



Bavarian Ministry of
Economic Affairs,
Regional Development
and Energy



invest
in
bavaria



win.
win

Discover cross-industry innovation
in Bavaria.

How do you fit into the picture?

Bavaria could be home to your new business.

Cross-industry innovation can grow business. See for yourself if locating your start-up or company to Bavaria could be a win-win scenario:

Are you working in one of these industries?

XR – AI – IoT – FinTech – Life Science – Cybersecurity – Mobility & Aerospace – Nanotechnology – Mechatronics

— NO —

No problem. Just keep on reading ...

YES →

Are you a start-up, entrepreneur or research team?

Bring your technology to Bavaria and find entrepreneurs and other companies with ideas in fields you hadn't considered before. Read on to learn more.

YES →

Are you an established company seeking to innovate?

Discover innovation partners among Bavarian start-ups, cluster teams, universities, research institutions and companies. See how in this brochure.

YES →

Are you a cross-industry innovator and ready to sell your product?

Find new customers, employees, partners and the ideal location for your business in Bavaria. Learn more here.



"Hi, my name's Alex. I was born and bred in Bavaria and I'm going to guide you through this brochure. I hope you'll be just as excited as I was to discover how cross-industry innovation is shaping our future and strengthening our global business networks. Don't forget to check out our [website](#)."

Welcome!

What is cross-industry innovation and why is Bavaria so good at it?

Cross-industry innovation means breaking out of old patterns of doing business. It brings together industries, disciplines and skills in new ways.

For example, Extended Reality (XR) and robotics are revolutionising the operating room and in manufacturing. Artificial intelligence (AI) is creating entirely new concepts of mobility. Nanotechnology is driving new product development.

In Bavaria, radical out-of-the box thinking is shaping new and exciting business ideas by leaving silo thinking behind. This brochure will tell you all about it – and what it means for your business. In a nutshell, here are the **four key reasons** why cross-industry innovation flourishes in Bavaria:

1

Diverse business landscape

Bavaria is not only one of the most successful and multifaceted manufacturing locations in Europe. It's also home to strong non-industrial sectors like FinTech, logistics and health. This diversity creates unique cross-industry business opportunities. ([pages 6–9](#))

2

Effective networks

Bavaria has always been good at bringing together not just entrepreneurs and established companies, but also scientists and intellectuals to drive innovation. ([pages 10–13](#))

3

Access to talent

Some of the world's leading universities and research institutions call Bavaria home – along with a first-class higher education system. In addition, vocational training and dual-study programs offer solid skills and hands on experience from the start. ([pages 14–17](#))

4

Glocal perspectives

The strong presence of non-native global players in Bavaria alone helps you connect with international markets. Bavarian companies always look well beyond their home markets. Taking a glocal perspective drives innovation at home and international competitiveness. That's why their success opens new markets for you. ([pages 18–21](#))

Hot topics where cross-industry innovation makes an impact.

[Cross-industry innovation is happening in almost all sectors of business. Here are seven topics that are making headlines in Bavaria.](#)



Fin- & InsurTech

Technology and new business models are revolutionising the banking and insurance sector – and we're not just talking about Blockchain technology. Drone technology is helping insurance companies settle claims faster and fraud detection based on big data is delivering robust security solutions. Bavaria is home to many key players in the financial sector who work with start-ups and research teams to embrace these new opportunities.

[Read more](#)



Extended Reality (XR)

You think Augmented and Virtual Reality are just for kicks? Think again. Exciting new applications are being developed for everything from mental healthcare to engineering and city planning. With its strong base in the film, gaming and entertainment industry, Bavaria already knows how to use its creative prowess to forge new paths.

[Read more](#)



Artificial Intelligence (AI)

What if machines make smarter decisions and eliminate human error? The Bavarian government is investing heavily in research that puts AI to good use, with universities and research institutions acting as key drivers. AI is a prime example of cross-industry innovation in Bavaria that is gaining importance in almost all business sectors: from automotive to healthcare to procurement.

