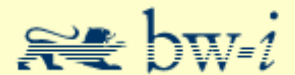


Precision Instruments and Optics in Europe



Baden-Württemberg

Baden-Württemberg International



Precision Instruments and Optics in Europe

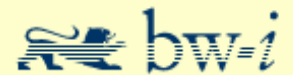
The purpose of this presentation is to:

- Demonstrate the importance of the European Union – the world's largest single market
- Outline its future dimensions as it expands towards the east
- Describe the present status and future prospects for precision instruments and optics within this market
- Explain why Baden-Württemberg is the ideal location from which to serve the Precision Instruments and Optics market – Europe wide

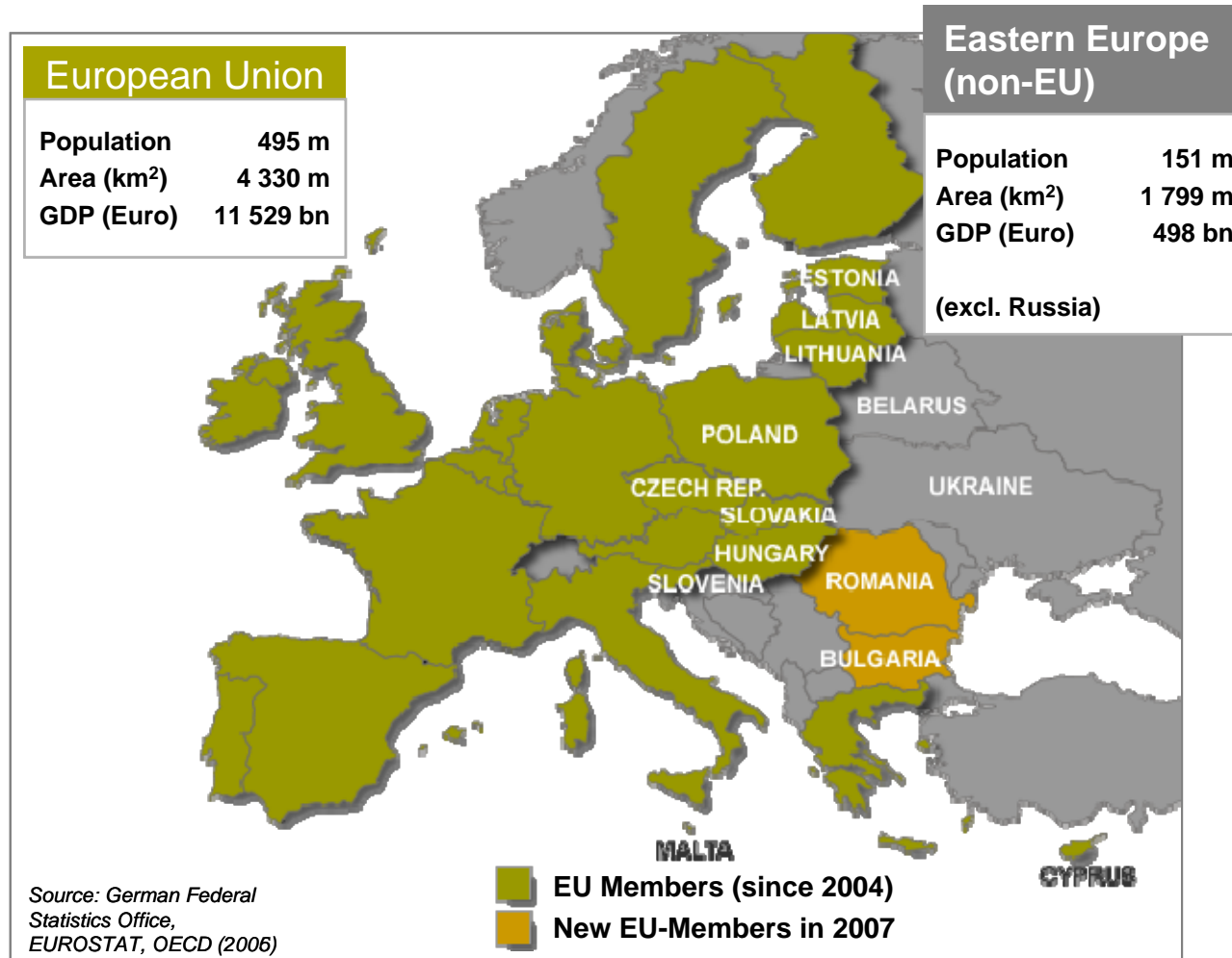


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Europe is expanding towards the East



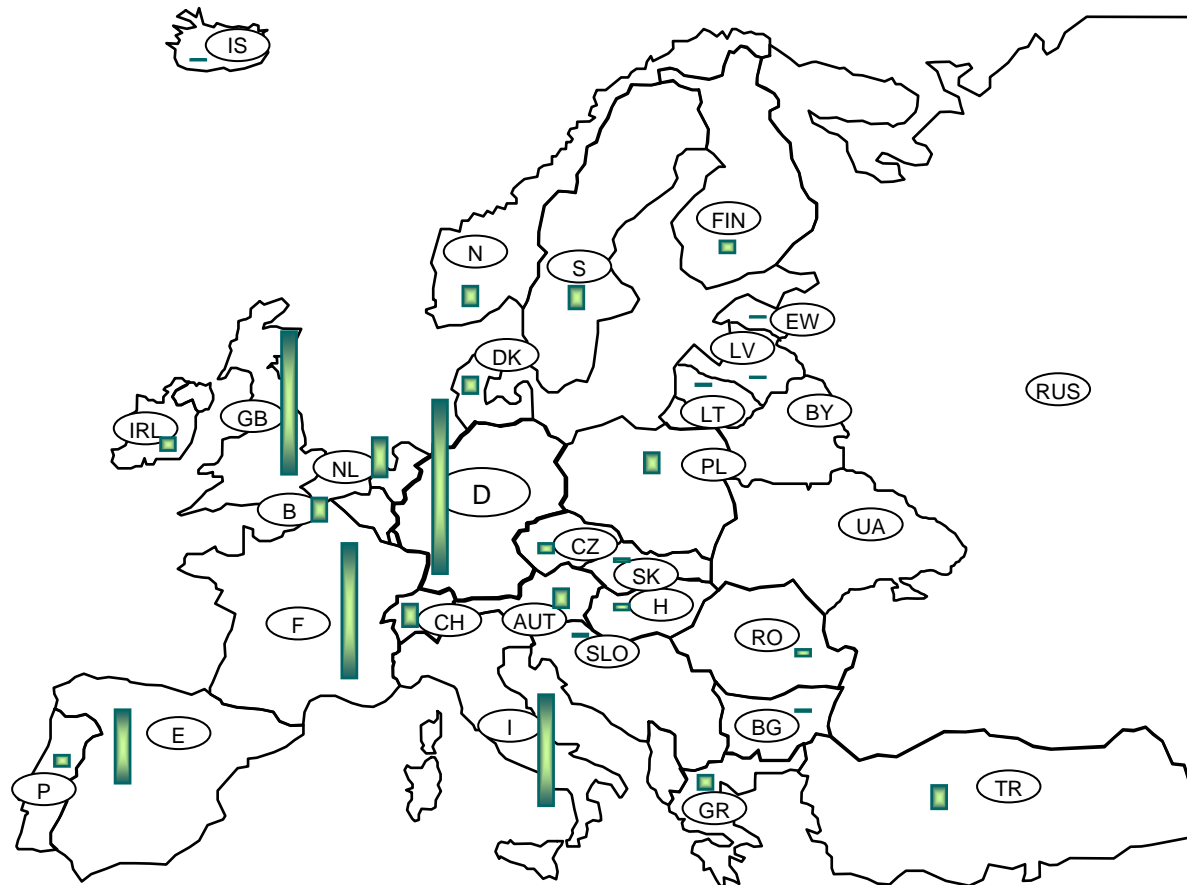
In the last two decades, the sharp contrasts between the Western and the Eastern European countries have been fading and the European Union is the major driver for Europe's integration.

