

Your Partner for Innovation

INNOVATION

NANOTECHNOLOGIES

ENERGY TECHNOLOGIES



You as the Head of an SME...

- ...have an innovative idea and are looking for a sparring partner to discuss the realization of a marketable product?
- ...are looking for support to improve your product and to further your company?
- ...want exact clarification regarding patent protection?
- ...value a partner who can show you how you can benefit from collaboration with a university or research institute?

- ...wish to expand your product range but are reliant on additional technological expertise?
- ...are looking for an experienced contact partner who can show you how your company can profit from digitalization and Industry 4.0?
- ...need additional funds to realise your development project?

If you answered yes to one of these questions, you should get to know us.



We are Your Partner for Innovation



Dr. Martin A. Bopp
Managing Director
Hightech Zentrum Aargau AG

We welcome you, entrepreneurs,

We, the Hightech Zentrum Aargau based in Brugg are an independent service centre in the canton of Aargau. Our core business is in supporting SMEs in Aargau to realize their innovative projects and in matters surrounding technology. In the first five years we have initiated and supported more than 1000 various projects with over 500 different companies from all kinds of technological fields. We work in three main areas: innovation consultancy and support, nano – and material technologies and also energy technologies and resource efficiency. Find out about us: on the following pages we will show you in short what added value we can offer you.

- We will show you how to start up your innovation project and make it successful. Online (www.hightechzentrum.ch) you will find numerous success stories that Hightech Zentrum Aargau have contributed to considerably.
- We will help you find the way to collaborate with the best-suited university, research institute or industry partner.
- We can support you financially with a feasibility study or point out further financing options.
- A dozen technology and innovation specialists are at your disposal to increase your competitiveness. Our experts are from various specialist areas and have in-depth knowledge which, combined, provides over 300 years' related work experience.

- Competent networking partners are an important factor for success. Partners and companies that make up our networking base in Switzerland has increased to over 7000 contacts. We will arrange contacts to specialists in research and industry.
- We will advise you in matters concerning patent rights and support you with patent searches/researches.
- We will offer you added value with our industry-specific and thematic information events and workshops. The Netzwerk Aargau innovativ, our youngest platform, is equipped for knowledge sharing and experience exchanges between business people.

Our work is competent, market-oriented and practical. With you, we will find a good solution to every question. Try us out!

“I am a fan of this institute. The Hightech Zentrum Aargau knows how to guide innovation projects to their implementation.”

Thomas Stäubli, CEO SWD AG Stator- and Rotor Technology

Our Areas of Focus

■ Innovation consultation and support

What importance does innovation hold in your company's strategy? Innovative companies make a high contribution to added value. Innovation support is a central mission of Hightech Zentrum Aargau. We fundamentally assist businesses from all fields. We facilitate access for SMEs to the right technologies with additional product- and process innovation. We have a large partner network at our disposal.

■ Nano- and materials technologies

How "nano-conscious" is your business? Are you using the new generation of materials? Nanotechnology and newly developed high-tech materials are already enabling completely new industrial products and production processes. The potential for further development is immense. Accessible knowledge of key technologies in the canton of Aargau is extensive, even within an international context. Highly competent institutes

such as the Swiss Nanoscience Institute SNI play a significant role; affiliated to the Paul Scherrer Institute PSI and FHNW University Northwestern Switzerland, they act as a beacon for nanosciences and technologies. We, the Hightech Zentrum Aargau, established our core competence in nano- and materials technology back when the company was founded. We generate pioneering achievements by imparting and applying this knowledge whereby industrial implementation is constantly increasing. As an extra service, we are creating the internet site nano.swiss. This should further facilitate access for businesses to new materials and production methods.

