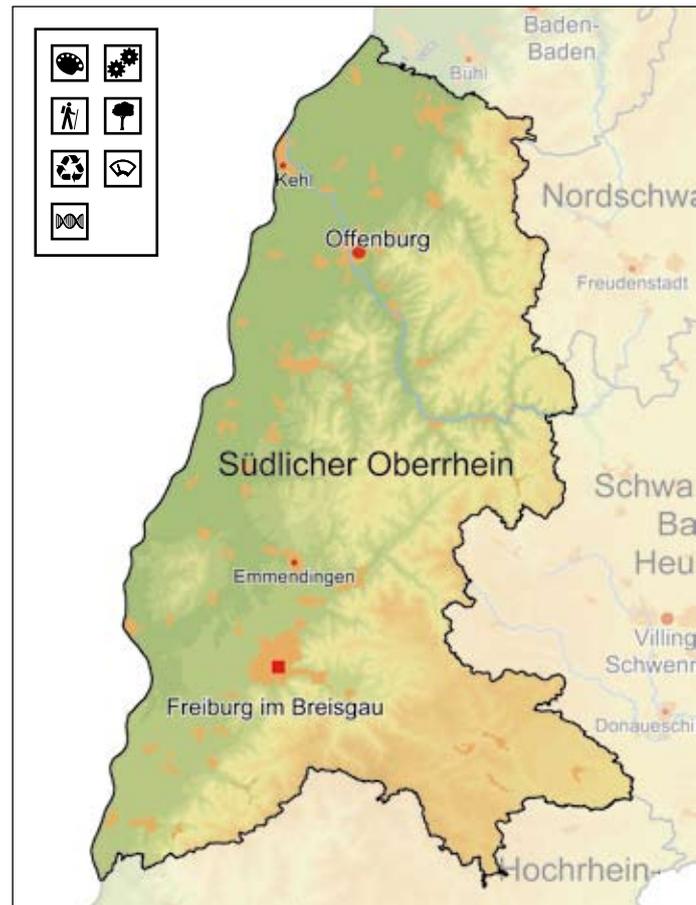
Forestry/timber industry

The timber value-adding chain is particularly highly developed in the Ortenau area: From raw materials through sawmills, refinement, woodworking machinery construction, special-purpose vehicle construction to energy saving timber frame house construction.



Environmental and energy technologies (solar industry)

This specialized field is still in its infancy. It is driven to a large degree by concrete applications for resource-saving generation of energy, namely solar technology (thermics and voltaics) in the Freiburg area, and consequently by local demand. A large number of service providers such as architects and consulting bureaux have specialized in this subject area. In the form of the Fraunhofer Institute of Solar Energy Systems (ISE), the region also benefits from Europe's largest solar research institute.



Measurement & control technology¹ specializing in microsystems technology

This growing cluster is highly science-driven and has a central focus in the form of the IMTEK (Department of Microsystems Engineering). Many of the companies falling within this cluster to date have been in successful existence over a period of decades and in 2001 established a forum affiliated to the IMTEK. In product terms, the focus is on sensor engineering and also on the product level, measurement and control technology.



Life sciences

This cluster is focused firstly in Freiburg with its large number of scientific institutes and young spin-off companies, secondly in the Basel area with its international pharmaceutical corporations and thirdly in the Strasbourg area. In terms of products, the cluster is concerned primarily with the research, development and manufacture of biotechnical products for the life science sector, in particular for the pharmaceutical and agricultural industry.

The interview partners envisage additional cluster potential in the field of **Logistics** („Logistic Support Region“ according to an SCI study) and **ICT**.

Networks and cluster initiatives

Regional clusters	Regional cluster initiative
Creative industries (ICT / Media)	<p>MediaValley/Oberrhein – An initiative of the Offenburg / Ortenau economic region in conjunction with Hubert Burda Media and Offenburg University. The aim is to achieve database-protected and cross-border networking of universities and corporations.</p> <p>The Media Forum Freiburg founded in 1996 has around 130 member companies and is the regional media initiative in the Südlicher Oberrhein region. Its functions include promotion of the economy and location marketing for the media and IT sector as well as cultivation of a network of involved and interested organizations in the region.</p> <p>The Software-Forum Oberrhein is an initiative launched by the economy and tourism board Freiburg Wirtschaft und Touristik GmbH & Co. KG, the chamber of commerce IHK Südlicher Oberrhein and the Baden industry association WVIB e.V. and has been further developed since 2003 in a cross-border venture together with the Chambre Regionale de Commerce et d'Industrie d'Alsace.</p>
Production technology (mechanical engineering/ metalworking/precision engineering)	Initiative in the planning stage.
Tourism/health (Southern Black Forest tourism region)	<p>Schwarzwald Tourismus GmbH – joint umbrella organization of tourist communities in the Black Forest tourism region, with for instance the City of Freiburg as a member; Its key focus is promotion and marketing of the target region on a national and international level.</p> <p>Given its size and international significance, the theme park Europapark Rust may be considered as an initiative for the tourism cluster in its own right. This attraction enhances the touristic value of the entire region.</p> <p>The separate initiative „Health Region Freiburg“ must also be viewed in this context, with the theme areas: Circulatory disorders, heart disease, vascular disorders in a variety of fields, primary prevention and rehabilitation.</p>

¹ Measurement & control technology (MSR-Technik)

Regional clusters	Regional cluster initiatives
Forestry/timber industry	TIMBER value-adding chain: The Offenburg / Ortenau economic area, Technical University of Kaiserslautern and the Regional Association are the initiators of the project, which also involves partner regions from France, Switzerland and Austria.
Environmental and energy technologies (solar industry)	SolarRegion Freiburg – An initiative originally launched by the City of Freiburg and now spreading to the regions with the focus on strengthening R&D and utilization of solar energy, as well as support to local solar technology as well as environmental management firms.
Measurement & control technology (microsystems technology)	Since 2005, Mikrosystemtechnik Baden-Württemberg e.V. MST BW , Freiburg, has been the headquarters of the state-wide network responsible for management of the MicroTEC Südwest cluster which spans several regions (finalist in the BMBF Top Cluster Competition). The Forum of Applied Microsystems Engineering (FAM) – evolved in association with the Institute for Microsystems Engineering (IMTEK), Freiburg. This initiative is primarily concerned with the integration of companies from the fields of measurement & control technology; Its main objectives: Communication forum, orientation for training and education, strengthening R&D activity, recruitment.
Life sciences	Bio Valley – one starting point for this initiative was the BioRegio Freiburg; Today, this is a tri-national cluster initiative encompassing large parts of Alsace in the West, and the Basel area in the South with its large pharmaceutical corporations. Also worthy of mention here are the BioTechPark Freiburg with the Technology Foundation BioMed Freiburg .
Logistics	Currently no more detailed information
ICT	Winner of the KREATEK Competition staged by MFG (Media and Film Society): Initiative RFID¹/Contactless Devices , Freiburg

Cluster-relevant and other research and transfer institutes

Institute	Fields of activity
University of Freiburg (including the university clinic)	Technical and scientific courses: Applied informatics, bioinformatics, biology, chemistry, information technology, intelligent embedded microsystems, medicine, molecular medicine, microsystems engineering, pharmacy, physics, environmental sciences, forestry, forestry and environmental sciences, dental medicine, European forestry. Selected institutes: Institute of Microsystems Engineering, Institute of Informatics, Material Research Centre, Centres for Applied Biosciences, Biosystem Analysis, Renewable Energies, Neurosciences, Biological Signal Studies, Central Office for Research Promotion and Technology Transfer , supplementary transfer activity through eight companies of the Steinbeis Network.

1 RFID = Radio Frequency Identification.

Institute	Fields of activity
Baden-Württemberg Forestry Test and Research Institute (FVA)	Based in Freiburg, this is the central institute for the further development of forestry and the timber industry, in particular also for forest management.
Offenburg University of Applied Sciences	Selected technical and economics courses: Applied informatics, industrial informatics and automation, mechatronics, communication technology, electrical engineering/information technology, mechanical engineering building services, process and bio technology, process and environmental technology; Media and information management, communication and media engineering, media technology/management; Industrial engineering, business administration. Institutes: Institute of Applied Research, supplementary transfer through five companies of the Steinbeis network.
Transfer-oriented research institutes	The following Freiburg-based Fraunhofer Institutes must be mentioned in this context: <ul style="list-style-type: none"> - Institute for Solar Energy Systems (ISE) - Institute for the Mechanics of Materials (IWM) - Institute for Physical Measurement Techniques (IPM) - Institute for Applied Solid State Physics (IAF) - Institute for High-Speed Dynamics (EMI) These five institutes pursue application-specific, industry-oriented research. The institutes are integrated into national research associations (e.g. Defence and Security Technology, Materials) and alliances (e.g. Energy, Nanotechnology) of the Fraunhofer-Gesellschaft.

Schwarzwald-Baar-Heuberg

08

The region

In terms of its landscape, the region encompasses primarily parts of the Black Forest, the Upper Neckargäu area and the Swabian Alb area. To the South it reaches as far as the Swiss border, to the North it borders onto the Stuttgart region. The region looks back on a long industrial history, whose origins stretch back to the first half of the 19th Century. During the last three centuries, a remarkable structural transformation has taken place in the region, which is in evidence in the development of both the existing structures and also the new regional clusters.