Since May 2004, Poland, the Czech Republic, Slovakia, Hungary, Slovenia, the Baltic States, Cyprus and Malta are members of the European Union. In 2007, Romania and Bulgaria are have joined the EU.

European integration opens up a vast market for your company with untold market opportunities.



The leading Markets in Europe



In 2006, the 27 member states of the European Union had a total Gross Domestic Product of Euro 11 529 bn, exceeding the GDP of the USA (Euro 10 550 bn) and Japan (Euro 3 478 bn).

Four of the member states – Germany, Italy, France and the UK – are among the six largest economies of the world. Of these, Germany has the highest GDP, the largest population, and the highest purchasing power.

Within Germany, the State of Baden-Württemberg, Germany's southwest, is one of the most prosperous and innovative regions.

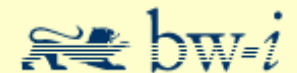
Source: German Federal Statistics Office, EUROSTAT, OECD (2006)

■ Dimension of total GDP

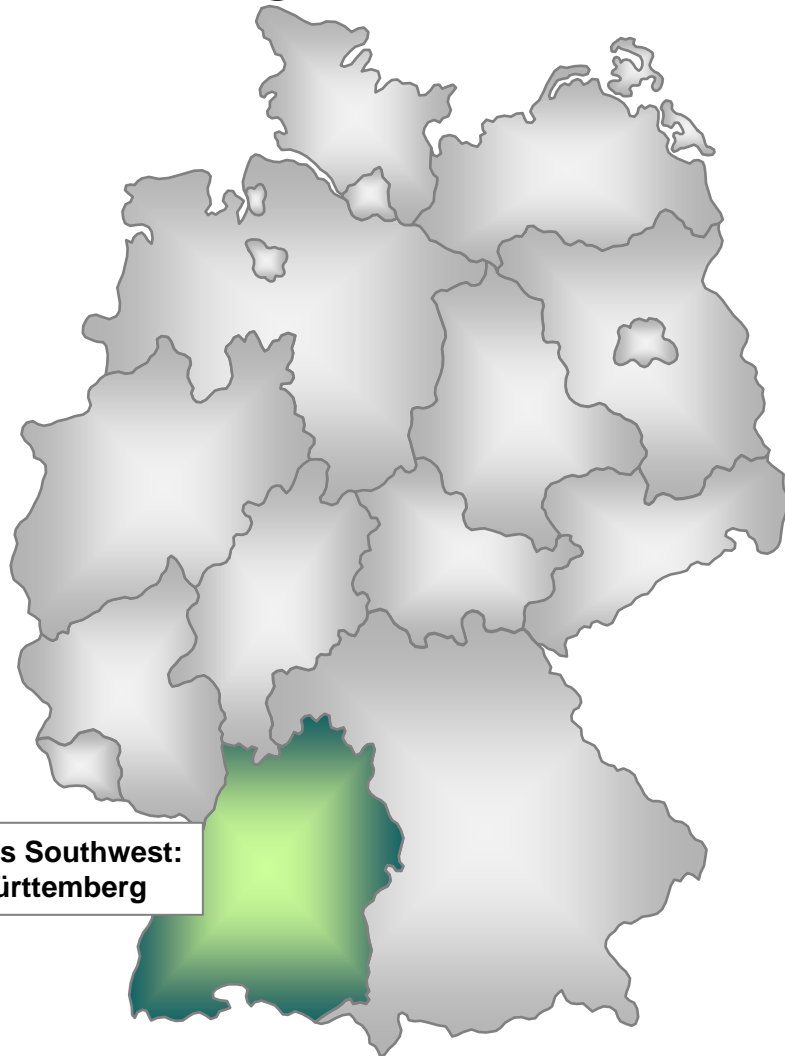


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The right Location for Growth and Prosperity



Germany's Southwest:
Baden-Württemberg

Baden-Württemberg is already the most highly industrialized and one of the most prosperous regions in Germany.

Its proximity to important markets – east and west – makes it an ideal location for pan-European activities.

And it has further merits:

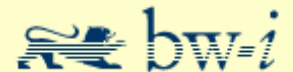
- It has a highly developed infrastructure – suppliers, R&D facilities, business services.
- Its workforce is well trained, innovative and productive.
- Its companies have an established export orientation and know how to penetrate new markets.

It is set to succeed in the 21st Century.