[Read more](#)



IoT & Industry 4.0

Bavaria has a strong manufacturing heritage, so all technologies enabling faster, more flexible and more efficient processes to produce better goods at less cost take center stage. From robotics to adaptive manufacturing – there are many new solutions that are revolutionising the shop floor here.

[Read more](#)



IT- & Cybersecurity

With digital transformation encompassing all walks of life and business, answers to tough IT security and cyber security problems are crucial. Bavarians take data security and privacy as seriously as the rest of Germany and are innovating on it in areas as varied as banking and building access control. The EU has selected Bavaria as one of four project locations to be part of a European network for cyber security.

[Read more](#)



Health, MedTech & Life Sciences

The days when life science was the exclusive realm of doctors, biologists and chemists are long gone in Bavaria. Today, they are working alongside engineers and data scientists to develop powerful new solutions for diagnostics and therapy. Bavaria's high-profile universities spearhead some of the most exciting cross-functional research here.

[Read more](#)



Mobility & Aerospace

How will personal mobility and logistics work in the future? Reinventing the way people and goods move from A to B is unthinkable without cross-industry innovation. From sustainable propulsion to smart logistic networks to autonomous driving: With its strong background in the automotive industry, Bavaria is leading new developments, not just on the ground, but in space as well.

[Read more](#)

Looking for business opportunities?

Bavaria's diverse economic landscape nurtures cross-industry innovation success.

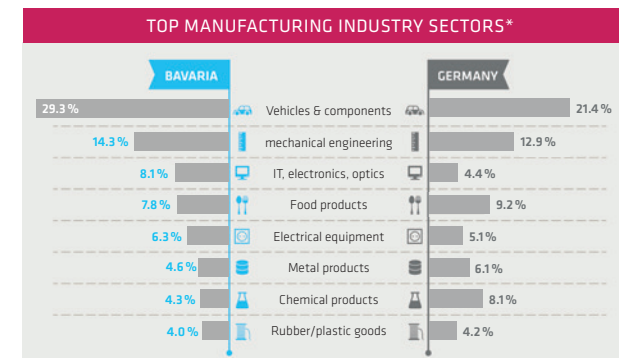
"Bavaria's strong industrial heritage gives it an enviable position of economic strength. It continuously reinvents itself as an economic powerhouse of the future. If you are a global entrepreneur with a strong vision, you will thrive here and not just because of a large potential new customer base."



Got bold plans?

[A healthy and diverse economy is the best basis for cross-industry innovation. Check out Bavaria's numbers.](#)

Bavaria is one of Europe's most powerful economic engines: If it were a country, its population of 13.1 million would make it the eighth largest country in the EU by population. With a gross domestic product (GDP) of €610 billion in 2020, it accounts for one-fifth of Germany's economic performance. Bavaria's real GDP has grown by 70% between 2000 and 2020. Thanks to its strength in a wide variety of future-oriented industry and service sectors and a highly diversified economy, the overall positive trend is set to continue.



* Percentage share in overall manufacturing revenues 2020; Source: Bavarian Ministry of Economics

BAVARIA

23.0%

Share of gross value added by industry.

Bavaria's Minister of Economic Affairs Hubert Aiwanger comments: **"Bavaria is the economic powerhouse of Germany. To keep it that way, we continue to invest heavily in our economy's cutting-edge fields of the future."**

Are you inventing the future?

[Bavaria is not just about big business. It's also about smart disruption and thriving on innovation. Discover the opportunities.](#)

Many studies cite Bavaria as one of the most future-proof locations in Europe. Leading industries such as engineering, vehicles and components as well as non-industrial sectors such as healthcare and insurance form the traditional pillars of its economic prosperity, but they continually reinvent themselves to remain competitive well into the future. This is where cross-industry innovation comes into play.

Established blue chip players such as BMW, Munich RE and Siemens have put Bavaria on the map, but it doesn't stop there. Large companies and Bavaria's so-called hidden champions are building the future by working together. A symbiosis of in-company teams, start-ups, university think tanks and science hubs join ranks to break out of old moulds to create the businesses of the future. They do this by embracing the technologies of extended reality (XR), IoT, clean tech and artificial intelligence (AI), to name just a few.