■ Energy technology and resource efficiency

How important is energy technology to you? Energy supply today is extremely important. Aargau is the energy canton of Switzerland. Several well-established businesses from the energy technology and energy economy branches and also from distinguished research institutes are firmly rooted here. They are also significant players in the 21st century: they need to find a sustainable approach to energy and material resources in order to ensure a cost-effective, environmental and reliable energy supply. The Hightech Zentrum Aargau promotes connectivity between companies and universities and is involved in innovation projects to facilitate and develop sophisticated energy technologies.



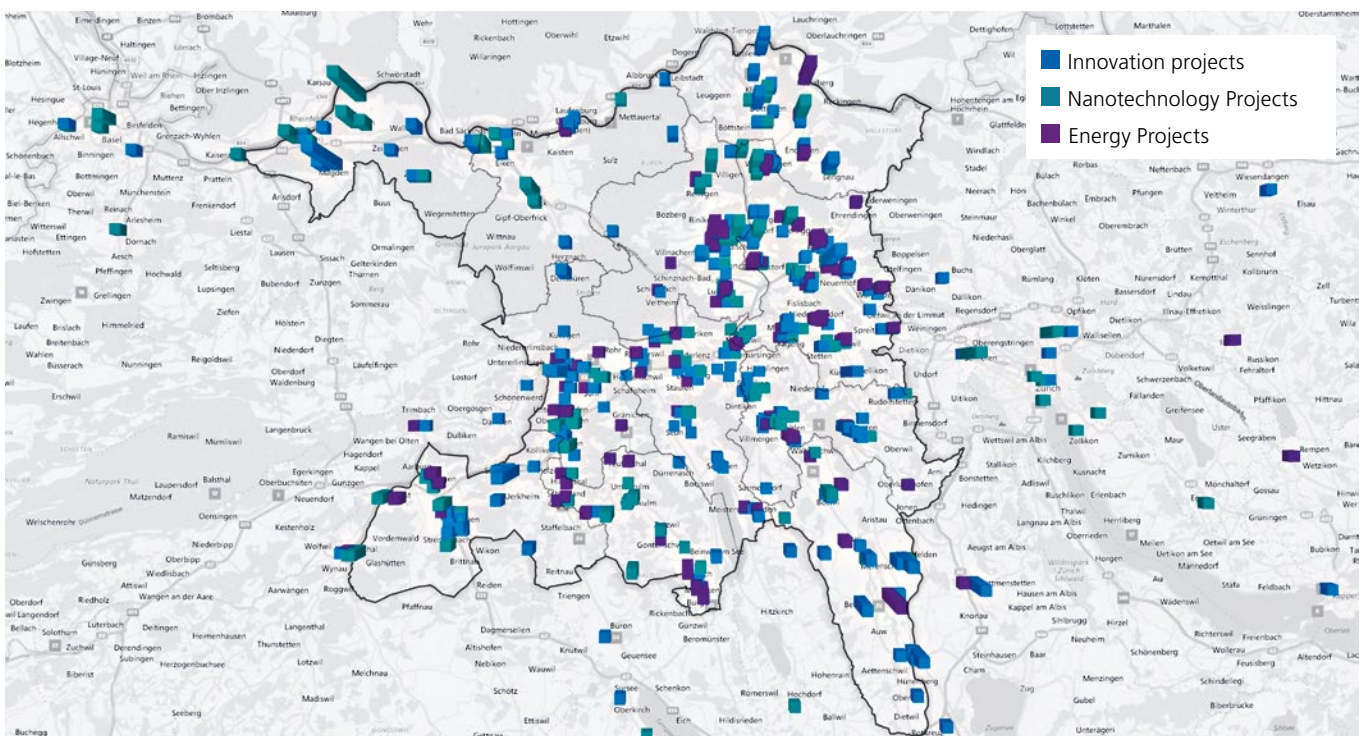
1000 Projects with 500 Companies

The first five years of Hightech Zentrum Aargau – 2013 to 2017 – were defined by continual growth. To date we have initiated and supported over 1000 various projects with 500 different companies. The geographical divergence of the projects indicates where the innovators are based – the Hightech Zentrum Aargau is active throughout the whole of the canton.