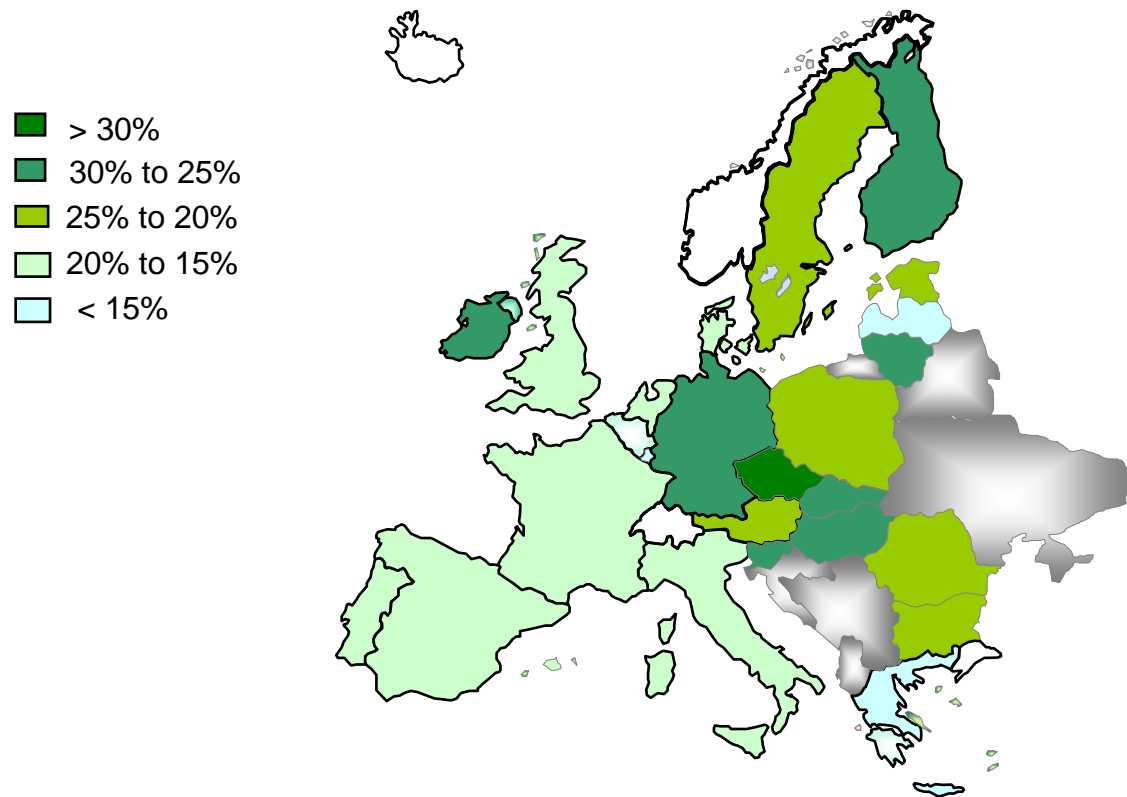
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A Foothold in Germany ensures Proximity to Industrial Customers

The Manufacturing Industry Share of National Economy (in %)



Among the Western European countries, Germany has with 26% the highest share of the domestic content in the manufacturing industry.

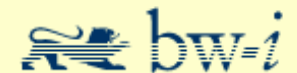
For a producer of Measuring & Control Technology, a foothold in Germany ensures close proximity to a large number of customers and suppliers.

Source: Eurostat



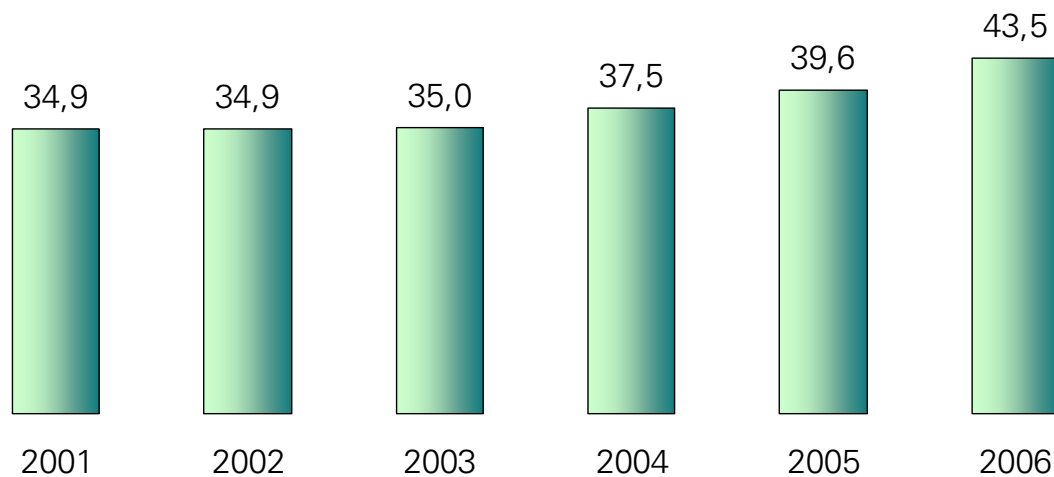
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Germany – EU's largest Producer of Precision / Optics Products

**Total Sales of German Manufacturers of
Precision Instruments and Optics (in bn €)**



In 2006 total sales of German manufacturers amounted to € 43.48 billion.

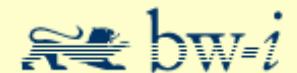
From 2005 to 2006 sales per employee grew on 8.8 % per year - evidence of the steady increase in productivity

Source: Association of Precision Engineering and Optics Manufacturers

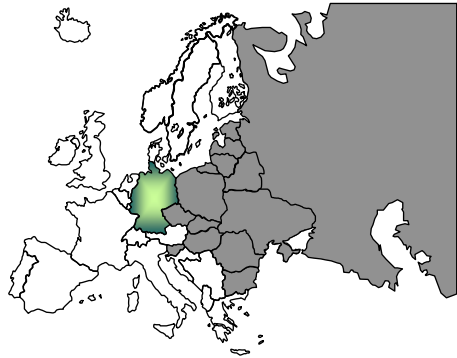


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The Eastern European Market is growing steadily



Growth rates within the Eastern European market for precision instruments and optics vary by segment.

Growth is highest in the precision instruments segment, as a result of investments in measuring and control equipment. In this segment, annual growth rates of between 7.5% and 8% are expected throughout the coming years.

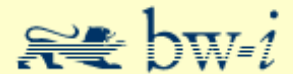
Growth in the medical equipment segment depends heavily on the level of government spending in the healthcare sector, but is expected to reach an average of 5% annually.

Growth in the consumer goods market for optical and photographic equipment, clocks and watches is slower, with preference being given to low-priced imports.

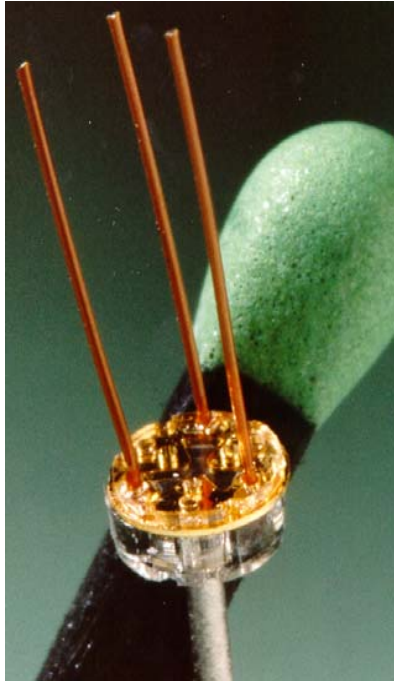


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Microsystems Technology – An Interesting Field for R&D



Micro-valve-system
compared to the size
of a match



Micropumps with macro-performance
compared to the size of an ant

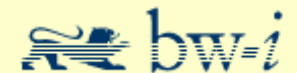
Microsystems technology - the combination of microelectronics, micromechanics, micro-optics and informatics - has made it possible to develop entirely new products in the fields of electronics, medical technology, environmental protection, communications and measuring and control equipment.