The clusters

Medical engineering

A textbook regional cluster has formed in the Tuttlingen area whose origin stretches back to the 19th Century. The location and cluster structure is characterized by more than 400 companies, most of them small workshops in the craftsmanship tradition, but also globally oriented corporations. The foundation of the medical engineering cluster is the still highly important sector of surgical mechanics, which stands for a wide range of surgical instruments, supplementary devices and implants made of metal. Today, systems both for rigid and increasingly also flexible endoscopy for keyhole diagnosis and surgery represent an innovative product category in this cluster. Endoscopic systems call for a far more advanced level of expertise than classical precision mechanical skills. Here, alongside system-specific knowledge, also video/microoptical, microelectronic and other microsystem engineering skills are required. Added to this is the need for specific IT and software expertise. Alongside human medicine, this cluster now also includes veterinary medicine and industrial endoscopy applications.



Automotive (automotive industry suppliers)

The Schwarzwald-Baar-Heuberg region is home to a large number of automotive industry suppliers. A special feature here is the geographical concentration of turned part manufacturers on the flat upland area known as the Heuberg with the town of Gosheim as its major centre. This can be termed a regional centre of competence for turned part production, whose origins stretch back to the sixties. Switch elements and locking systems from the Tuttlingen area today provide a benchmark for innovation in this sector. The automotive industry is its major customer. Individual companies have since grown to become medium-sized enterprises. In addition, among the automotive industry supply companies active in the region, for instance in the Schramberg area, are some which may claim to be among the world leaders in their field. Special purpose vehicle construction also looks back on a long tradition in the region.

Production technology (mechanical engineering)

Special purpose machine building as well as series production of machine tools provide thousands of jobs in the region. Knowhow transfer of the latest technologies helps to secure the leading edge of local companies in world markets.

Measurement & control technology (measurement and automation engineering)

Precision and micro engineering call for stringent standards of excellence in measurement and production technology. Many components can only be manufactured using highly automated production technologies. This has led to the formation of a relatively new cluster in the field of measurement and automation technology. Sensor telemetry and contactless measurement technology particularly are represented by highly competent firms in this region. The microsystems engineering sector is represented in this as well as the following cluster.

Precision engineering / microengineering / microsystems technology

In this cluster, a tradition stretching back over a hundred years and links between many companies have given rise to production plants whose competitive strength continues to grow to the present day. This

cluster originated from the watch and clock making industry concentrated around Villingen-Schwenningen and Schramberg, which for many years dominated the world clock and watch market. Precision engineering in this sector found a direct outlet in the field of microengineering, in which several hundred companies are currently active in the production of micro and precision components. They are involved with microassembly and microproduction. Production takes place in cleanrooms or under cleanroom conditions using ultra-modern methods from the field of microsystems technology. The manufacture of weapons for all types of application from sports to military use in the Oberndorf area is the result of networks and close exchange of experience.

Plastics processing

Originating from the metal-oriented supply companies to the automotive industry, over recent years an increasing number of efficient plastics processing companies have emerged, whose high technology credentials are lending this cluster increasing weight in the region. New developments in the field of fibre reinforced plastics are opening up new perspectives for this cluster.

Musical instrument production

For over 150 years already, musical instruments from the region, from the humble mouth organ and accordion to the concert grand piano, have enjoyed international popularity.

Tourism/health

Tourism / health, including the health industry, represent an important cluster in the region. This encompasses primarily the existing spa and mineral baths industry together with the associated therapeutic and convalescent institutions. The „Black Forest Holiday Region“ stretches across the sections of the Black Forest to the Northwest of the region and beyond. This is a well-established cluster. A second tourist destination area – the Donaueggenland, lies to the East of the region. Cycling and hiking tourism has been on the increase here for a number of years. The „Black Forest“ is extremely well known as a tourist and health spa destination throughout Germany, and is also familiar in the international arena. The large number of foreign visitors and tourists testify to the significance of tourism as an economic factor for the region. Over 40 therapeutic and convalescent clinics form the backbone of the region's health industry.

Environmental and energy technologies (solar technology)

A rising new cluster which is making a name for itself amongst its international competitors in particular in the supply sector.

Additional cluster potential is envisaged by the interview partners in the **food and beverage industry, logistics** („logistics region of regional significance“ according to an SCl study), **ventilation technology** and **virtual reality**.

Networks and cluster initiatives

Regional clusters	Regional cluster initiatives
Medical engineering	<p>Since 2001, the Centre of Competence Minimally Invasive Medicine & Technology MITT e.V. has been active in networking companies from in the medical engineering sector in Tuttlingen with research institutes in Baden-Württemberg. This is one of the first cluster initiatives to exist in the field of medical engineering anywhere in Germany. The Centre of Competence concentrates on technology transfer and applied company-specific issues and services, and like the MicroMountains Network also supports cross-section tasks in medical engineering in the fields of training, formation and innovation.</p> <p>Medical engineering and Health Tuttlingen / Neckar-Alb (finalist in the BMBF Top Cluster Competition) winner of the KREATEK competition staged by the MFG Agency for IT and Media: Medtech meets Biotech.</p>
Automotive (automotive industry suppliers)	No all-encompassing cluster initiative exists. A dedicated initiative started by the turned part manufacturers in the Heuberg area has been in existence for some time: „ Not-for-Profit Association of Turned Part Manufacturers (GVD), Gosheim “. This syndicate has been in existence for over 30 years and provides a platform, also online, in support of turned part specialists particularly in the Großer Heuberg area.
Production technology	Currently no more detailed information
Measurement & control technology (measurement and automation engineering)	Cluster activities in this sector are in the development stage and are being coordinated by HSG-IMIT, VDC St. Georgen and MicroMountains Applications AG .
Precision engineering/ microengineering/ microsystems technology	For the last three years, the MicroMountains Network e.V. cluster initiative has worked to promote the microengineering sector in the region. Winners of the MFG KREATEK competition: Xpeering
Plastics processing	Cluster activities are being coordinated by MicroMountains Network e.V.
Musical instrument production	Currently no more detailed information
Tourism/health	<p>The Tourism Working Group of the Schwarzwald-Baar-Heuberg Chamber of Commerce has been in charge of cluster initiatives for some years.</p> <p>Schwarzwald Tourismus GmbH (STG) is a joint umbrella organization run by the district administration and tourism communities in the Black Forest holiday region. Its core task is national and international promotion and marketing of the target region.</p> <p>Since September 1st 2004, it has formed a joint tourism organization with Donau-bergland Marketing und Tourismus GmbH. Alongside the district administration of Tuttlingen as the main shareholder, 35 towns and communities throughout the region as well as 44 restaurants and hotels and the Hirsch Brewery are also affiliated.</p>
Environmental and energy technologies	Currently no more detailed information
Food and beverage industry	Currently no more detailed information
Logistics	Currently no more detailed information
Ventilation technology	Currently no more detailed information
Virtual reality	Currently no more detailed information

Cluster-relevant and other research and transfer institutes

Institute	Fields of activity
Furtwangen University	The university has sites in Furtwangen and Villingen-Schwenningen and offers a total of 26 courses, eight of which are in technical subjects, eleven in the field of computer science, three in industrial engineering and four in the field of international business. The university's link to industry is supported primarily by the Institute for Applied Research and by twelve companies of the Steinbeis Network. Another site, the university campus in Tuttlingen, provides courses for advanced qualifications in the field of medical engineering.
International Business School Tuttlingen	Since 2003, renowned companies active in the field of medical engineering have participated in the Master's degree program sponsored by the city and district administration of Tuttlingen, which culminates in an MBA degree. This postgraduate program which focuses on „ Medical Devices & Healthcare Management “ communicates the latest management expertise to the highest level as well as the soft skills required for next-generation management, engineers and company successors.
Institute of Microsystems and Information Technology HSG-IMIT	The HSG-IMIT¹ in Villingen-Schwenningen supplies solutions in the field of R&D. It views its role as that of a leading research and development service provider for micro-technical components and systems in Baden-Württemberg.
MicroMountains Applications AG	MicroMountains Applications AG is one of the six microtechnology application centres in Germany. The aim of this application centre is the implementation of the latest microtechnologies.
Trossingen School Of Music	An internationally acclaimed university institute whose origins lie in the cluster of manufacturers of wide-ranging different musical instruments.
Transfer-oriented research institutes	The Virtual Dimension Center St. Georgen (VDC) as a transfer institute for computation, simulation, visualization and virtual reality in the Schwarzwald-Baar-Heuberg region and the Virtual Dimension Center Tuttlingen (VDC) for VR technologies ² as a transfer institute in the field of medical engineering.

1 HSG-IMIT = Institute of Microsystems and Information Technology of the Hahn-Schickard-Gesellschaft.

2 VR = Virtual Reality.

The region

This region is located in the far South of Baden-Württemberg, and is shaped in terms of its geographical specialization by the two development poles of the Lörrach-Basel and Konstanz areas. A fundamental characteristic of this entire region is the intensive interaction with the Swiss neighbouring areas (Germany's last remaining external EU border), which is expressed both in direct economic ties and also links forged by research and by cross-border commuting. For the rural district of Konstanz, particular importance is consequently attached, for instance, to continued interaction with the Lake Constance area (Bodensee District and the Cantons of Schaffhausen and Thurgau). These geographical ties at the same time form the backdrop for the geographical assignment of clusters or evolving clusters.