Taking the total number of projects as a gauge, materials technologies and mechanical engineer-

ing are mainly supported. Next are the areas ICT/Software/Engineering and electrical engineering followed projects in biotech-/medtech-/pharma-/chemical industries.

Most nanotechnology projects are supported in the first five years in the following industries: materials technologies (65 %) and biotech/medtech/pharma/chemical industries.



Projects supported by Hightech Zentrum Aargau since 2013.

“The Hightech Zentrum Aargau has contacts everywhere and understands where innovation is needed. The expert responsible for us was a key motivator.”

Christoph Müller, co-owner AquAero GmbH

A Solid Foundation for Your Innovation

Innovations move our world forwards. It is thanks to them that we produce more efficiently, we launch new products and tap into new markets. Innovativeness is a traditional strength of Aargau, the economy canton. But this, too, needs to be maintained and, with view to global competition, to continue to develop. Increasing the innovativeness of SMEs in Aargau is Hightech Zentrum Aargau's central mission.

What is the approach of our specialists? Our range of services is structured modularly. It comprises the following four components:

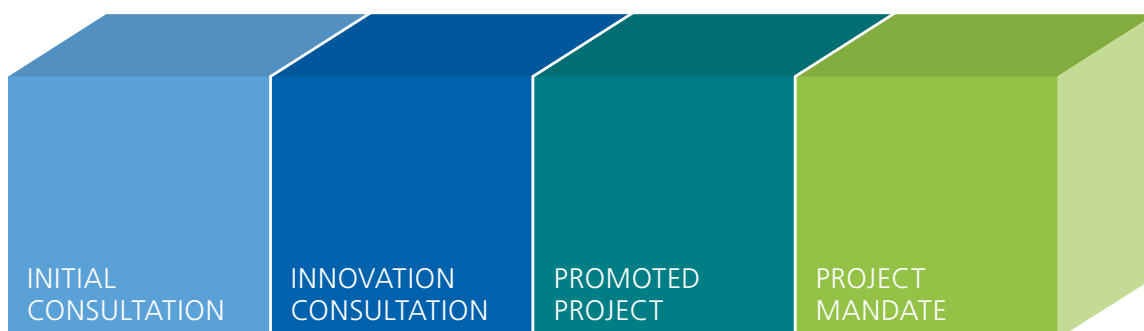
1. Initial consultation

- In the first conversation we introduce who we are to you and outline our services.
- Our specialists gain a first insight into your company and find out what your specific needs are.

- We show you how you can be supported in the realisation of your innovation concept.
- We explain which various funding opportunities are available in Aargau, nationally and internationally.

2. Innovation consultation

- The second step involves your innovation project being textually refined.
- We support you on specific matters surrounding technology and innovation and will gladly assume the role of a sparring partner for you.
- Matters concerning confidentiality and rights on intellectual property (Intellectual Property IP) are clarified.
- Tailored to your needs, we identify suitable development partners from research or industry.



Modular structure: the four central services of Hightech Zentrum Aargau.

- The most appropriate promotion tool (e.g. a feasibility study) is determined and submission of the promoted project is prepared.
- The implementation plan is established.

3. Promoted project

- The project objective and IP strategy are defined and a confidentiality agreement reached.
- If desired, we advise and support you on patent searches.
- Our best-suited development partner in research or industry is evaluated and contacted.
- The budget for project financing from internal and external sources is drawn up.
- We support you in the preparation of the project application and in securing the appropriate funding.
- The realisation of the promoted project is accompanied closely by our specialists.

4. Project mandate

- Concerning components 1 to 3 we can offer Aargau SMEs a certain number of consultation hours free of charge. For example, a first weeks of consultations when a feasibility study is prepared.
- If desired, for a fee, we will undertake a project mandate. This will be invoiced either by the hour or at a flat rate.
- In the context of a project mandate we can assume full responsibility for the overall management of the project.
- We are glad to provide further service modules (environment analysis, business modelling, extended patent searches, IP strategy development, workshops, technical seminars etc).