With the trend to miniaturize technical products, microsystems technology is growing rapidly worldwide. The world market for microsystems totals for \$ 20 billion.



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Growth Opportunities for Precision/Optics Products in the EU

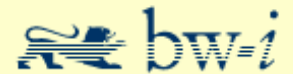


- The market is growing and will increase further
- High-quality, high-tech products are particularly in demand
- There is room for new market entrants among the wide range of specialized producers
- EU norms and standards are not a hurdle, but an opportunity to serve an ever-expanding market



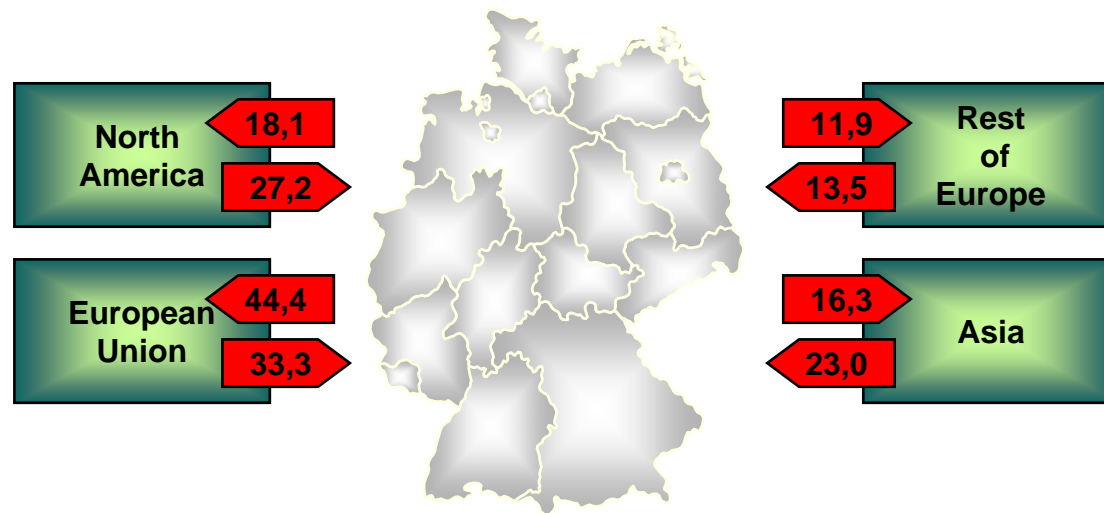
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Germany – An important Global Trade Partner

Germany's trade flows in Precision Instruments and Optics in % of total Imports/Exports



From 2005 to 2006 exports increased by 12.5% and reached an amount of €26.1 billion, accounting for 59.9% of total sales. The other EU countries and North America are the most important export markets.

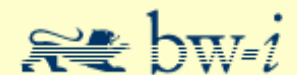
Exports to the „Rest of the world“ have increased significantly, evidence of the continuing globalization in this sector.

Source: Association of Precision Engineering and Optics Manufacturers



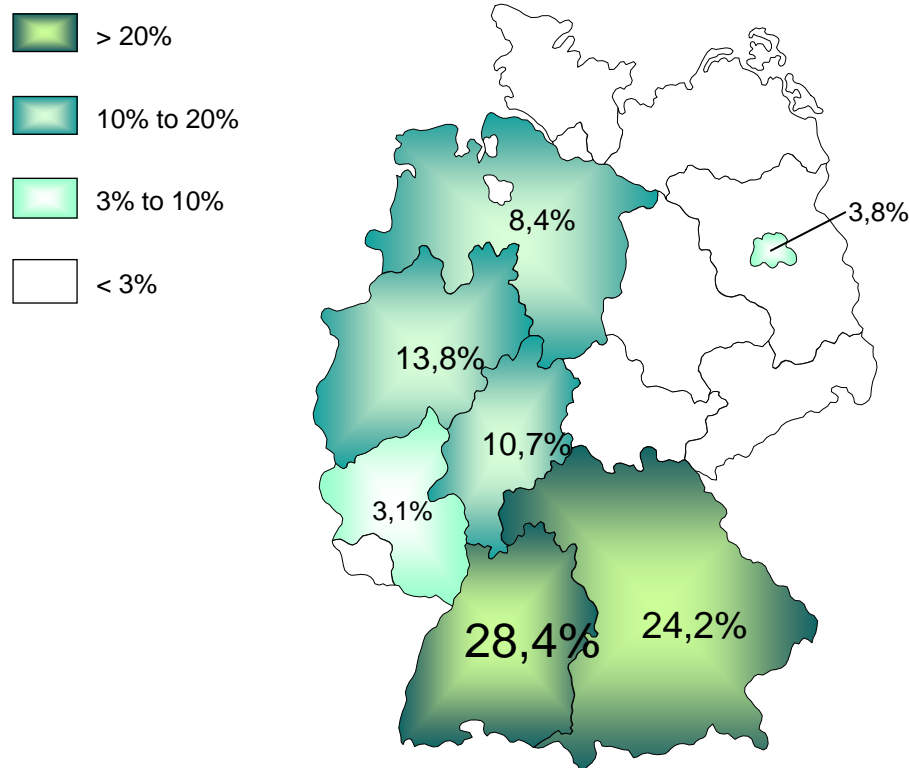
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Baden-Württemberg's companies – leading in R&D Investment

German company expenditure on R&D
Breakdown by State (in%)



German companies in the 16 States of Federal Germany spend a total of Euro 38 bn. on R&D annually. 28,4 % of this amount is invested by companies in one State – Baden-Württemberg.

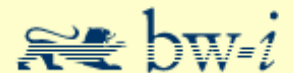
Baden-Württemberg's companies also employ far more people in R&D than in other German States. Of the total German companies workforce in R&D, 27.1 % of the employees are in Baden-Württemberg.