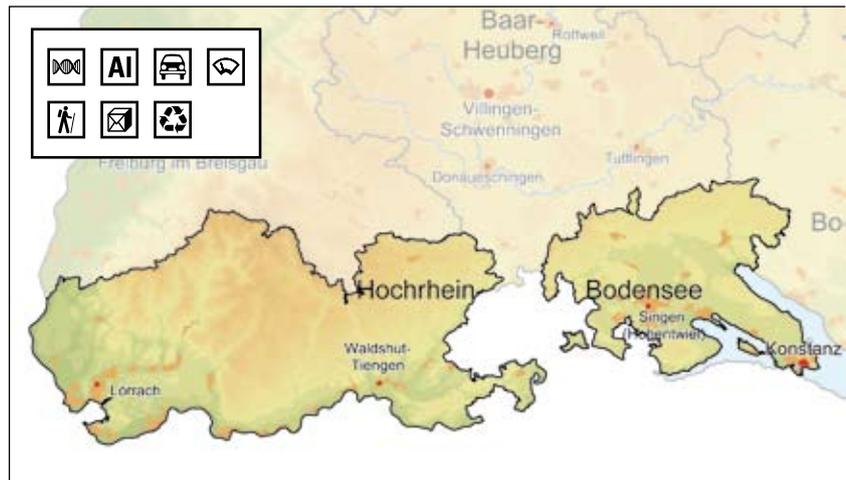


The clusters

Life sciences

Lörrach area: This life science cluster, whose competitive capacity is strengthened by the tri-national BioValley initiative, is located along the Upper Rhine, also taking in the Lörrach-Basel area (consequently reference is made to the corresponding text from the Südlicher Oberrhein region chapter).

Konstanz area: A series of companies and young research and analysis service providers is in evidence grouped around Konstanz University and the lead companies Altana / now called Nycomed GmbH. Which R&D and young entrepreneurial potential is able to further develop on this basis remains to be seen.



Aluminium processing

The abundance of water in the Upper Rhine area was instrumental in attracting aluminium manufacturing and processing enterprises to the region already over a hundred years ago. The aluminium processing locations are consequently grouped along the Upper Rhine, from Weil am Rhein in the West as far as Singen in the East, with a high concentration in the Wutach Valley. In-between is Swiss territory, with Neuhausen and Schaffhausen at its centre. These also form part of this geographical concentration (Rheinfall was the historical point of origin for aluminium manufacture). The Wutöschingen community forms a local centre here. In terms of value adding, the focus here lies on processing, machining and refinement of aluminium for the manufacture of semifinished products and components, as well as some end products.

Automotive

This cluster comprises primarily a group of component and part manufacturers, important sectors of which are directly linked to the aluminium specialization, but which is broader based taken overall. These enterprises are also located along the Upper Rhine.

Measurement and control technology

The Hochrhein-Bodensee region is home to a whole series of companies active in the field of measurement and control technology. In a similar pattern to the Südlicher Oberrhein region, an increasing number of microsystem technologies are being applied in the companies operating in this sector.

Tourism/health

Alongside cooperation within the framework of the „Black Forest Holiday Region“, the special characteristic of this region is the way in which possibilities for cross-border cooperation are used (networking of tourist offerings). Added to this is the cluster which has grown up around the Lake Constance tourism area. Lake Constance tourism is an economic force in its own right within the Hochrhein-Bodensee region.

Packaging technology

This cluster is based on well-established firms, and is concentrated both in the South and North of the Rhein and of Lake Constance. The German side is characterized particularly by packaging firms working the food and pharmaceuticals sector as well as by manufacturers of packaging materials (flexible packaging). Schaffhausen is home to the International Packaging Institute (IPI), which acts on a cross-border

basis as a centre of competence and a central platform for the packaging industry. A particular focus also located in the Singen area, which has the company Alcan Packaging Singen GmbH at its centre. The value-adding chain in this region encompasses packaging machine manufacturers, packaging producers and packaging companies and their suppliers as well as several universities.

Environmental and energy technologies (Konstanz area)

This cluster encompasses a large number of companies and institutes in the Konstanz area. The focus of the value-adding chain lies here in the fields of analytics, components and systems for water and regenerative energies, and is supplemented by specific supply companies and consulting firms as well as university-affiliated and independent research institutes.

Regional stakeholders in the location envisage further cluster potential in the fields of **special-purpose machine and plant engineering**, the forestry / timber industry, textile industry and fundamentally also in the field of **logistics** („logistics region of regional significance“ according to an SCI study) as well as in **environmental technology**. The **nanotechnology** sector is also being pursued as a potential cluster and an initiative in the Konstanz area.

Networks and cluster initiatives

Regional clusters	Regional cluster initiatives
Life sciences	Lörrach area: As the tri-national Bio Valley Initiative encompasses Lörrach / Basel area, see also the explanation provided in the Südlicher Oberrhein region chapter. Konstanz area: BioLAGO e.V. – a young initiative backed by the city and the district administration of Konstanz which seeks to promote the establishment of biotechnology as an innovative branch of industry, while working towards the creation of a network with supra-regional and international orientation focusing on core competences in fields such as life sciences, consumer protection, health care and their technological environment.
Aluminium processing	Aluminium-Forum Hochrhein. This Initiative centering on the Aluminium Region was launched some years ago from the Wutöschingen location and is coordinated by the Southwest economic region promotion body Wirtschaftsregion Südwest GmbH (WSW). This initiative has already achieved a whole raft of joint measures and succeeded in gaining national and international recognition for the Aluminium Region.
Automotive	The region is a partner of the State-wide cluster initiative „Clusterinitiative Automotive Südwest“.
Measurement and control technology	A joint initiative together with Northwest Switzerland and the Alsace region is planned for 2008.
Tourism/health	Development of products for marketing by Schwarzwald Tourismus GmbH (Freiburg) as a joint marketing organization for the entire Black Forest area. Randenkommission, Hochrheinkommission: The „Border Commission“ and „Upper Rhine Commission“, both cross-border cooperative affiliations between the district administrations and cantons along the Upper Rhine aimed at product development, networking and optimization of the cultural and leisure offering across the region. Internationale Bodenseetourismus GmbH (IBT) is a joint tourism marketing organization for the communities of the four countries bordering on Lake Constance with the Konstanz district administration as one of its major shareholders.

Regional clusters	Regional cluster initiatives
Packaging technology	International Packaging Institute (IPI) , Schaffhausen Working Group for Packaging Technology – this is an initiative subgroup within the Lake Constance Cluster Initiative (CliB) working group. It is an affiliation of a series of packaging companies, primarily from the Singen area.
Environmental and energy technologies	A network of just under 30 stakeholders intends to form the core of a regional cluster network under the umbrella of the CliB . The initiative groups include primarily companies and institutes from the Western Lake Constance area.
Special-purpose machine and plant engineering	Currently no more detailed information
Logistics	Currently no more detailed information
Environmental technology	Currently no more detailed information
Nanotechnology	Currently no more detailed information

Cluster-relevant and other research and transfer institutes

Institute	Fields of activity
Konstanz University	Technical and scientific courses: Biological sciences, life science, chemistry, informatics, physics. Supplementary transfer through the Institute for Applied Research (IAF) and through ten companies of the Steinbeis Network.
Konstanz University of Applied Sciences – Technology, Economics and Design (HTWG)	Cluster-relevant courses of study include mechanical engineering, environmental and process technology, electrical engineering, computer science, informatics and communication design.
University of Cooperative Education Lörrach	Selected technical and economics courses: Biosystem informatics, information technology, mechatronics, mechanical engineering, business engineering, industrial business administration, tourism business administration, international business management, business informatics.
University of Basel	The university offers both science and medical study programs. Both faculties additionally form a research centre for life sciences with a large number of different research groups of direct relevance to the Bio Valley Initiative .
Transfer-oriented research institutes	Of relevance for the regional cluster is the Freiburg-based Fraunhofer Institute of High-Speed Dynamics (Ernst Mach Institute, EMI) with its external branch in Efringen-Kirchen. Transfer takes place additionally through a large number of Steinbeis Network member companies (link to Konstanz University , the HTWG , the University of Cooperative Education Lörrach or also with no link).

The region

In economic terms, the Neckar-Alb region is closely linked to the Stuttgart region. This is reflected both in the interlinked commuting patterns – many employees from the Neckar-Alb region work in the Stuttgart region – and also in the cluster structures. In particular the automotive and mechanical engineering clusters, which play an instrumental role for the Neckar-Alb region, must also be viewed in connection with the Stuttgart region. In contrast, the textile, medical engineering and biotechnology clusters and their interlinked activities are oriented more towards the Neckar-Alb region.



The clusters



Textiles and clothing

This traditional cluster characterized by a medium-sized enterprise structure enjoys a strong competitive position – despite a steady decrease in employment in this sector over a period of some decades. The value-adding chain in the region is largely fully represented, including textile machine engineering, textile chemistry and supra-regional marketing structures.



Production technology (mechanical engineering)

Overall this is a largely mature cluster comprising primarily small and medium-sized enterprises with considerable remaining growth potential, in particular in the field of tool and machine tool manufacture and – in connection with the textiles cluster – also textile machinery. In addition, „special-purpose machines“ and robot technology play a distinct role. As regards the value-added chain, the Neckar-Alb mechanical engineering cluster is fully integrated into state-wide networks.



Automotive

Due to the favourable location relative to well-known automotive engineering factories in the Stuttgart region (30-45 minutes driving time), the region is a preferred location for supplier firms. The predominantly small to medium-sized enterprise structure, as well as the traditional locations of larger-scale plants employing a workforce of over 1,000 both profit from the outstanding innovative drive produced as a result of close cooperative arrangements all along the value-added chain.