Ready for business without borders?

[Bavaria's business culture takes a global perspective. Meet like-minded people.](#)

Bavaria is a hub for global business. No other German city is home to more DAX-listed companies than Bavaria's capital of Munich.

Global companies thrive on Bavaria's combination of economic power and innovative drive. The numbers tell the story: 37 of the world's 50 most innovative companies have a base in Bavaria. One of them is the internet giant Google. Wieland Holfelder, Vice-President Engineering at Google Germany, says:

"Bavaria is a very lively IT hub in Germany and Europe. It provides a unique ecosystem that is supported by a strong industry, innovative and successful start-ups, the presence of worldwide recognised universities (e.g. TUM, LMU), as well as international research institutes (e.g. the Max Planck Society, Fraunhofer, DLR)."

See [pages 22-23](#) for a comprehensive list of resources.

Get started now!

Bavaria is one of the best European locations for your business. Invest in Bavaria can help you tap into its thriving economy and culture of innovation. There are several ways we can support you setting up your business in Bavaria:

- **Finding partners:** We can point you towards appropriate networking opportunities.
- **Boosting new business:** Invest in Bavaria knows that cross-industry innovation is a catalyst for growth. Take advantage of Bavaria's extensive pool of both large and small companies to acquire new customers. We can give you a comprehensive overview so you can get started quickly.
- **Finding locations:** The Oktoberfest and Lederhosen made Munich famous well beyond Germany's borders, but it's just one of many great Bavarian locations for business. Many successful companies are situated elsewhere in Bavaria. We can assist you in finding a location in Bavaria that fulfills your business needs.

Want to network smarter?
In Bavaria, you'll meet plenty
of like-minded people.

"In Bavaria, 17 high-tech clusters create smart networks where cross-industry innovation thrives."



Looking for a cross-industry innovation partner?

[Bavaria's proven Cluster Initiative could be your key to success.](#)

A culture of smart networking has been institutionalised in Bavaria since 2006 with the so-called "Cluster Initiative Bavaria". Clusters are networking platforms that bring together local companies, universities, research institutions and independent experts to create a unique hotbed for innovation, backed by the Bavarian government.

A total of 17 clusters around five key megatrends (Digitalisation, Energy, Health, Materials and Mobility) have been created. The success of this concept is self-evident: Most of the Bavarian cluster teams have been awarded a bronze, silver or gold label by the EU-backed European Cluster Excellence Initiative.



Cluster platforms are the key to making cross-industry innovation projects work. For example, the "Bayerische Zukunftsinitiative Assistenzrobotik" (Bavarian Future Initiative Assistance Robotics) uses technology that was designed for space exploration to create robotic systems to assist people with disabilities and physical impairments. In Garmisch-Partenkirchen, Bavaria will set up its own Healthcare Robotics Centre. Projects bring together a diverse group of players including the German Aerospace Centre (DLR); the Caritas Association of the archdiocese of Munich and Freising; the Technical University of Munich; Franka Emika, a leading manufacturer of industrial robotics; and Reactive Robotics, a developer of medical robotics. Hospitals and nursing homes across Bavaria are also involved in developing unique new healthcare concepts.

Want to start cross-border networking?

[Break out of the domestic market with like-minded internationalists in Bavaria.](#)

When the Cluster Initiative Bavaria was launched, it focused on strengthening local networks and alliances. The cluster management teams have since expanded to increasingly emphasise the creation of strong international alliances.

For example, Kawasaki City, with its world-class open-innovation site King Skyfront, and the cluster management organisation BioM, which coordinates the Munich and Bavarian Biotechnology Clusters, have created an active cooperation scheme.

Joint initiatives include matching support for cooperation projects, an exchange of information about each region's new technologies, industry developments and academic potential. They also share best practices in small and medium enterprise support in addition to sharing technology.

Ready to go?