Aargau SMEs are promoted financially in components 1 to 3 with a considerable amount.



Depending on requirement the selection of service components can be varied. Several promoted projects per field are possible.

“Innovation is vital for us because it taps into new and ambitious areas. The Hightech Zentrum Aargau has greatly supported us in this.”

Roger Burger, General Manager Orchid Orthopedics Switzerland GmbH

We Will Tell you what is Possible: With the Reliable Feasibility Study

Do you have a brilliant idea for a new product, process improvement or an attractive service? Hightech Zentrum Aargau offers you a promotion tool with the feasibility study that can optimise the chances of your innovation project whilst simultaneously reducing its risks. The feasibility study at cantonal level is unique throughout Switzerland. Our technology and innovation experts adopt the role of a sparring partner. They seek out the best partner, or more specifically, the best-suited institute for you. With view to a development project, the feasibility of your plan – i.e. the technical practicability – is closely inspected. In this way you receive an important decision-making tool for your project and we provide

you with a low-threshold introduction into the innovation process. 80% of the feasibility studies carried out so far have been done in collaboration with a university or research institute. Consequently, companies benefit from the most efficient transfer of knowledge from universities to businesses. The conditions are fair: the Hightech Zentrum Aargau finances the work of their respective university partners. The business enterprise contributes financially pro rata and with their own contributions. The application procedure is simple; the applications can continually be submitted. We ensure a quick decision.



Between 2013 and the middle of 2018, 180 feasibility studies were carried out, most of which were in collaboration with a university or research institute.

The Feasibility Study: Customised for You

The process of a feasibility study

1. Defining the subject
2. Finding the 2. best-suited university or research institute respectively
3. Submitting an application, receiving approval
4. Conducting the study with review meetings
5. Closing meeting

From the Experience of Hightech Zentrum Aargau:

- Innovation consultation
- Nanotechnologies
- Energy Technologies

■ **For instance, the SWD AG Stator and Rotor Technology** in Densbüren. In the course of a feasibility study they attracted significant recognition with regard to the further development of their manufacturing technology. They were able to raise their competitiveness to a higher, more ambitious level. This flexible SME is a partner to a reputable manufacturer of electric motors.

■ **For instance, the Algra Group** in Merenschwand. They make and process signs, fronts, casings and input systems. Through a feasibility study Algra detected a weak point in the production process for metal signs. With specific counter-measures, production costs were able to be significantly reduced permanently.

■ **For instance, the Orchid Orthopedics Switzerland** in Baden Dättwil. The medical

technology company implemented, as a result of a feasibility study, an innovative wear-resistant coating for implants. The result: it was possible to verify the significantly improved functionality of the components in question.

■ **For instance, Rohrer AG** in Möhlin. The company was assisted with the support of a feasibility study for a development project. Rohrer is working on a new method for the production of freeze-dried tablets based on their own patented technology.

■ **For instance the EWS Energie AG** in Reinach. The regional utility company received the confirmation during the course of a feasibility study that they are on the right innovative path with their battery storage (Tesla battery) for supplying whole neighbourhoods with solar power.

■ **For instance, the AquAero GmbH** in Windisch. Through a feasibility study, the start-up company realised that its technology could not only be used for extracting water from the air but also as an industrial dehumidifier for cold chambers. This resulted in additional sales opportunities.

“The Hightech Zentrum Aargau, in collaboration with the FHNW University Northwestern Switzerland, has imparted essential inspiration to us through their expertise and experience. It has also opened our eyes up to the realisation of more potential for optimisation.” Dieter Matter CEO Algra Group

Use our Strong Partner Network

Strong partnerships are an important basis for success. One of our strengths lies in our tight network of over 7000 contacts: universities, research institutes, industry partners and associations, third party innovation networks and project financing partners. The quality of our network provides a guarantee that, for every challenge you face, a good solution will be found efficiently. Networking Aargau companies in matters of innovation and technology is part of our core responsibility. This responsibility is central to the conception of our numerous events: large-scale events all about energy, nanotechnologies and practice circle including

workshops, industry-, subject-specific- and partner events.