Source: Stifterverband, facts and figures from 2005

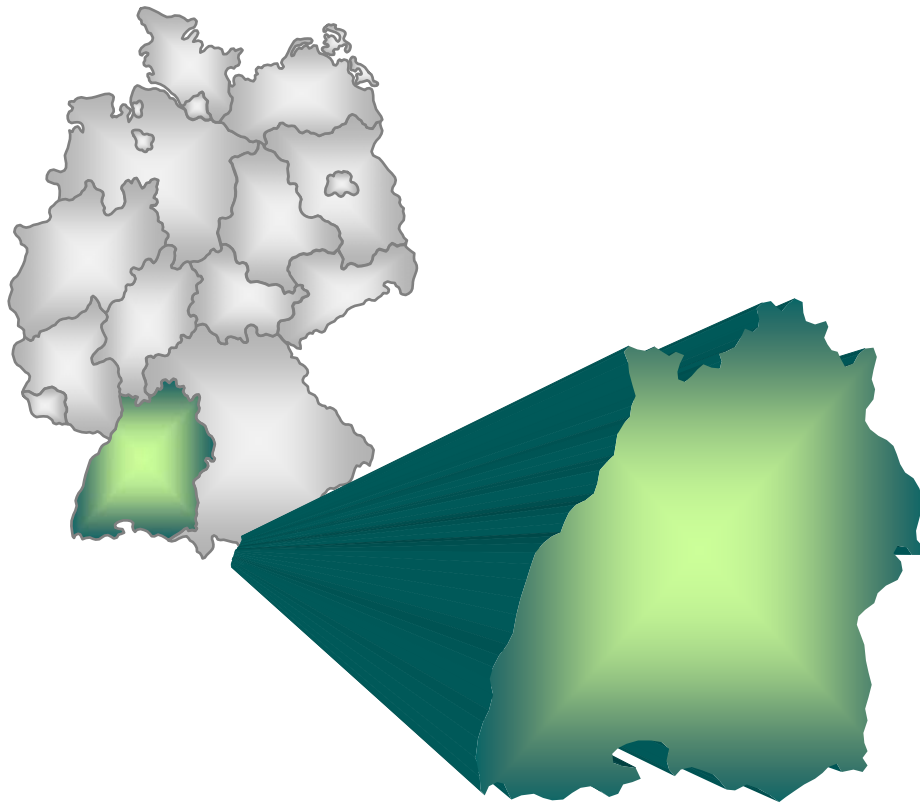


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Precision Instruments and Optics in Baden-Württemberg

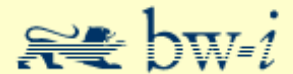


- Within Germany, Baden-Württemberg is the most highly industrialized state.
- 24% of Germany's companies in five important sectors of industry – electronics, mechanical engineering, motor vehicle construction and parts, precision instruments, optics and office machines – are in Baden-Württemberg.
- With its industrial density and dedication to quality, it is the ideal location for companies in the precision instruments and optics field.

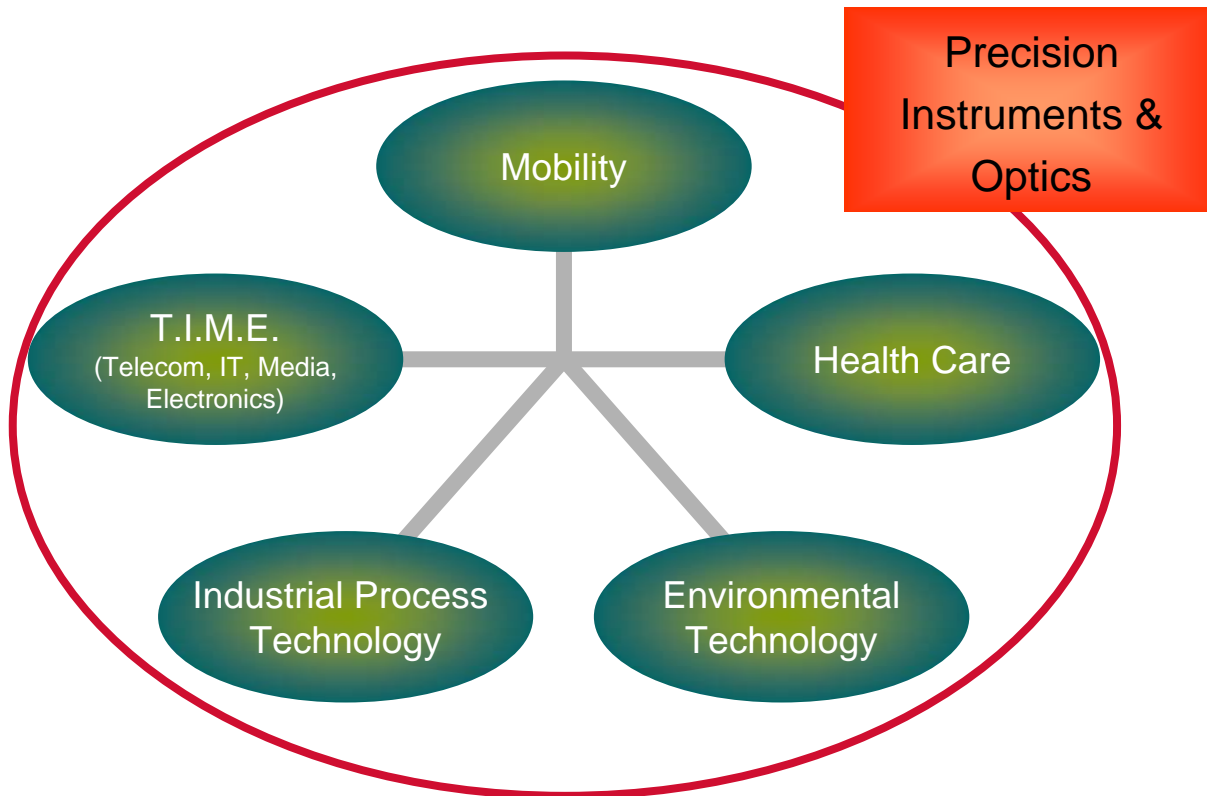


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Precision Instruments and Optics in Baden-Württemberg

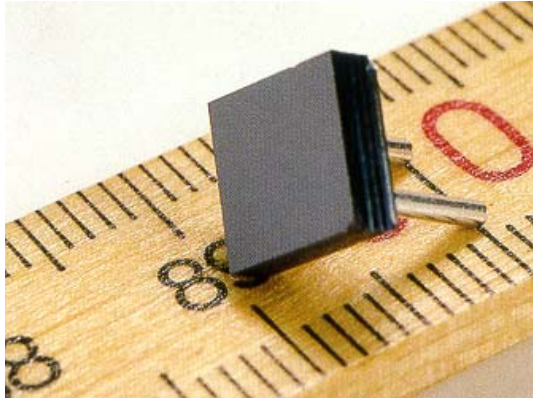


Precision Instruments & Optics is an important supplier to all of the 5 most important cluster industries in Baden-Württemberg.

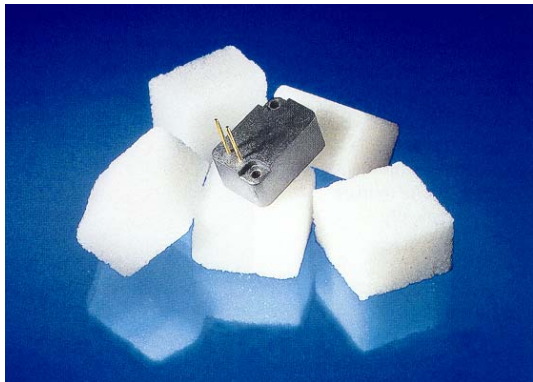
In Baden-Württemberg, all relevant industries are present in great density – one of the few regions worldwide that offers this advantage.



