Innovation, together we do it

Your partner for successful product development

Helbling Technik
Our visionary approach means that we become your partner as we execute projects for you. We turn technological and product innovations into reality with hearts, minds and actions working in harmony to help you reach market leadership.

With us as your partner, we will assemble experienced teams with specialist know-how and an understanding of your technical and business needs. Together we will work towards a common goal: making your company an innovation leader and improving market position.

**Product development that sparks enthusiasm**
Innovation is produced by working together with you, and by building on our passion for creating something new. We see collaborating as an enriching process that benefits both of us and produces a unique dynamic – once we’ve committed to a project, we win the trust of everyone involved, based on our team’s expertise, the concepts and ideas we develop and, finally, the new technologies and products that result from this dynamic.

**Competence and versatility**
Our wide range of technical and business expertise makes us a unique partner. Our interdisciplinary teams draw on a pool of over 400 professionals and can execute projects from initial idea to market launch, bringing innovations to life. We offer creativity, innovation, project management experience and a strong focus on effective and efficient implementation.

Working as an independent party with manufacturers and technologies best suited for your application, we are a neutral partner in the creation of your innovations – from consumer to industrial goods to medical technologies, from one-off products to small batch or mass production.
We offer a whole range of services to support your project. Regardless of how complex the task is, we keep the focus on your objective.

Our expertise is your success
Each development project has its own challenges, which we’re ready for thanks to our broad range of experience from thousands of completed projects in a wide variety of sectors, our international focus, and our ability to work in different cultural settings.

Our extensive know-how in different industry sectors and technological and scientific fields supports the development of new solutions. The collaboration between your people and our specifically assembled project team is the key to success.
FULLY COMMITTED TO YOU, FROM VISION TO PRODUCT MATURITY

Helbling Technik can be more than “just” a development partner for you – we can be your strategic partner and support you throughout the entire product life cycle.

Our goal is to develop a long-term partnership with you and help you become more successful in the marketplace.

As your partner, we take on various responsibilities and understand that you depend on us to stay on track, in terms of scope, schedule and budget. We want to keep our most important promise to you: executing your project as quickly and cost-efficiently as possible to the highest quality.

Entrepreneurial spirit
We identify closely with your projects, understanding your priorities and the requirements of your customers. We put together a project-specific team, with a dedicated project lead as your contact person who coordinates between your team and our team and ensures that your interests are known and being considered.

Giving you what you deserve
We want to help you realize the potential of your ideas and do not ask to share in the commercial success of the innovations we develop together. We approach projects from a neutral position regarding technology, and without background intellectual property. We look at the requirements and select the most suitable technology for each project. After project conclusion, all foreground intellectual property generated during the project is yours.

We can work together with you in various ways:

As strategic partner we help you define your product strategy.

As innovation partner we work with you to mature your ideas and turn them into reality.

As development partner we build on your existing ideas and use our expertise to implement them.

To begin our partnership, we often provide services covering specific topics and over short periods of time so that you can get to know us and how we work.
WE ARE AN INDEPENDENT PARTNER IN ALLIANCE WITH YOU

We integrate into your existing network, and if desired we can also manage your project. If needed we can draw on a tried and tested network of best-in-class organizations to provide resources, knowledge, experience, infrastructure or established processes.

Working with us, the ideas originate from you and you participate actively in their development. This means we can be sure you'll fully identify with the outcome.

Part of your network
Our flexibility enables optimized cooperation. When we put our team together, we integrate into your existing network, and if desired we can also manage your project. You profit from our extensive experience working on projects of all scales. This means we can also suggest possible suppliers. Our priority is to keep the focus on efficiency and economy, so that you can achieve the best possible result with the budget you have.

Experts in our field
We aren’t freelancers or consultants: we understand R&D projects and can carry them out ourselves. We manage the interfaces with our customers – large or small, start-ups or corporate groups. Our specialty is providing interdisciplinary team performances focused on your product.

We want to make you shine
The way we work together with your team, as part of your network, is especially important to us. This collaboration is defined as much by specialist expertise as by the personal connections we build. We understand you, and can support you when you’re advocating for your product internally. And we’re able to introduce you to new concepts and convince you of their benefits. We know that when our experts and yours understand one another and are on the same page, we can achieve the outstanding results that will make you shine.