Netzwerk Aargau innovativ: The idea behind networking plays a central role in connection with our latest platform. The Netzwerk Aargau innovativ provides business people within Aargau with the opportunity to exchange information in personal conversations on current matters such as innovation, digital transformation, Industry 4.0 and process optimisation. A transfer of knowledge in practice, for practice.

Financing

- Schweizerische Eidgenossenschaft / Confederation suisse / Confederazione Svizzera / Confederaziun svizra / Swiss Confederation
- Bundesamt für Energie BFE
- Innosuisse – Swiss Innovation Agency
- Technologiefonds
- BOEG FÜR INNOVATIVEN KLIMASCHUTZ
- EU RESEARCH
- Swiss guide to European research & innovation
- HOPE 2020
- FNSNF
- SCHWEIZERISCHER NATIONALFONDS ZUR FÖRDERUNG DER WISSENSCHAFTLICHEN FORSCHUNG
- SNI
- FORSCHUNGSFONDS AARGAU

Universities

- n|w Fachhochschule Nordwestschweiz
- FITT Fachhochschule Technikum Winterthur
- INKA Institut für Menschentechnische Konstruktiv-Entwicklungen
- SNI
- u^b Universität Basel
- Berner Fachhochschule
- EPFL
- ECOLE POLYTECHNIQUE FÉDÉRALE DE LAUSANNE
- HOCHSCHULE LUZERN
- FFHS
- Universität Basel
- ETH zürich
- Universität Zürich
- adolphe merkle Institute
- Fraunhofer
- zhaw
- Hes-So
- FHO
- Fachhochschule Ostschweiz

Industry Partners

Hundreds of companies, primarily from the canton of Aargau

Research Institutes

- KAITZI
- Empa
- Material Science and Technology
- inspire
- csem
- PAUL SCHERRER INSTITUT
- FES
- FIBL

Innovation Networks

- Schweizerische Eidgenossenschaft / Confederation suisse / Confederazione Svizzera / Confederaziun svizra / Swiss Confederation
- Innosuisse – Swiss Innovation Agency
- DEPARTEMENT VOLKSWIRTSCHAFT UND INNERES
- Aargau Services Standortförderung
- CC SCHWEIZ
- geni suisse
- IGF | IPI
- TECHNOPARK AARGAU
- RUZ
- IGZ
- innovations- und gründerzentrum
- surfaces innovantes™
- ITZ
- InnovationsTransfer Zentralschweiz
- its
- NETWORK
- AMNetwork
- SWISS STARTUP CHALLENGE
- BASEL AREA. SWISS
- SWISS materials

Industry Association

- AiHK Aargauische Industrie- und Handelskammer
- AGV Aargauer Gewerbeverband
- SWISSMEM
- BWZ
- SM SWISSMECHANIC
- IPQ
- Institut für praxisorientierte Qualifizierung
- SWISS MEDTECH
- SWISS ENGINEERING
- STV UTS ATS

Protecting your Intellectual Property: Special Service Patent Research

Any business which backs innovations should also be prepared in advance for matters concerning intellectual property (IP). Hightech Zentrum Aargau has a wealth of IP competence at their disposal and also supports SMEs in this sensitive area.

Intellectual property can be protected from imitations by unauthorized persons through patents and brand or design protection. Issues concerning commercial property rights are mostly complex. In close collaboration with the Swiss Federal Institute of Intellectual Property in Bern (IGE), we help companies to acquire specific information, especially regarding patents.

- As a first step, the framework of an idea, or more specifically, of an innovation plan, is considered. By so doing, we clarify the principle possibilities of a commercial right to protection.