Microsystems Technology – Strong in Baden-Württemberg



The focus on clock-making – a traditional Baden-Württemberg handicraft – prompted the creation of an Institute for Chronometry, which subsequently developed into the Hahn-Schickard Society for Microtechnology and Information Technology (IMIT). With 74 employees, IMIT carries out a wide range of research projects, sponsored by the State and Federal Government or under contract to industry and acts as an adviser on research and development to Baden-Württemberg firms.



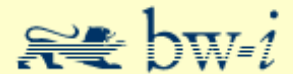
Activities include the development of innovative products and processes in, for example:

- Multifunctional microassembly systems
- Micropneumatics and microdosing
- Microswitches
- Micromechanical sensors
- Micromirror devices

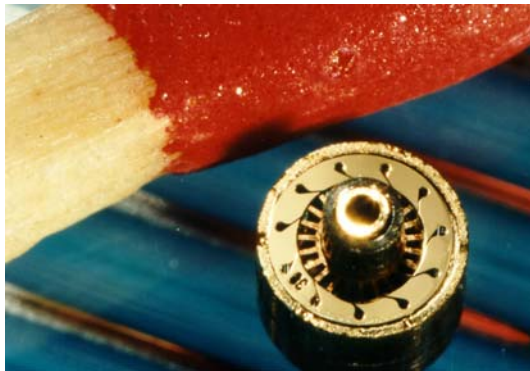


Baden-Württemberg

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Microsystems Technology in the Karlsruhe Research Center



Microturbine compared with the tip of a match

Photos by courtesy of Karlsruhe Research Center

Forschungszentrum Karlsruhe – one of Europe's largest research institutes, dedicated to research into microsystems, medical technology, environmental technology, energy and basic research – has a staff of 3 800 and an annual budget of €315 million for research and development. The projects carried out under contract or in cooperation with industry earn annual revenues of about €75 million.

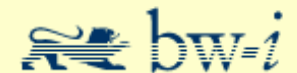
Research projects in the field of microsystems include:

- Microsystems in minimal invasive neurosurgery
- Micromembrane pumps and microturbines
- Multisensor microsystems for the identification of harmful gases
- Microreactors for chemical processes



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Microsystems Technology at the HSG-IMIT Villingen-Schwenningen



Internationally the HSG-IMIT enjoy an outstanding position as important interlocutor for experts and organizers of and speakers at technical congresses. The institute picks up ideas from its own scientific work and generates projects there from. HSG-IMIT teams test feasibility, develop and build prototypes and finally organize series production for and with clients. The experience and the method of bringing that which is proven together with that which is new leads to a short time to market.



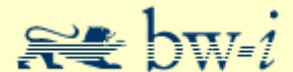
HSG-IMIT is using this potential and is concentrating on specific target markets:

- Automotive
- Bio and medicinal technology
- Life sciences
- Production and automation technology

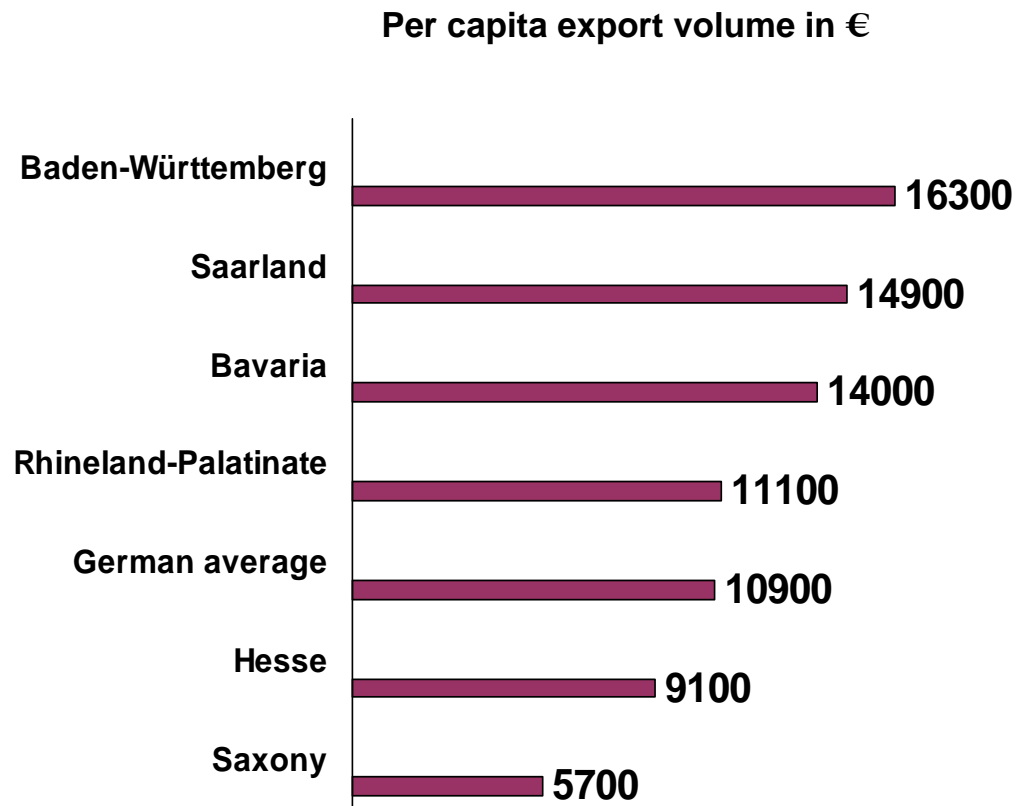


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Baden-Württemberg – One of the World's leading Exporters



Baden-Württemberg accounts for only 0.17% of the world's population and for an impressive 1.8% of total world exports. This is 15,7% of total German exports.

Baden-Württemberg yearly exports € 175 billion worth of goods (2006). With a per capita export volume of € 11502 Baden-Württemberg outstrides all other German States.

Exports account for more than 52% of the State's GDP, making Baden-Württemberg Germany's No. 1 exporter.