Medical engineering

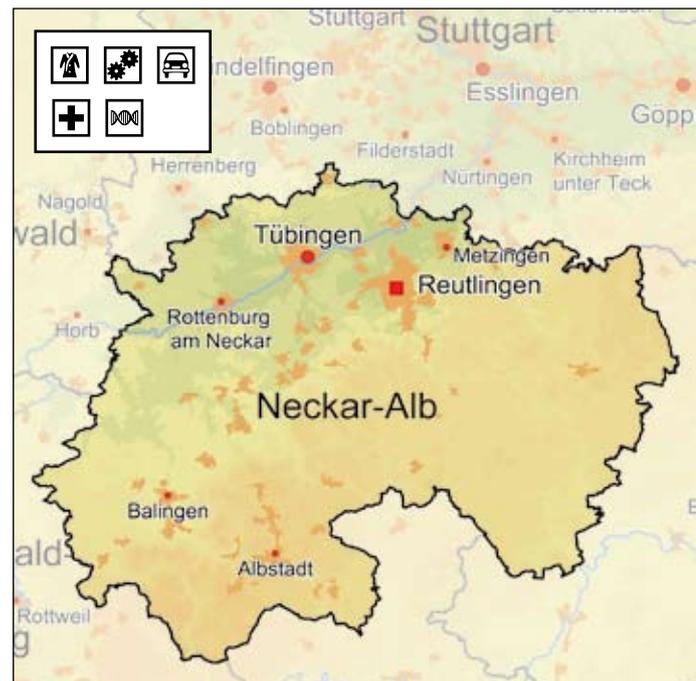
This cluster is dominated largely by medium-sized enterprises focusing on electrical medicine and is still in the process of a marked growth phase. It is based on a variety of development line spin-offs revolving around and originating from Tübingen University, as well as developments in the Hechingen area which are undoubtedly linked both to the textile tradition and to locally evolved competence in the field of precision mechanics.



Life sciences

This young cluster is highly research-driven, and includes a series of spinoffs from Tübingen University with links to pharmacy and also to medical engineering. A business incubation centre focusing on biotechnology in the Tübingen-Reutlingen Technology Park (TTR) acts as a crystallization point for this cluster.

The interview partners envisage further cluster potential in the fields of **ICT** (including satellite navigation), **cleanroom technology**, in the **forestry/timber industry** sector and in the field of **health**.



Networks and cluster initiatives

Regional clusters	Regional cluster initiatives
Textiles and clothing	Location-specific interests and company activities within the textile industry are represented in the Neckar-Alb region by Chamber of Commerce events as well as regional textile studies.
Production technology	Currently no more detailed information
Automotive	IHK Netzwerk Automotive – A chamber of commerce network for representation of location interests and for networking corporate and research activities undertaken by the automotive supply industry in the region. Targeted selection along the value-adding chain. Sustainable self-financed cluster structure.
Medical engineering	„Medical Valley Hechingen“ – Location initiative by the City of Hechingen in support of medical engineering in the Hechingen area; „MITT e.V.“ – Centre of Competence Minimally Invasive Medicine and Technology Tübingen-Tuttlingen , supported by BMBF and the State of Baden-Württemberg. Medical Engineering and Health Tuttlingen/Neckar-Alb (finalist in the BMBF Top Cluster Competition) winner of the KREATEK competition staged by the MFG Agency for IT and Media: Medtech meets Biotech .
Life sciences	„BioRegio Stern Management GmbH“ – established as a result of the BioRegio competition. As a supra-regional initiative this encompasses initiatives in Stuttgart, Tübingen, Esslingen, Reutlingen and the Neckar-Alb region. Tissue Engineering – entry in the BMBF program „Health Region of the Future“
ICT (including satellite navigation)	Currently no more detailed information
Cleanroom technology	Currently no more detailed information
Forestry/timber industry	Currently no more detailed information
Health	Currently no more detailed information

Cluster-relevant and other research and transfer institutes

Institute	Fields of activity
Tübingen University	Faculties: In particular medicine, mathematics and physics, chemistry and pharmacy, biology, geosciences, information and cognitive sciences; Transfer: Technology Transfer Centre of Tübingen University and a series of companies belonging to the Steinbeis network which are managed by university professors.

Institute	Fields of activity
Reutlingen University	Informatics, production management, international business administration, applied chemistry, technology, textile and design, transfer through two institutes of applied research and seven companies of the Steinbeis Network.
Albstadt-Sigmaringen University	Faculties of engineering, business and computer science as well as life sciences; Transfer through the Institute of Applied Research (IAF).
University of Applied Forest Sciences Rottenburg	Study programs in forest management, bioenergy and sustainable energy competence (SENCE) as well as transfer through two companies of the Steinbeis Network.
Contracted research institutes	Natural and Medical Sciences Institute (NMI) at the University of Tübingen in Reutlingen, the leather training, testing and research centre Lederinstitut Gerberschule Reutlingen e.V. Also worthy of mention are the DITF (German Institutes for Textile and Fibre Research) in Denkendorf, which although located in the Stuttgart region (see page 12), have their roots in Reutlingen and are of major importance for this textile cluster.
Transfer-oriented research institutes	Max-Planck Institute for Biology, Max-Planck Institute for Biological Cybernetics, Friedrich-Miescher Laboratory for Biological Work Groups in the MPG.

Donau-Iller

11

The region

The Baden-Württemberg city of Ulm together with the Bavarian city of Neu-Ulm form the definite centre of the cross-state region of Donau-Iller. Together these cities form the regional centre of the Donau-Iller region. Given this close association, some of the clusters and evolving clusters in the region radiate outwards over the common state border.



The clusters

Life sciences

This cluster is an example of expansion across geographical regional and state borders. The cluster stretches across the „Innovation region Ulm“ with its regional centre of Ulm / Neu-Ulm and the two rural districts of Alb-Donau and Neu-Ulm as well as the Upper Swabian rural districts of Biberach and Ravensburg; while in the North it stretches as far as the rural district of Heidenheim in the Ostwürttemberg region. This is a central European location for research, development and production focusing particularly on the field of biopharmaceuticals. In this sector, the region enjoys outstanding potential for growth.

Automotive (commercial vehicles)

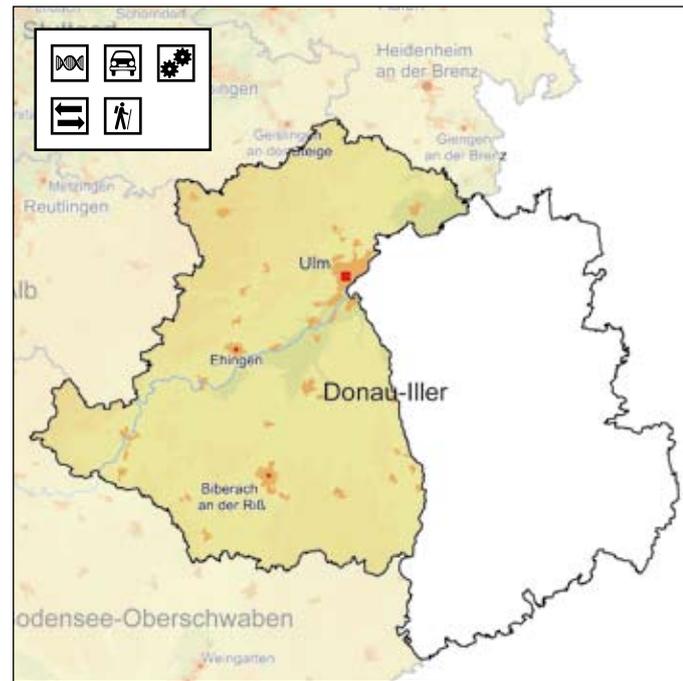
This is a well-established cluster with additional potential for development. Its extent encompasses not only the Ulm / Neu-Ulm centre, but the entire area represented by the Ulm Chamber of Commerce and also parts of the Schwaben Chamber of Commerce area with the Bavarian rural districts of Neu-Ulm and Günzburg. Large sections of the associated commercial vehicle value-adding chain are represented in this area: from commercial vehicle manufacturers themselves through tier 1, 2 and 3 suppliers¹ to the relevant engineering service providers. Alongside the unique concentration of six OEMs² covering the various partial segments of the commercial vehicle industry, also worthy of mention are the regional universities with their special automotive competence centres.

Production technology (mechanical engineering)

The mechanical engineering sector is present in the Ulm area, but primarily also in the rural districts of Alb-Donau and Biberach. In terms of products, the industry is not focused on a particular machine type, but encompasses a wide range of machines for different target markets. Mechanical engineering is the region's single biggest sector of industry. Employment in the region is well above the national average. The combination of a large number of small and medium-sized enterprises with the presence of leading manufacturers ensures a high degree of perception and a high level of competence in the region.

Logistics

The Donau-Iller region is one of Baden-Württemberg's three „logistical core regions“. The Ulm region is defined by the motorway junction between the A 7 and A 8 and together with the associated transshipment logistics sector serves as a vital hub for freight traffic. Consequently, alongside the new Freight Transport Centre in the North of Ulm with its combined freight traffic terminal, the region is home to numerous companies operating in the field of freight logistics, particularly forwarders and carriers alongside storage and transshipment capacity. Various studies demonstrate that the region is occupied by a higher than average number of different sectors. This diversity is also characterized by the highly dynamic nature of the region. In the form of the Ulm Logistics Day, a central platform has already been created for the exchange of knowledge.