Following this, individual IP elements for the protection of the plan are outlined. Depending on the initial position, our specialist will define the IP strategy with you or will, at this juncture, call in a patent or brand lawyer.

- Our expert acquires information from fee-based databanks and supplements them with data from other sources. Hightech Zentrum Aargau functions here, too, as a hub and acts as an intermediary between databanks, research suppliers and patent lawyers.
- An additional option includes further research by involving technology and patent experts of the IGE, or patent lawyers. In this way, any questions arising concerning patentability and the risk of a potential patent infringement are dealt with.

Guided patent search

One special service offered by the Hightech Zentrum Aargau is the one day, guided patent search at the IGE in Bern. This search, which is free of charge to Aargau SMEs, is conducive to the preparation of an innovation project. Based on the follow-up research report, the next steps are decided on: registration of the patent, project cancellation or acquisition of the licence. Guided patent searches can be carried out via a telephone conference call at the Hightech Zentrum Aargau. We additionally offer a field analysis. In so doing, within a day a company gains valuable information about technological trends and the competition's behaviour.



Sensitive area: Intellectual Property needs protection.

“Hightech Zentrum Aargau’s network offers a big advantage: We can especially benefit from expert knowledge with a scientific background.”

Alexander Meyer, company manager and owner of KAPAG Karton + Papier AG

Boost from Aargau Research Funding



Successfully supported: the young enterprise Sintratec AG from Brugg shakes up the globally increasing market for 3D printers in a desktop format. The hightech start-up was supported by Aargau Research Fund and Hightech Zentrum Aargau to remain as the market leader.



Successfully supported: Birchmeier Sprühtechnik AG in Stetten developed a modern spraying technique for the protection of plants and pest control. This project was supported by Aargau Research Fund in collaboration with Hightech Zentrum Aargau. The company has already won several innovation prizes for the electronically controlled spraying technique.

The Aargau Research Fund, together with Hightech Zentrum Aargau's feasibility study and the Nano-Aargovia program, is significantly instrumental in the financing of research and development projects. The Aargau Research Fund supports applied research and development projects from Aargau companies, provided a university or research institute is involved. The projects need to be able to demonstrate a high level of innovation whilst promising economic gains to the business partner. The amount for sponsorship, a maximum of 100,000 SF comes from the university or research institute involved. The company matches the amount with their own personal contribution.

Since it was founded in 2008 the Aargau Research Fund has sponsored almost 100 projects. It has triggered a volume of projects that is three times higher than the cumulative financial contribution. Since 2018 the canton of Aargau has increased the funding to 1,4 million francs. For smaller SMEs, access to national sponsoring funds of Innosuisse is difficult because they cannot raise the personal contribution necessary with their own resources. This is where the Aargau Research Fund fills a gap. It supports the transfer of knowledge and technology between universities / research institutes and Aargau companies. It simultaneously increases the incentive for innovative companies to choose the canton of Aargau as their site.

You can submit an application for funding on a biannual basis, by the 31st March or 31st August. We are glad to support you with it.

The Hightech Zentrum Aargau is responsible for the Aargau Research Fund's administration. Decisions on financial backing are made by an independent research committee.

Capital Advantage: Financial Backing for Your Innovation Project

Added value that you can benefit from with us as your innovation partner: we will show you funding options for the implementation of your project. A large number of funding organisations are available – in Aargau, in Switzerland and internationally. We know where the particular organisations place their emphasis regarding their involvement to projects and we understand their requirements.

Keeping an overview in this field is not easy. We at Hightech Zentrum Aargau have this overview. During the very first consultation, our technology and innovation experts would be glad to expand on the key backing options available. We will find the best funding scheme and partner to suit your project. We will support you in your application and also in this project.

Below is an overview of those funding schemes or institutes that are most frequently used by SMEs in Aargau.