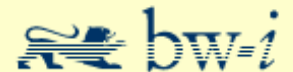
2006 figures

Sources: German Federal Statistics Office



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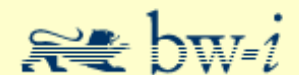


Companies

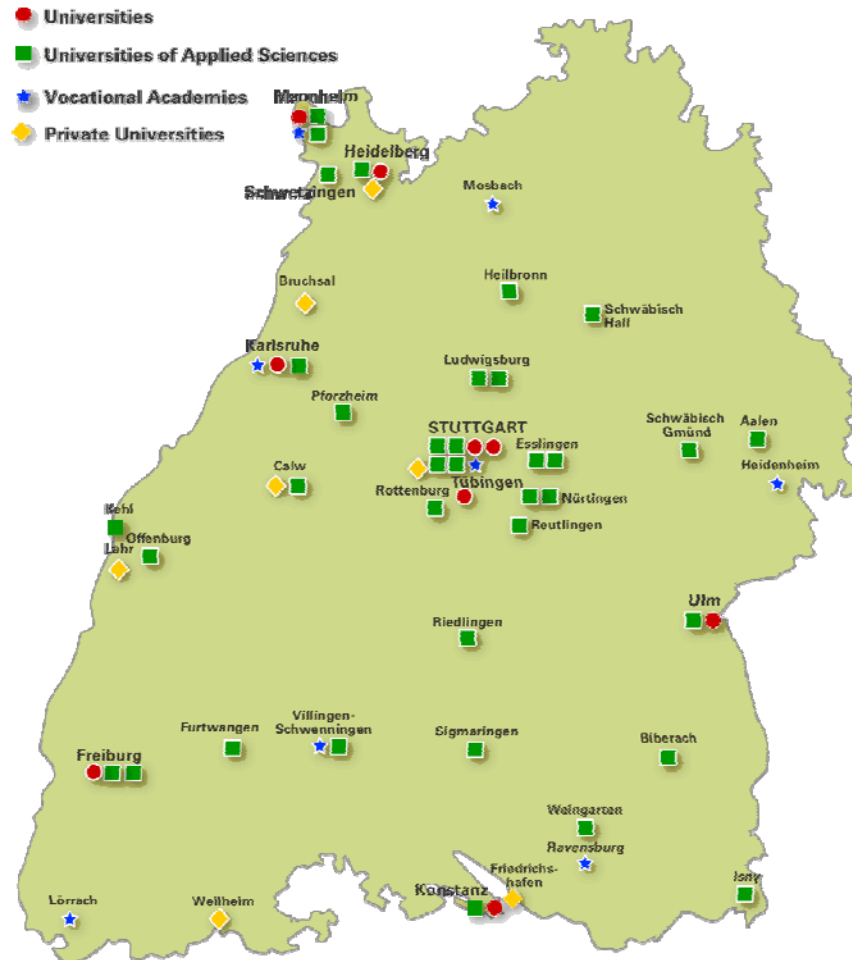


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Baden-Württemberg – An excellent structure for higher education



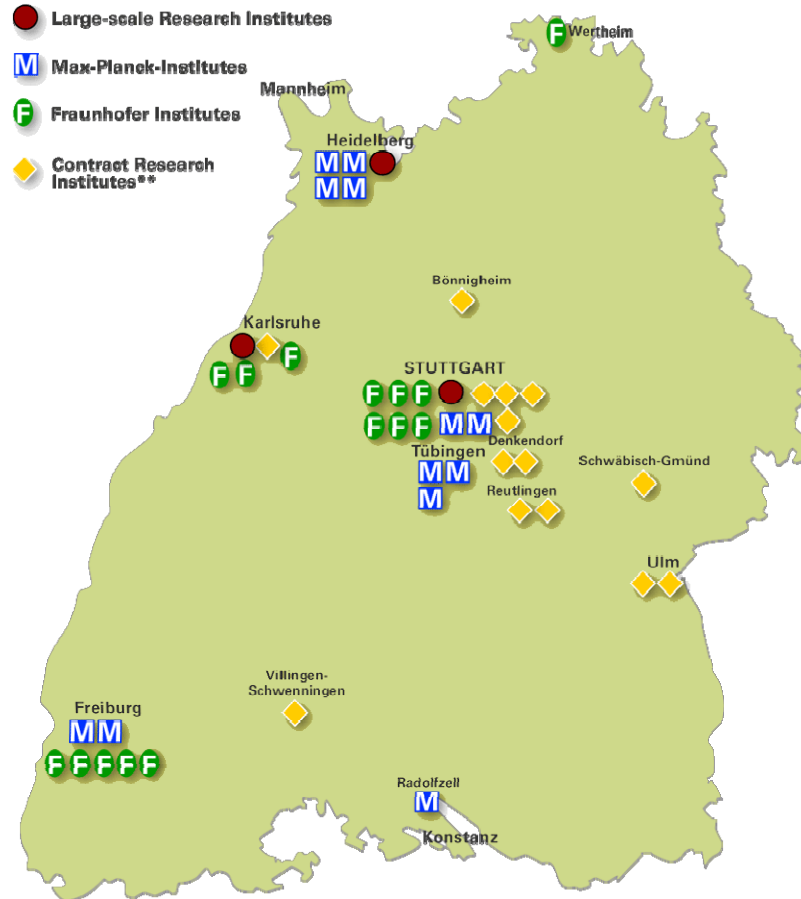
Baden-Württemberg has the most densest and the most modern structure of Universities and Academies for higher education, including

- 9 Universities
- 36 Universities of Applied Sciences
- 6 Universities of Education
- 8 Universities of Arts
- 8 Vocational Academies
- 7 Private Universities

A network of technology transfer centers provides the bridge between private industry and research institutes and guarantees rapid access to new results.