¹ Tier = category. In the automotive industry, direct suppliers to car and vehicle manufacturers are categorized as tier 1 suppliers. Tier 2 suppliers supply tier 1 suppliers and so on.

² OEM = Original Equipment Manufacturer.

Tourism/health

The focal point of this cluster is the University Clinic in Ulm with its academic teaching hospitals, the armed forces hospital, RKU University and Convalescent Clinic and institutes located in the Science Park. The University Clinic exerts an influence radiating out beyond the region's borders. In addition, the region is characterized by its many Upper Swabian spa and therapeutic mineral baths including the spa and convalescent clinics.

Networks and cluster initiatives

Regional clusters	Regional cluster initiatives
Life sciences	BioRegioUlm – Association for the Promotion of Biotechnology – this not-for-profit community of interests forms the central platform for further development of the BioRegionUlm. Its objectives include not only location marketing but primarily also the fields of cooperation, new business incubation and training.
Automotive (commercial vehicles)	Commercial Vehicles Cluster Schwaben (CNS) network was officially established as a not-for-profit association on December 18, 2007 and alongside location marketing („number one commercial vehicle location in Germany“), also predominantly pursues the aim of intensive networking in order to create an open culture of innovation towards the achievement of tangible competitive advantages. Future-oriented issues are dealt with in six working groups by experts from industry and higher education. The Ulm Chamber of Commerce plays a leading role in this initiative in cooperation with the Schwaben Chamber of Commerce on the Bavarian side. Winners of the MFG KREATEK competition: CNS Commercial Vehicles Cluster Schwaben
Production technology (mechanical engineering)	A mechanical engineering cluster initiative is due to be launched in 2008. Mutual interests and where applicable also cooperative arrangements will be based on joint themes, such as the common spectrum of technical methods.
Logistics	A logistics initiative is currently in the development phase. The leading force in this initiative is the Schwaben Chamber of Commerce in cooperation with the Ulm Chamber of Commerce.
Tourism/health	Oberschwaben-Tourismus GmbH (OTG), the Tourism Board of Oberschwaben based in Bad Schussenried, functions as a marketing platform for the rural districts of Biberach and Ravensburg. In addition, the region is currently taking part in a competition staged by the Federal Ministry of Education and Research to find health regions of the future. In this context, initial in-depth exchanges have already taken place between regional stakeholders.

Cluster-relevant and other research and transfer institutes

Institute	Fields of activity
University of Ulm	Selected technical, scientific and economic study programs: Electrical engineering, informatics, information system technology, media informatics, molecular medicine, biology, biochemistry, industrial chemistry, physics, industrial physics as well as study programs in medicine, dental medicine and the Institute of Laser Technology in Medicine and Metrology, Ulm

Institute	Fields of activity
Ulm University of Applied Sciences	Selected technical and economics courses: Automotive engineering, automotive electronics, industrial electronics, mechanical engineering, mechatronics, medical engineering, production technology, industrial engineering, systems engineering and management. In addition, a cooperative course is also offered in conjunction with Neu-Ulm University, to create industrial engineering graduates specializing in logistics.
Neu-Ulm University	The particular focus of this university is on logistics / supply chain management.
Biberach University of Applied Sciences	Selected study programs: Pharmaceutical biotechnology, business administration, project management
Transfer-oriented research institutes	The above mentioned Institute of Laser Technology in Medicine and Metrology works on a transfer-oriented basis. Transfer at the Ulm location also takes place through 20 companies belonging to the Steinbeis Network.

Bodensee- Oberschwaben

12

The region

The Bodensee-Oberschwaben region is characterized by a powerful industrial core along the Schussental Valley in the Friedrichshafen-Ravensburg-Weingarten conurbation. The rural areas of the region are also home to a number of significant industrial enterprises. From the historical point of view, the airship enterprises founded by Graf Zeppelin in 1908, Luftschiffbau Zeppelin GmbH, has been instrumental in the development of the localized technologically-oriented clusters. The Bodensee-Oberschwaben region also enjoys international acclaim as a tourism and health region.



The clusters



Production technology (mechanical engineering)

Overall, mechanical engineering represents a „mature“ cluster with continued high potential for innovation and growth in the region. It is difficult to determine any single point of focus for this cluster, as the sales markets of the companies operating in this sector are widespread.



Automotive (vehicle production)

The core of this cluster is formed by two large-scale corporations from the field of drive and chassis technology which have achieved a top position in the international arena. A series of small and medium-sized enterprises (around 100) is also active in this cluster, some of which are integrated into the supra-regional automotive cluster.



Aerospace

The development of this cluster is inextricably linked to the names Zeppelin and Dornier. Various Group companies are concentrated in the Lake Constance area operating in the fields of satellite and military technology with supplier links stretching into the region.



Engineering

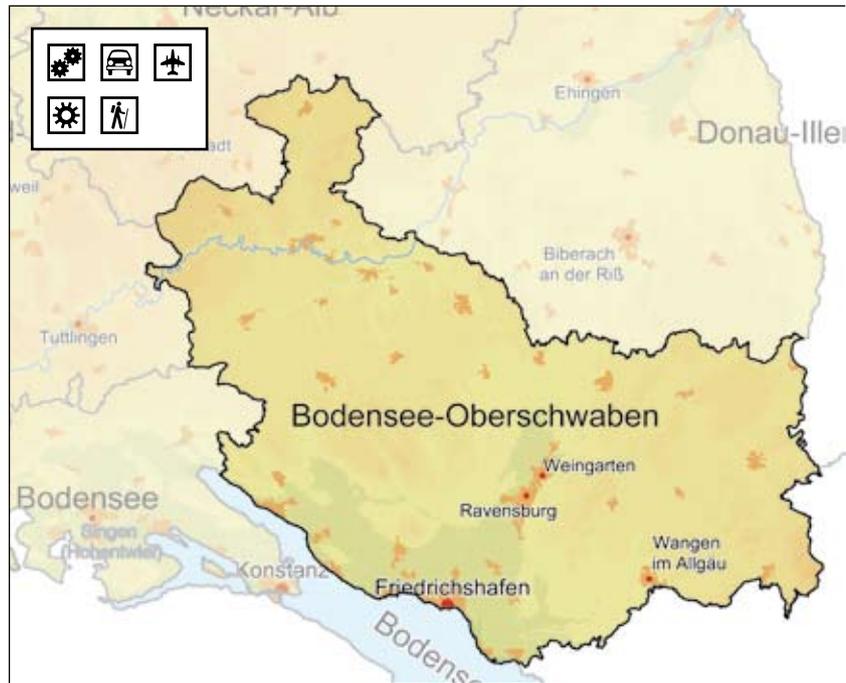
This cluster is characterized by small and medium-sized engineering companies. The subject of engineering is fundamentally closely linked to the region’s technology-intensive system products (mechanical engineering, automotive engineering, aerospace). The broad-based customer structure on the one hand and the common method basis on the other as well as geographical concentration justify the definition of a separate cluster in this field.



Tourism/health

This cluster is characterized on the one hand by Lake Constance tourism and on the other hand by the spa and therapeutic bathing culture of the Upper Swabian area with its network of spa and convalescent clinics. The widely diversified field of spa and health tourism is characterized by a high real net output ratio in the region.

The interview partners envisage additional cluster potential in the fields of **life sciences** (isolated companies, particularly in conjunction with the BioRegion Ulm) and **information and communication technology** (T-City Friedrichshafen).



Networks and cluster initiatives

Regional clusters	Regional cluster initiatives
Production technology	Currently no more detailed information

Regional clusters	Regional cluster initiatives
Automotive (vehicle production)	Informal vehicle production network focusing on systems, components, assemblies, production plants, universities and engineering companies.
Aerospace	Currently no more detailed information
Engineering	Virtual Factory Baden-Württemberg , a competence network of 14 small and medium-sized engineering firms primarily originating from within the region.
Tourism/health	<p>Internationale Bodensee-Tourismus GmbH (IBT) as a marketing platform with headquarters in Konstanz (=>Hochrhein-Bodensee region); A health and tourism network for joint marketing is planned.</p> <p>Oberschwaben-Tourismus GmbH (OTG) based in Bad Schussenried as a marketing platform for the Biberach and Ravensburg rural districts and a part of the Sigmaringen rural district.</p>
Life sciences	Currently no more detailed information
ICT	T-City Partner Network launched in January 2008 with 30 companies and institutes.

Cluster-relevant and other research and transfer institutes

Institute	Fields of activity
Zeppelin University, Friedrichshafen	Study programs in corporate management and economics, communication and cultural management, public management and governance.
Ravensburg-Weingarten University of Applied Sciences	Study programs in economics (business administration, business informatics), social work (pedagogics of nursing, social work) and engineering (electrical engineering and IT, automotive engineering, mechanical engineering, technical management, physical engineering), transfer through the Institute of Applied Research and nine companies of the Steinbeis Network.
Albstadt-Sigmaringen University	Faculties of engineering, business and computer science as well as life sciences; Transfer in particular through the Institute of Applied Research (IAF) and a company belonging to the Steinbeis Network.
ISSN University of Applied Sciences (NTA)	Study programs in pharmaceutical chemistry, physical electronics, physical engineering and specialist subjects of molecular biotechnology, food chemistry, nanotechnology and laser technology.
Ravensburg Academy of Cooperative Education	Study programs in economics, engineering (electrical engineering, mechanical engineering, industrial engineering, information technology), media and communication design, business informatics.