- **Feasibility study:** In Switzerland at cantonal level a unique funding tool for a quick and simple check of the technical implementability of an innovation idea. Hightech Zentrum Aargau has carried out more than 200 different feasibility studies since 2013.
- **Aargau Research Fund:** The canton of Aargau, in the context of its growth strategy, has been backing applied research and development projects of Aargau businesses

in collaboration with partners from universities or research institutes. Highly innovative, market-oriented and feasible projects are favoured.

- **Nano-Argovia:** This program, financed by the canton, exclusively backs research and development projects in the field of nanotechnology with definite application potential. It enables straightforward access to the knowledge and experience of the Swiss Nanoscience Institute SNI. Projects are funded that are implemented by businesses in northern Switzerland with the SNI.
- **Innosuisse:** Until 2017, the Swiss Innovation Agency went under the name of Commission for Technology and Innovation KTI. The backing of science-based innovation is central. The competitive position of existing SMEs is strengthened, and new business starts are supported. The spectrum encompasses a range of funding measures and tools.

This overview is not complete. Current details referring to individual forms of financing are to be found on a separate information sheet.

“Hightech Zentrum Aargau became a crucial catalyst and motivator. It also enabled access to resources that I would never have had as a one-man start-up.”

Urs Giger, Managing Director GDC Urs Giger GmbH

25 of over 1000 Customer Projects

- Innovation consulting
- Nanotechnologies
- Energy Technologies

Hightech Zentrum Aargau has initiated and supported more than 1000 projects. Here you can see 25 examples of such customer projects. You can find further details in our business reports (www.hightechzentrum.ch/geschaeftsberichte).



Adrian Michel AG,
Walde



Algra Group,
Merenschwand



ANTRIMON Group AG,
Muri



Camille Bauer AG,
Wohlen



Connova AG,
Villmergen



Mammut Sports Group AG,
Seon



Mems AG,
Birmenstorf



Orchid Orthopedics,
Baden-Dättwil



SWD AG Stator- und Rotortechnik,
Densbüren



Carbomill AG,
Seon



Credentis AG,
Windisch



Huber & Co. AG,
Oberkulm



KAPAG Karton + Papier AG,
Muhen



MemO₃ GmbH,
Möhlin



Rofam GmbH Laser-Technik,
Leimbach



Rohrer AG,
Möhlin



Ruedersäge AG,
Schlossrued



TB-Safety GmbH,
Frick



EWS Energie AG,
Reinach



GDC Urs Giger GmbH,
Mühlau



IBB Holding AG,
Brugg



Miloni Solar AG,
Baden



Power-Blox AG,
Brugg



Swiss Blue Energy AG,
Tegerfelden



Virtual Global Systems,
Aarau

Satisfied Customers – a Competent Team

The number of successfully completed customer projects is continuously growing. Hightech Zentrum Aargau has its finger on the pulse and is able to exercise its long-term, positive influence on Aargau as a business location. This success is primarily based on the customers' trust in our expertise. The most recent customer survey on Hightech Zentrum Aargau showed a very positive result: 93 % of the company directors who responded would recommend our experts to a business associate. Our team was evaluated as being trustworthy and competent, needs- and solution-oriented. 9 out of 10 businesses expect concrete benefits from the project that they implemented with us.

Combined, our technology and innovation experts comprise over 300 years of professional experience. They have degrees in technical subjects – in many cases after an apprenticeship – and have broad expertise at their disposal. Our experts are practical professionals with managerial experience and a far-reaching network. They are perfectly qualified to support business people efficiently.

Did we convince you? Don't hesitate to contact us.



The team of the Hightech Zentrum Aargau disposes a substantiated knowledge, longterm experience and guarantees a high service level. You will find more information about us under www.hightechzentrum.ch/team.

“The specialists at Hightech Zentrum Aargau have a lot of knowledge at their disposal. The partnership is target-oriented and we feel very well looked after.”
Christian Gerber, Managing Director EWS Energie AG



How Innovation Forms In Aargau: The Film.

www.hightechzentrum.ch/film

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