Baden-Württemberg – A highly developed Research Infrastructure

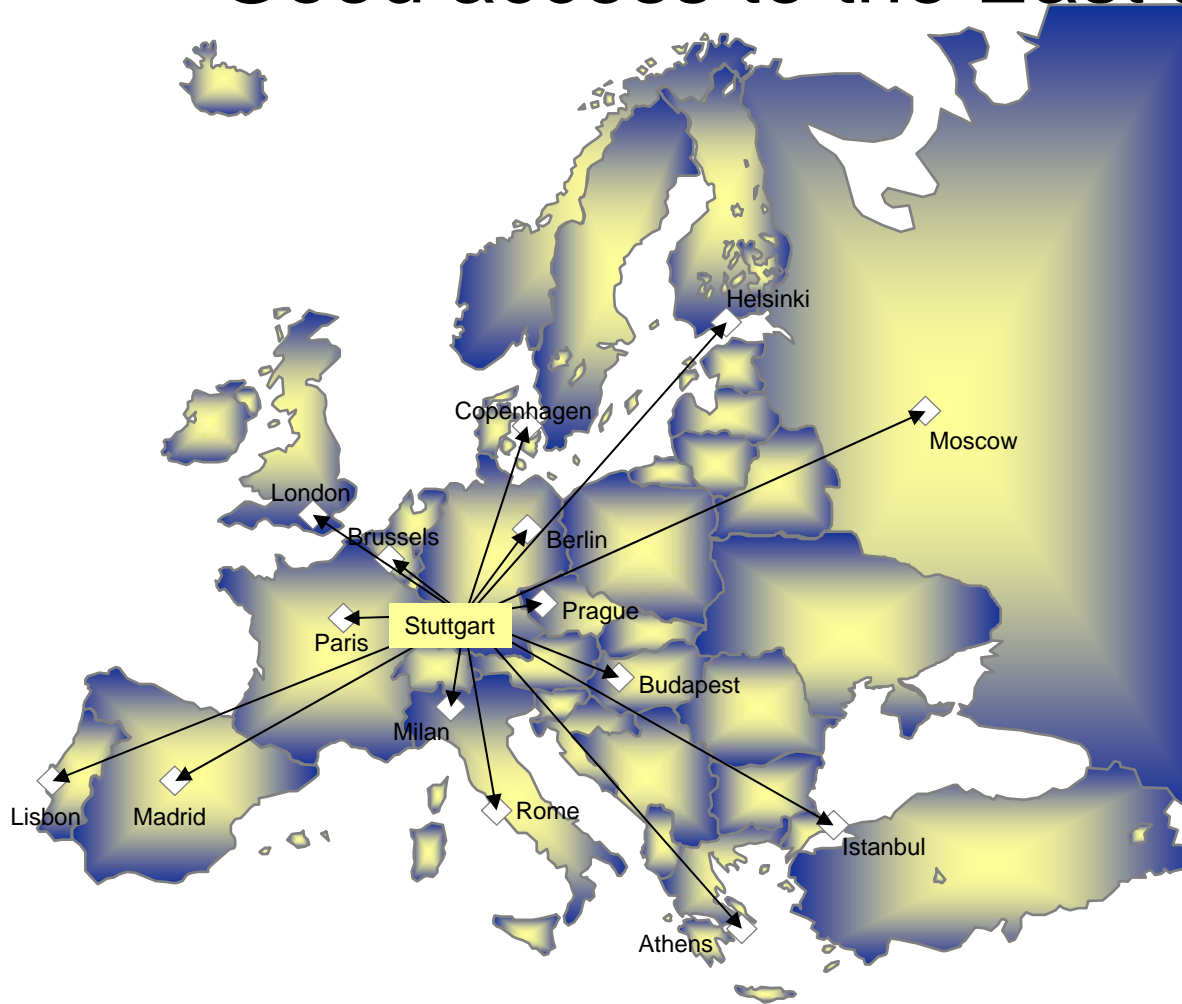


The State provides a unique research infrastructure consisting of

- 3 Large-scale research institutes
- 12 Max-Planck-Institutes
- 15 Fraunhofer Institutes
- 13 Contract research institutes



Baden-Württemberg – Good access to the East and the West

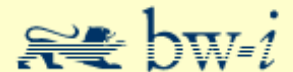


Distance	in km	flight time
Athens	1677	3hrs/40
Berlin	512	1hr/10
Brussels	416	1hr/5
Budapest	749	1hr/20
Copenhagen	802	1hr/40
Helsinki	1621	2hrs/40
Istanbul	1776	4hrs
Lisbon	1841	2hrs/10
London	727	1hr/50
Madrid	1378	2hrs/20
Milan	369	1hr/5
Moscow	2067	5hrs/10
Paris	502	1hr/20
Prague	408	1hr
Rome	808	1hr/35

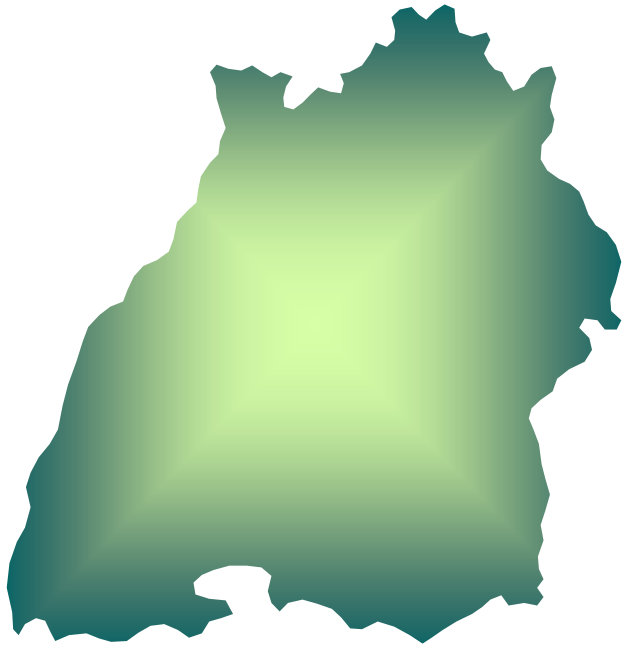


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Precision Instruments & Optics benefit from Key Advantages



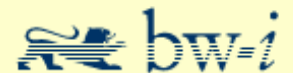
By deciding on Baden-Württemberg as the focal point of their European activities, companies in precision instruments and optics benefit from:

- A location in the most attractive European market
- Highly qualified and motivated personnel
- A research infrastructure that provides optimal cooperation possibilities
- A dense network of suppliers, known for their reliability and dedication to excellence.
- Easy access to other Western, Central and Eastern European markets



Baden-Württemberg

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Baden-Württemberg Facts & Figures

Population	10.7 million inhabitants
Gross domestic product (GDP)	Euro 353 billion
Expenditure on R&D	Euro 13.7 billion = 4,2% of the State's GDP
Patent applications per year	> 13 638 = 28,5% of German total
Number of manufacturing plants (with more than 50 employees)	4 500
Export quota (manufactured products)	51 %
Value of exports	Euro 150 billion = 1.8 % of the World's exports
Research facilities	> 100 major research institutes
University, technical and vocational college students	242 938



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Services provided by Baden-Württemberg International

Baden-Württemberg International is your central port of call if you are looking for a location or a Baden-Württemberg partner with whom to establish fruitful business relations. Our range of services includes:

When you are looking for an industrial location:

- Information on Baden-Württemberg and on individual industrial sites.
- Consulting on government subsidies and programs.
- Assistance with all contacts to authorities, including permit procedures.
- Support in the search for suppliers and the selection of service companies.

When you are looking for cooperation partners:

- Information on market potential and market specifics.
- Planning of information visits, including appointment scheduling.
- Identification of potential partners that meet your specific demands.
- Assistance with trade fair activities in Baden-Württemberg.

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Internet: www.bw-invest.de • E-Mail: info@bw-i.de



Baden-Württemberg

Baden-Württemberg International The logo for Baden-Württemberg International, consisting of a stylized blue and white graphic followed by the lowercase letters 'bw-i' in a blue serif font.