Characterization of regional clusters

According to the empirical definition of regional clusters, in summary it is possible to outline a number of systematic characteristics:

- Some regional clusters exist which are characterized by defining if not dominant lead corporations. These are generally large-scale companies in their respective markets. The cluster then tends to group around these lead corporations, which also exert a determining influence on what is and is not possible within the context of the cluster.
- Other clusters are conversely characterized by more of a balanced SME structure.
- Another type of cluster is the university or research-driven cluster, whose entrepreneurial potential is difficult to predict.
- Another group is formed by regional clusters which owe their existence to the occurrence of natural resources (raw materials) or natural factors (such as topography, weather, climate).

In addition to these, cluster themes or evolving clusters also exist whose existence still hangs in the balance or whose structure currently remains rather unclear. These cases are listed in the chapter on each region as conjectured clusters or as cluster potential.

Many of the regional clusters included represent specialist fields in one or more partial areas of the State and can consequently not be said to have a State-wide presence.

On the other side of the coin, specialist fields of state-wide relevance exist which themselves exert a defining influence on many regions within the State. A prime example of these is the automotive industry, i.e. the development and manufacture of vehicles and their components. It could even be said that the overall economic effect of the automotive cluster only occurs as a result of interaction between the various players.

State-wide cluster initiatives or networks and platforms also exist whose regional characteristics have not yet been identified in every area.

Matching overview tables

The overview tables provided in the following provide a valuable tool to those seeking to set up mutual communication channels between regional clusters:

Table 2 summarizes the links between the individual regions and the regional clusters. This cluster table can be used to gain the following information:

1. Value-adding themes and markets exist which are shared by several different clusters in Baden-Württemberg. In some cases, value-adding networks or potential for further supra-regional networks exist between these regional clusters.
2. The „automotive“ product field plays the most prominent role here, as it is active in every region of the State, with a regional cluster identified in no fewer than ten of the twelve regions. Series produced automotive end products are manufactured in no fewer than five regions: Stuttgart, Heilbronn-Franken, Donau-Iller, Mittlerer Oberrhein and the metropolitan region Rhein-Neckar.
3. Other value-adding fields demonstrating supra-regional network potential include production technology, tourism, creative industries, life sciences, information and communication technology, environmental and energy technology, medical engineering, measurement and control technology, plastics processing, logistics, nanotechnology, packaging technology, forestry / timber industry.
4. In addition, a whole series of regional clusters exists which may be categorized rather as a singular occurrence in Baden-Württemberg or which have to date only been identified in one instance.

These are the clusters

Aluminium processing, fastening technology, chemistry, engineering, precision engineering, glass and laboratory technology, aerospace, metal & die cutting technology, musical instrument production, surface technology, photonics, textiles and clothing.

Overview 3 provides the contact data of the main contact partners for the Cluster Atlas in the various regions, and the state-wide cluster platforms and networks. In this way, topics such as individual traits in common between the clusters or possibilities for joint networking can be matched with a minimum of effort. In any event, steps should be taken in advance to ascertain precisely whether there is any actual prospect of networking with a view to achieving the common goal of „improving competitiveness“ , i.e. whether a win-win situation can reasonably be expected to result for the networking partners which will allow an increased individual or overall benefit.

Finally, overview 4 affords easier access to the cluster initiatives listed in by allocating the relevant website addresses – where these are available.

Overview 2: Comparison table of the regional clusters

Cluster name	Stuttgart	Heilbronn-Franken	Ost-württemberg	Mittlerer Oberrhein	Rhein-Neckar	Nord-schwarz-wald	Südlicher Oberrhein	Schwarzwald-Baar-Heuberg	Hochrhein-Bodensee	Neckar-Alb	Donau-Ilfer	Bodensee-Ober-schwaben
Automotive	❖	❖	❖	❖	❖			❖	❖	❖	❖	❖
Aluminium processing									❖			
Fastening technology		❖										
Chemicals				❖	❖							
Engineering								❖				❖
Precision engineering etc.												
Glass/ laboratory technology		❖										
ICT	❖			❖	❖							
Creative industries	❖		❖	❖	❖	❖	❖					
Plastics processing		❖				❖		❖				
Life sciences					❖		❖		❖		❖	
Logistics	❖				❖						❖	
Ventilation technology		❖										
Aerospace												❖
Medical engineering						❖		❖				
Metal & die cutting technology						❖				❖		
Measurement and control technology (microsystems technology)		❖					❖	❖	❖			
Musical instrument production								❖				
Nanotechnology				❖								
Surface technology			❖									
Organic electronics					❖							
Photonics/optical technologies			❖									
Production technology	❖				❖		❖	❖		❖	❖	❖
Textiles and clothing										❖		
Tourism/health				❖		❖	❖	❖	❖		❖	❖
Environmental and energy technologies	❖			❖			❖	❖	❖			
Packaging technology	❖											❖
Forestry/timber industry												
Chipping/metal working/founding			❖									

Overview 3: Contact data of main contact partners in the 12 spatial planning regions and for the State-wide cluster platforms/networks

Region	Contact partner	Institution	Tel. no.	e-mail address	Postal address
1. Stuttgart	Dr. Walter Rogg	WRS	0711-22835-0	wrs@region-stuttgart.de	Friedrichstraße 10 70174 Stuttgart
2. Heilbronn-Franken	Steffen Schoch	WHF	07131-7669-860	s.schoch@heilbronn-franken.com	Weipertstraße 8-10 74076 Heilbronn
3. Ostwürttemberg	Dr. Ursula Bilger	WiRO	07171-92 753-0	bilger@ostwuerttemberg.de	Universitätspark 1 73525 Schwäbisch Gmünd
4. Mittlerer Oberrhein	Dr.-Ing. Adolf Kopp	Stadt Karlsruhe	0721-133-7300	adolf.kopp@wifoe.karlsruhe.de	Zähringerstraße 65a 76124 Karlsruhe
5. Rhein-Neckar	Dr. Felix Gress	MPN	0621-12987-10	felix.gress@m-r-n.com	N7, 5-6 68161 Mannheim
6. Nordschwarzwald	Prof. Dr. Norbert Höptner	WFG NSW	07231-154369-0	hoeptner@nordschwarzwald.de	Blücherstraße 32 75177 Pforzheim
7. Südlicher Oberrhein	Dr. Bernd Dallmann	FWTM	0761-3881-801	bernd.dallmann@fwrtm.freiburg.de	Rathausgasse 33 79015 Freiburg
8. Schwarzwald-Baar-Heuberg	Heinz-Rudi Link	WF SBH	07720-8308 44-1	link@wifoe-sbh.de	Eichendorffstraße 33 78054 Villingen-Schwenningen
9. Hochrhein-Bodensee	Dr. Alexander Graf	WSW	07621-5500-150	alexander.graf@wsw.eu	Marie-Curie-Straße 8 79539 Lörrach
10. Neckar-Alb	Dr. Markus Nawroth	IHK Reutlingen	07121-201-185	nawroth@reutlingen.ihk.de	Hindenburgstraße 54 72762 Reutlingen
11. Donau-Iller	Otto Sälzle	IHK Ulm	0731-173-112	saelzle@ulm.ihk.de	Olgastraße 97-101 89073 Ulm
12. Bodensee-Oberschwaben	Dr. Wolfgang Heine	IHK BOS	0751-409 -143	heine@weingarten.ihk.de	Lindenstraße 2 88250 Weingarten

State-wide	Contact partner	Tel. no.	e-mail address	Postal address
1. automotive-bw	Dr. Albrecht Fridrich	0711-22998-15	automotive-bw@rkw.de	Königsstrasse 49 70173 Stuttgart
2. Autoland Baden-Württemberg	Dr. Markus Decker	0711-123-2430	Markus.Decker@wm.bwl.de	Theodor-Heuss-Str. 4 70174 Stuttgart
3. bw-i Baden-Württemberg International GmbH	Ekaterina Deckers	0711-227-87-938	ekaterina.deckers@bw-i.de	Willi-Bleicher-Str. 19 70174 Stuttgart
4. Baden-Württemberg Connected e.V. (bwcon)	Oliver Zils	0711-90715-501	zils@bwcon.de	Breitscheidstraße 4 70174 Stuttgart
5. BIOPRO Baden-Württemberg GmbH	Christine Decker	0711-218185-16	decker@bio-pro.de	Breitscheidstraße 10 70174 Stuttgart
6. Forum Luft- und Raumfahrt Baden-Württemberg e.V. (Aerospace Forum Baden-Württemberg)	Anita Vogl	0711-327325-90	vogl@lrbw.de	Gerhard-Koch-Straße 2-4 73760 Ostfildern
7. Kompetenznetzwerk Mechatronik Göppingen e.V. (Mechatronics Competence Network Göppingen)	Volker Schiek	07161-965950-0	info@mechatronik-ev.de	Manfred-Wörner-Straße 115 73037 Göppingen
8. MFG Baden-Württemberg GmbH - Medienentwicklung - Filmförderung	Klaus Haasis Gabriele Röthemeyer	0711-90715-370 0711-90715-400	info@mfg-innovation.de filmfoerderung@mfg.de	Breitscheidstraße 4 70174 Stuttgart
9. MST BW Mikrosystemtechnik Baden-Württemberg e.V.	Peter J. Jeuk	0761-897598-75	info@mstbw.de	Emmy-Noether-Straße 2 79110 Freiburg
10. Photonics BW e.V.	Dr.-Ing. Andreas Ehrhardt	07364-2029-13	info@photonicsbw.de	Carl-Zeiss-Straße 1 73447 Oberkochen
11. Virtual Dimension Center Fellbach w.V.	Jens Mohrmann	0711-585309-0	info@vdc-fellbach.de	Auberlenstraße 13 70736 Fellbach
12. Intralogistik Netzwerk BW e.V.	Dieter Tietz	0711-78237173	info@intralogistik-bw.de	Industriestraße 25 70565 Stuttgart
13. Environmental Project Headquarter	Wolfgang Wolf	0711-327325-33	pu@lvi.de	Gerhard-Koch-Str. 2-4 73760 Ostfildern
14. Design Center Stuttgart	Sabine Lenk	0711-123-2570	design@rps.bwl.de	Willi-Bleicher-Straße 4 70174 Stuttgart