[Start building your network in Bavaria now. We can point the way:](#)

- If you are interested in effective networking in Bavaria, we can connect you with the cluster universe, digital hubs and other suitable institutions for your business.
- Next to the Cluster Initiative Bavaria and the Digital Hubs there are many other networking platforms that cater to specific topics and sectors. We can help you find your way.
- Learn more about Bavaria's leading think tanks and research institutions on our [website](#).
- Visit Bayern Innovativ, Bavaria's leading innovation initiator and accelerator, for further information and inspiration.

See [pages 22–23](#) for a comprehensive list of resources.

Are you a digital cross-industry innovator?

[Discover networking opportunities in Bavaria's digital hubs.](#)

In addition to the cluster strategy, the German government established the so called Digital Hub Initiative in 2016. The concept: established companies, researchers, founders and investors work together in the hubs to promote the digital transformation of products and services. Digital hubs provide an ideal breeding ground for cross-industry innovation projects in an energizing environment that is not just focused on local business but on making strong ideas work on a global scale.

Three of these hubs are based in Bavaria: InsurTech, Mobility and Digital Health. Also, the InsurTech and Digital Health hubs have joined forces to create H+, a cross-industry innovation programme focussing on digital health solutions.

	InsurTech	Mobility	Digital Health
Location	Munich	Munich	Nuremberg/Erlangen
Focus Areas	IoT, Industry 4.0, Artificial Intelligence, Digital Health, Mobility, Smart Cities, Asset Management and Cybersecurity	Flexible and networked mobility	Big Data, Artificial Intelligence, IoT
Corporate Partners	e.g. Allianz SE, ARAG, Die Bayerische, Generali Deutschland, HUK-Coburg, LV 1871, Munich Re, NÜRNBERGER Versicherung, Versicherungskammer Bayern, Wayra and Treefin.	e.g. Audi, BMW, Daimler, Facebook, Nokia, SAP, Stadtwerke München, ADAC, AISIN AW, Infineon, TÜV Süd	e.g. Siemens, Healthineers, adidas, Nürnberger Versicherung, Novartis

See [pages 22–23](#) for a comprehensive list of resources.



Looking for talent?

Bavaria is fertile ground for the cross-industry innovation leaders of tomorrow.

„Academic excellence and world-class research thrives in Bavaria, thanks to its network of universities and research institutions.“



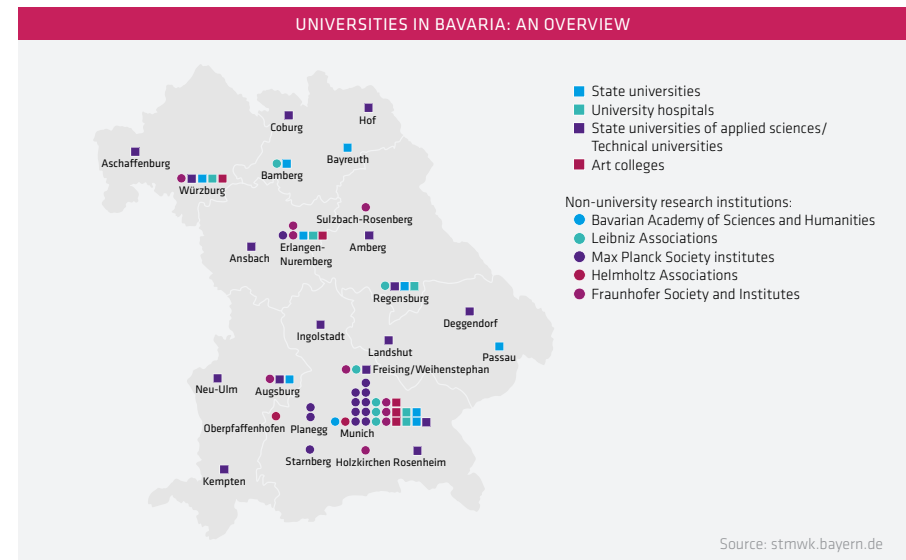
Smart young people wanted?