Overview 4: Web addresses for the listed cluster and network initiatives in the regions

Region	Regional cluster	Name of the cluster initiative	Web address
Stuttgart	Automotive	CARS – Clusterinitiative Automotive Region Stuttgart (Cluster Initiative of the Automotive Region Stuttgart)	http://wrs.region-stuttgart.de
		BZa-BW – Brennstoffzellen-Allianz Baden-Württemberg (Fuel Cell Alliance Baden-Württemberg)	http://www.bza-bw.de
		Virtual Dimension Center Fellbach (VDC)	http://www.vdc-fellbach.de
		Kompetenzzentrum Kfz der Handwerkskammer Region Stuttgart (Vehicle Competence Centre of the Stuttgart Region Chamber of Commerce)	http://www.hwk-stuttgart.de
	Production technology	Clusterinitiative Automotive Südwest	http://www.autoland-bw.de
		Clusterinitiative Maschinenbau der WRS (WRS Mechanical Engineering Cluster Initiative)	http://wrs.region-stuttgart.de
		Kompetenznetzwerk Mechatronik (Mechatronics Competence Network)	http://www.mechatronik-ev.de
		Virtual Dimension Center Fellbach (VDC)	http://www.vdc-fellbach.de
		Kompetenzzentrum Technische Textilien	http://www3.itv-denkendorf.de
		Manufuture-BW	http://www.vdma.org
	Packaging technology	PEC - Packing Excellence Center	http://www.packaging-excellence.de
		NAC – Net Application Center Region Stuttgart	http://www.nac-stuttgart.de
	ICT	Open Source Region Stuttgart	http://opensource.region-stuttgart.de
		Open Source Lösungspark (Open Source Solution Park)	http://www.open-source-loesungspark.de
BITZ – Backnanger Innovations- und Telcommerce Zentrum (Backnang Innovation and Telcommerce Centre)		http://www.backnang.de	
KTMC – Kompetenzzentrum Telematik, Mobile Computing und Customer Care (Competence Centre for Telematics, Mobile Computing and Customer Care)		http://www.ktmc.de	
		SBS – Softwarezentrum Böblingen / Sindelfingen (Software Centre Böblingen / Sindelfingen)	http://www.softwarezentrum.de

Region	Regional cluster	Name of the cluster initiative	Web address
Stuttgart	Environmental and energy technologies	KINET – Kompetenz- und Innovationszentrum Nachhaltige Energie-Technik (Competence and Innovation Centre for Sustainable Energy Technology)	http://www.kinet-online.de
		KURS – Kompetenzzentrum Umwelttechnik (Competence Centre for Environmental Engineering)	http://www.kurs-net.de
	Creative industries	Kompetenzzentrum für regenerative Energieanwendung (Competence Centre for Regenerative Energy Utilization)	--
		BzA-BW – Brennstoffzellen-Allianz Baden-Württemberg (Fuel Cell Alliance Baden-Württemberg)	http://www.bza-bw.de
		BioRegio STERN Management GmbH	http://www.bio regio-stern.de
		Clusterinitiative Design der WRS (WRS Design Cluster Initiative)	http://wrs.region-stuttgart.de
		Clusterinitiative Design	http://wrs.region-stuttgart.de
		Film Commission Region Stuttgart	http://www.film.region-stuttgart.de
		mediafaktor filder	http://www.mediafaktor-filder.de
		Medieninitiative Region Stuttgart (Media Initiative Stuttgart Region)	http://medien.region-stuttgart.de
Popbüro Region Stuttgart (Pop Bureau Stuttgart Region)	http://www.popbuero.de/		
Logistics	KLOK – Kompetenzzentrum Logistik Kornwestheim GmbH (Logistics Competence Centre Kornwestheim)	http://www.klok-net.de	
	OpenEnlocc	http://www.openenlocc.net/	
Health	GesundheitsRegion Stuttgart (Health Region of Stuttgart)	http://wrs.region-stuttgart.de	
	Clusterinitiative Gesundheit (BENEFIT) der WRS (WRS Health Cluster Initiative)	http://wrs.region-stuttgart.de	
Life science	KTMC - Kompetenzzentrum Telematik, Mobile Computing und CustomerCare (Competence Centre for Telematics, Mobile Computing and Customer Care)	http://www.ktmc.de	
	BioRegio STERN Management GmbH	http://www.bio regio-stern.de	
	Automotive-Dialog	http://www.automotive-region.de	
Plastics processing	Kunststoff-Dialog (Plastics Dialogue)	http://www.kunststoff-region.de	

Region	Regional cluster	Name of the cluster initiative	Web address
Heilbronn-Franken	Fastening technology	--	--
	Ventilation technology	Innovationsregion Kocher-Jagst e. V. (Innovation Region Kocher-Jagst Initiative)	http://www.innovationsregion.de
	Packaging technology	Verein Packaging Valley Germany e.V. (Packaging Valley Germany Association)	http://www.packaging-valley.com
	Measurement and control technology	--	--
	Glass/laboratory technology	Forschungsgemeinschaft Technik und Glas e.V. (FTG) (Technology and Glass Research Association)	http://www.ft-g.org
Ostwürttemberg	Health	Gesundheitsregion Heilbronn (Health Region of Heilbronn)	http://www.gesundheits-region.de
	ICT	Innovationscluster IT-Servicemanagement - Institut für Electronic Business (IfEB) (IT Service Management Innovation Cluster)	http://ifeb.hs-heilbronn.de
	Photonics/optical technologies	Photonik-Initiative „Photonic Valley Ostwürttemberg“	http://www.photonic-valley.de
	Surface technology	Oberflächentechnologie-Initiative (Surface Technology Initiative)	http://www.ostwuerttemberg.de/oberflaechentechnik
	Automotive	Automotive-Initiative	http://www.ostwuerttemberg.de/automotive
Ostwürttemberg	Creative industries	Hochschule für Gestaltung (University of Design)	http://www.hfg-gmuend.de
	Forestry/timber industry	--	--
	Chipping/ metal working/ founding	Zukunftsinitiative Ostwürttemberg 2015 (Future Initiative Ostwürttemberg 2015)	http://www.zio.ostwuerttemberg.de
	ICT	Cyberforum e. V.	http://www.cyberforum.de
	Automotive	Automotive Engineering Network (AEN) Südwest e.V.	http://www.ae-network.de
Mittlerer Oberrhein	Nanotechnology	Nanoforum/NanoValley.EU	http://www.nanomat.de + http://www.nanovalley.eu
	Environmental and energy technologies	Energieforum (Energy Forum)	http://www.energieforum-karlsruhe.de
	Creative industries	Europäische Medien- und Event-Akademie (EurAka) (European Media and Event Academy)	http://www.event-akademie.de
	Tourism/health	--	--

Region	Regional cluster	Name of the cluster initiative	Web address	
Mittlerer Oberrhein	Security technology	Karlsruher IT-Sicherheits Initiative (KA-IT-SI) (Karlsruhe IT Security Initiative)	http://www.ka-it-si.de	
		BioRegion Rhein-Neckar-Dreieck e.V.	http://www.bioregion-rnd.de	
	Life sciences	--	--	
		Chemicals	Forum Organic Electronics	http://www.m-f-n.com/forumoe.0.html
	Organic electronics	Environmental and energy technologies	EnergieEffizienzAgentur Metropolregion Rhein-Neckar gGmbH (E2A) (Energy Efficiency Agency of the Metropolitan Region of Rhein-Neckar)	http://www.energieeffizienzagentur.de
			UKOM e.V. – Umweltkompetenzzentrum Rhein-Neckar (Environmental Competence Centre Rhein-Neckar)	http://www.umweltkompetenz.org
			Urban plus – Allianz für Wohnen, Umwelt und Beschäftigung im Rhein-Neckar-Dreieck (Living, Environment and Employment Alliance in the Rhein-Neckar Area)	http://www.urban-plus.de
	Automotive		Nutzfahrzeugcluster Südwest/Commercial Vehicle Cluster CVC	http://www.cv-cluster.de
			Automotive Cluster RheinMain-Neckar	http://www.automotive-cluster.org
	Production technology		Kompetenzzentrum Moderne Produktionssysteme (KMP) (Competence Centre for Modern Production Systems)	http://www.kmp.hs-mannheim.de
		NanoValley.EU	http://www.nanovalley.eu	
ICT		IT&Medien Netz Rhein-Neckar (IT&Media Network Rhein-Neckar)	http://www.it-medien-netz.de	
		IT Forum Rhein-Neckar e.V.	http://www.it-forum-lu.de	
Rhein-Neckar	Logistics	Rhein-Neckar-Hafengesellschaft Mannheim mbH (State-owned Harbour Company)	http://www.hafen-mannheim.de	
		Hafenbetriebe Ludwigshafen am Rhein GmbH (Harbour Operating Company)	http://www.hafenbetriebe-ludwigshafen.de	
	Creative industries	Musikpark Mannheim	http://www.musikpark-mannheim.de	
		PopAkademie Baden-Württemberg (Pop Academy Baden-Württemberg)	http://www.popakademie.de	
Health		regioactive.de	http://www.regioactive.de	
		Gesundheitsregion / Gesundheitsnetzwerk Rhein-Neckar (Health Region/Health Network of the Rhein-Neckar Region)	http://www.gn-rnd.de	