[Bavaria's rich landscape of learning institutions will supercharge your business.](#)

Over 400,000 students were enrolled at universities in Bavaria in the 2020/21 winter term, a number that has nearly doubled over the last 20 years. Approximately 15% of these students came from abroad. This means that each year the Bavarian university system turns out a significant number of hungry and open-minded young people who are ready to launch their careers.

But professional education doesn't just happen at universities: Vocational training programmes, a distinctive feature of Germany's education system, offer a strategic combination of training on the job and classroom education. In 2018, approximately 240,000 young people were employed as vocational trainees in Bavaria.

Finding talent, by the way, is not limited to the state's major metropolitan areas: Both top universities and exciting job opportunities can be found all over Bavaria.



How can higher education in Bavaria support you?

Bavarian universities drive SuperTech Innovation.

It's not just the quantity of students in Bavaria that provide talent for future-driven businesses; It's also the quality. An increasing number of students are majoring in so-called MINT subjects (the German acronym for Math, IT, Science and Technology) – degree programmes whose graduates are sought after by cross-industry innovation teams.

Universities not only educate, they also function as important research and innovation hubs. The Bavarian government invests heavily in university research to maintain its world-class standard. For example, as part of its Hightech Agenda and Hightech Agenda Plus programmes it is investing 3,5 billion Euros in R&D in future technologies – including massive funding for Artificial Intelligence and so-called SuperTech sectors such as Aviation, Quantum Technology and Clean Tech. All of these industries thrive on cross-industry innovation.

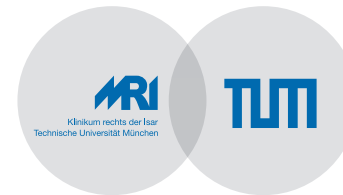
In addition, Bavarian universities work closely with many of the world class research centres based here: Both the application oriented Fraunhofer Society and the fundamental research conducting Max Planck Society have several locations in Bavaria, often located in the vicinity of relevant companies.

Seeking to bridge the gaps for cross-industry innovation?

Bavaria shows you the way with its interdependent universities and institutions.

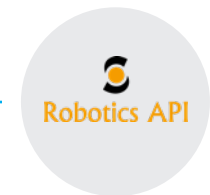
Over the past decades, universities have broken down silos to create opportunities for cross-functional innovation. On the one hand, initiatives such as TranslaTUM (see below) bring together scientists from different faculties to work on interdisciplinary research projects. On the other hand, the majority of Bavarian universities have programs in place to turn cutting-edge research into business ideas.

Let's take a look at two highly successful cases:



The Technical University of Munich has created a unique center for translational oncology research at the University Hospital rechts der Isar: TranslaTUM. Engineers and preclinical scientists work on joint projects to find new ways of curing cancer, including:

- Innovations in diagnosis and medication and the development of new treatment paradigms
- Novel sensing, imaging and analytical techniques that lead both to earlier diagnosis of cancer and the promotion of precision medicine.



The Institute for Software & Systems Engineering at the University of Augsburg has created the Robotics API software architecture that enables users to program complex, real-time critical tasks for robots in Java.

Developed closely with both local and international active companies, it has been implemented by KUKA for programming their innovative lightweight cobot LBR iiwa. It serves as a prime example of how research at universities is put into practice by companies.



Are you a glocal player?

Bavaria will help you turn ideas into reality.

"Global players such as BMW, Audi and Allianz are known worldwide, but the real driving force behind Bavaria's glocal economy is its "Mittelstand"!"



You think that beer is Bavaria's most popular export hit?

[Think again! The state's economy is well-connected all over the world.](#)

Over the past three decades the Bavarian economy has been growing by record numbers. In 2019 exports valued approximately 190 billion Euros annually. At the same time, around 193 billion Euros worth of goods were imported.

However, it is not just large companies that are doing business globally. In fact, it is the "Mittelstand" (German word for medium sized companies) that is significantly contributing to international business success.

va-Q-tec

In 2020, va-Q-tec was awarded "Innovator of the Year" by the TOP100 jury. The company offers high-performance thermal insulation components for various products, e.g. refrigerators. By now, it entered the international temperature controlled logistics market with its global TempChain network. va-Q-tec is effectively reinventing itself - from component manufacturer to logistics service provider - radical innovation based on insight into clients' needs and new market potential. Thus it became not only one of the main players contributing to the international and national distribution of the Corona vaccine.

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Key numbers on Bavarian SMEs:

99.6 %

Percent of all companies

76 %

Percent of all full-time employees

Source: stmw.bayern.de

Are you the next hidden champion?

[Many Bavarian medium sized companies are super-innovators with a glocal perspective.](#)

Hidden champions are market leaders in specialty, niche areas. With 457 companies, Germany is full of these powerhouses – and of these, Bavaria has 97. These companies are intensely focused on being the very best in their field. To do this, they are always looking for new partnerships and ways to cocreate “the next big thing”. Cross-industry innovation is often the way forward.

Many of these companies are deeply rooted in the region where they are headquartered, but their markets and partnerships extend throughout the entire world – a truly “glocal” approach to business.



Krones, a world leading packaging and bottling machine manufacturer, stands out as a prime example of Bavaria’s hidden champions. Based in Regensburg in the Upper Palatinate region, it has set up an innovation lab at TechBase Regensburg, the region’s leading digital start-up centre that maintains close ties to local universities.

The inspiration for this lab was to create an innovative space where cutting-edge technologies and digital business models can be developed and tested. It was recently named one of the top 10 digital innovation units of major corporations in Germany by one of the top German business magazines, Capital.

Concept Laser pioneered metal-based 3D printing and was ranked as one of the world’s market leaders in this segment. Founded in 2000 in Lichtenfels in Upper Franconia and acquired by GE Additive in 2016, it completed construction of its innovative “3D campus” in 2021. From its base in Lichtenfels, GE Additive helps companies in the aerospace, automotive and medical industries reimagine their production processes with smarter, more customised solutions.



CONCEPTLASER
a GE Additive company

Want to be part of the action?

Looking for the good life?

[Expats and locals alike enjoy the Bavarian lifestyle.](#)

Bavaria’s mix of majestic mountains, sparkling lakes and cosmopolitan lifestyle in a safe environment is a major reason to settle here. Time and again, the region has been voted one of the world’s best places to live alongside cities like Vancouver, Melbourne or Singapore.

People from all over the world come here for the business and cross-industry innovation opportunities – and they stay for the quality of life.

If you would like to build your start-up in one of Bavaria’s start-up-centres, you may be eligible for funding from **Invest in Bavaria’s Ois Easy Programme**. A comprehensive list of all centres and details about the programme can be found [here](#).

If you are looking for interesting investment opportunities, [BayStartUp](#) can help you select and qualify suitable start-ups.



See pages 22–23 for a comprehensive list of resources.

Curious and hungry for more?

[Here are a few key links to help you navigate the unique Bavarian cross-industry innovation ecosystem.](#)

Our services

- [Find out](#) how Invest in Bavaria can help you get started with your cross-industry innovation project.
- Check out [Ois Easy](#), the package for young start-ups from abroad.

Start-up centres and accelerators

- Get a comprehensive [list](#) of digital start-up centres and see how they connect cross-industry innovation partners.
- Download an [infographic](#) with a list of Bavarian accelerator programs by industry.

Clusters and hubs

- Find a comprehensive overview of Bavarian clusters and examples of cross-industry collaboration [here](#).
- Find more information on the [Digital Hub Initiative](#).

Universities and research institutions

- A list of Bavaria's universities is available [here](#).
- If you are looking for a listing of their international offices, [click here](#).
- Get an [overview](#) of cross-industry innovation at Bavaria's universities of applied sciences.
- Major research institutions involved in cross-industry innovation are listed [here](#).



News and updates

- If you want to keep up to date about cross-industry innovation in Bavaria, register for our [newsletter](#) here.
- Visit the [website](#) of our colleagues at Bayern Innovativ for ongoing updates.

Finally, if you want to contact us directly, [click here](#).

We are looking forward to talking cross-industry innovation with you.





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