Region	Regional cluster	Name of the cluster initiative	Web address
Nordschwarz- wald	Plastics processing	Innovationsnetz Kunststoff - INNONET (Plastics Innovation Network)	http://www.nordschwarzwald.de
	Metal & die cutting technology	--	--
	Forestry/timber industry	Netzwerk Holzindustrie Baden-Württemberg e.V. (Network Wood Industry)	http://netzwerk-holzindustrie.de
	Medical engineering	--	--
	Tourism/health	Schwarzwald Tourismus GmbH (Black Forest Tourism Board)	http://www.schwarzwald-tourismus.info
	Creative industries	Hochschule Pforzheim, Fakultät Gestaltung (Pforzheim University, Faculty of Design)	http://www.hs-pforzheim.de/de-de/Gestaltung
		Goldschmiedeschule (Goldsmith Technical College)	http://www.goldschmiedeschule.de
		Schmuckmuseum (Jewellery Museum)	http://www.schmuckmuseum-pforzheim.de
		Schmuckwelten	http://www.schmuckwelten.de
		MediaValley/Oberrhein	--
Südlicher Oberrhein	Creative industries	medien forum freiburg (Media Forum Freiburg)	http://www.mff.net
	Production technology	Software-Forum Oberrhein	http://www.software-forum-oberrhein.de
	Tourism/health	--	--
		Schwarzwald Tourismus GmbH	http://www.schwarzwald-tourismus.info
		Europapark Rust	http://www.europapark.de
	Forestry/timber industry	Wertschöpfungskette HOLZ (TIMBER value-adding chain)	--
	Environmental and energy technologies	SolarRegion Freiburg	http://www.solarregion.freiburg.de
	Measurement and control technology (microsystems technology)	Mikrosystemtechnik Baden-Württemberg e.V. (MST BW) / MicroTEC Südwest	http://www.mstbw.de http://microtec-suedwest.de
	Life sciences	Forum angewandte Mikrosystemtechnik e. V. (FAM) (Forum of Applied Microsystems Engineering)	http://www.imtek.de/fam
		Bio Valley	http://www.biovalley.de
	BioTechPark Freiburg	http://www.biotechpark.de	

Region	Regional cluster	Name of the cluster initiative	Web address
Südlicher Oberrhein	Life sciences	BioMed Freiburg	http://www.biotechpark.de/index.php?lan=de&env=med
	ICT	RFID/Contactless Devices	--
Schwarzwald- Baar-Heuberg	Health	Gesundheitsregion Freiburg (Health Region of Freiburg)	--
	Medical engineering	Kompetenzzentrum Minimal Invasive Medizin & Technik Tübingen – Tuttlingen e.V. (MITT) (Centre of Competence Minimally Invasive Medicine & Technology)	http://www.mittev.de
		MicroMountains Network e.V.	http://www.micromountains.com
		Medizintechnik und Gesundheit Tuttlingen/Neckar-Alb (Medical Engineering and Health Tuttlingen / Neckar-Alb)	--
		Medtech meets Biotech	http://www.bio-pro.de
	Automotive	Gemeinnützigen Vereinigung der Drehteilehersteller e.V. (GVD) (Not-for-Profit Association of Turned Part Manufacturers)	http://www.gvd.de
	Production technology	--	--
	Measurement and control technology	HSG-IMIT	http://www.hsg-imit.de
		VDC St. Georgen	http://www.vdc-tz-stgeorgen.de
		MicroMountains Applications AG	http://www.mm-applications.com
Precision engineering/ microengineering/ microsystems technology	MicroMountains Network e.V.	http://www.micromountains.com	
Plastics processing	Xpeering	http://www.micromountains.com/xpeering.html	
Tourism/health	MicroMountains Network e.V.	http://www.micromountains.com	
	Arbeitskreis Tourismus der IHK SBH (Tourism Working Group of the Schwarzwald-Baar-Heuberg Chamber of Commerce)	http://www.schwarzwald-baar-heuberg.ihk.de	
	Schwarzwald Tourismus GmbH (Black Forest Tourism Board)	http://www.schwarzwald-tourismus.info	
	Donaubergland Marketing und Tourismus GmbH (Donaubergland Marketing and Tourism Board)	http://www.donaubergland.de	
	Projektgruppe „Gesundheitsnetzwerk“ (Health Network Project Group)	http://www.wirtschaftsfoerderung-sbh.de	

Region	Regional cluster	Name of the cluster initiative	Web address
Hochrhein-Bodensee	Life sciences	Bio Valley	http://www.biovalley.de
	Life sciences (Konstanz area)	BioLAGO e.V.	http://www.biologo.org
	Aluminium processing	Aluminium-Forum Hochrhein	http://www.aluminiumforum-hochrhein.de
	Automotive	--	--
	Measurement and control technology	--	--
	Tourism/health	Schwarzwald Tourismus GmbH (Black Forest Tourism Board)	http://www.schwarzwald-tourismus.info
		Randenkommission (Border Commission)	http://www.randenkommission.org
		Hochrheinkommission (Hochrhein Commission)	http://www.hochrhein.org
		Internationale Bodenseetourismus GmbH (IBT) (Joint Lake Constance Tourism Board)	http://www.bodensee-tourismus.com
		International Packaging Institute (IPI)	http://www.ipi.sh
Neckar-Alb	Packaging technology	Arbeitsgruppe für Verpackungstechnologie/Clusterinitiative Bodensee (CliB) (Working Group for Packaging Technology in the Lake Constance Cluster Initiative)	http://www.bodensee-standortmarketing.com
	Environmental and energy technologies	Arbeitsgruppe für Umwelttechnologie/Clusterinitiative Bodensee (CliB) (Working Group for Packaging Technology in the Lake Constance Cluster Initiative)	http://www.bodensee-standortmarketing.com
	Textiles and clothing	IHK-Initiative (Chamber of Commerce Initiative)	http://www.reutlingen.ihk.de
	Production technology	--	--
	Automotive	IHK Netzwerk Automotive (Chamber of Commerce Automotive Network)	http://www.reutlingen.ihk.de
Medical engineering	Medical Valley Hechingen	--	
	Kompetenzzentrum Minimal Invasive Medizin & Technik Tübingen – Tuttlingen e.V. (MITT) (Centre of Competence Minimally Invasive Medicine & Technology)	http://www.mittev.de	
	Medizintechnik und Gesundheit Tuttlingen/Neckar-Alb (Medical Engineering and Health Tuttlingen / Neckar-Alb)	http://www.bio-pro.de	
	Medtech meets Biotech	http://www.bio-pro.de	

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Neckar-Alb	Life sciences	BioRegio Stern Management GmbH	http://www.bioregio-stern.de
		Tissue Engineering / BioPro	http://www.bio-pro.de
Donau-Iller	Life sciences	BioRegioUlm - Förderverein Biotechnologie e.V. (Association for the Promotion of Biotechnology)	http://www.bioregionulm.de
	Automotive	Cluster Nutzfahrzeuge Schwaben (CNS) e.V. (Commercial Vehicles Cluster Schwaben)	http://www.cns-ulm.com
Bodensee-Oberschwaben	Production technology	--	--
	Logistics	--	--
	Tourism/health	Entwicklung einer Gesundheitsregion Großraum Ulm	http://www.innovationsregion-ulm.de
	Production technology	--	--
	Automotive	--	--
	Aerospace	--	--
Engineering	Engineering	Virtuelle Fabrik Baden-Württemberg e.V. (Virtual Factory Baden-Württemberg)	http://www.virtuelle-fabrik-bw.com
	Tourism/health	Internationale Bodensee-Tourismus GmbH (IBT) (Joint Lake Constance Tourism Board)	http://www.bodensee-tourismus.com/
		Oberschwaben-Tourismus GmbH (OTG) (Tourism Board of Oberschwaben)	http://www.oberschwaben-tourismus.de
ICT		T-City-Partnernetzwerk (T-City Partner Network)	--

Notes on the Regional Cluster Competition by the Ministry of Economic Affairs

The 36 entries from regional cluster initiatives submitted by the September 22, 2008 closing date to the Regional Cluster Competition staged by the Ministry of Economic Affairs for the promotion of regional clusters in Baden-Württemberg confirm not only the enormous dynamic strength but also the outstanding regional potential for innovation within the cluster network structure. This current development underpins the intention expressed by the Ministry of Economic Affairs to enter into a continuous process of updating on the basis of the first Cluster Atlas issued in Baden-Württemberg in 2008, with the first update due to be issued in 2010.

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