Earning your trust
We’re confident enough in our work that we don’t need to use small print to keep you tied to us. The work we do speaks for itself. We define project milestones that document the entire process and, if necessary, can serve as an end point for the collaboration.
Trusted methods and agile approaches
The effective processes we employ to solve complex development tasks are based on years of experience. We carefully and judiciously combine tried-and-tested development and project management methods with agile approaches to ensure we can offer the flexibility our customers increasingly require. We formulate clearly defined requirements based on your ideas and plans, and assess their technical viability to ensure they are functionally robust. This always includes consideration of production viability. With a realistic, critical eye, we support you when selecting ideas and review interim results.

We know the standards
We combine methodical expertise in applying trusted methods with development and production know-how, as well as our understanding of standards and norms. We have ISO 9001, 13485 and 14001 certification, giving you additional assurance. This is combined with our ability to grasp and understand ideas, our appetite for novel approaches and solutions, and our talent for asking the right questions – which enable us to get to grips with new issues, work quickly and systematically, and drive your project forward.
OUR HANDSHAKE: AN ASSURANCE OF QUALITY

Our team leaders, of which there are more than 40, are your direct contacts. As specialists, they combine professional expertise with entrepreneurship. They have full responsibility for your project, from initial quotation to successful completion.

We have the expertise and the commitment.

Successful projects are built on intelligence – rational and emotional intelligence. They also require courage, decisiveness and confidentiality. We understand what you want, quickly and clearly. And we are prepared to set out on an unconventional path with you to secure your advantage in the market.

Winning you over with performance and reliability

We’re always determined to make your project a success – bringing to bear our technical and commercial expertise as well as our empathic perceptiveness, our ability to grasp ideas, and our intuition.

We see ourselves as your partner, at your side and ready to do all we can. Contracts are good and important – but they can’t replace mutual respect and trust. We treat your project with the same care as if it were our own. Our entire, personal approach is focused on your success – because our success only comes as a result of yours.

We demonstrate our commitment and sense of responsibility to your project by not accepting work for competitors while we are working with you.

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Professional project management

Professional project management is key to realising everyone’s ideas. We support you at every point and keep you informed at all times. We support you in planning the innovation process and finalising ideation, working with an interdisciplinary team that is tailored to the needs of the target group. In the ideation phase, business ideas, product visions and initial concepts are worked out. Our interdisciplinary team supports you with comprehensive documentation and a transparent and realistic estimation of your project costs.

From ideation to market launch

When working closely with you, we make sure that the design and development processes go as smoothly as possible. We provide an open platform for you to contribute to the product’s success. We also support you in preparing the product for market launch.

The entire product lifecycle is managed with you. We support you with market testing and make sure the processes are documented.
The Paris Climate Agreement and the United Nations’ Sustainable Development Goals represent milestones in the sustainability movement. Many countries, and most notably the EU, are putting in place legal frameworks to promote energy transition, sustainable transport systems and the circular economy. The EU is placing a green new deal at the heart of its political agenda. And the environment is becoming an increasingly talked about issue in society as a whole, as demonstrated by the Fridays for Future movement.

These developments are challenging businesses to think about entire value chains from a holistic, system-wide perspective. They call for a combined effort to develop new processes and innovative solutions that reduce consumption of resources and energy. Utilizing more environmentally friendly, recyclable materials will pave the way for a sustainable society.

We live up to our responsibilities
“We are part of our world”: these words from the Helbling Group’s mission statement speak to an awareness of its interconnectedness with wider society and a highly complex environmental system. This lies at the root of the Group’s responsibility to apply ethical business principles. We can draw on a wealth of experience in applying the principles of sustainability engineering – the development of systems and products that help to preserve energy and resources throughout their lifecycles, from the factory to end-of-life disposal. And our application of predictive maintenance also ensures that complex systems and products can be efficiently serviced in terms of both resources and costs.

Always moving forwards
We are continuously improving to ensure that we can go on contributing to the circular economy, using our resources efficiently and protecting our ecosystem for the future. By developing sustainable technologies and products, we are honoring our corporate responsibilities to our customers and society. We want to protect the natural environment to ensure that generations to come are able to meet their own needs.

Current projects: sustainability in action
Smart batteries – rechargeable energy storage systems with onboard battery management – are one example of Helbling’s expertise when it comes to sustainability. This technology is improving the charging processes, functionality and service life of batteries used in electric vehicles and other industrial and consumer goods applications.

Smart power grids are fundamental to the energy transition and sustainable energy generation. Helbling has experts in communications networking and control for energy generation and distribution installations as well as energy consuming technologies. Our capabilities in this area encompass power plants (e.g. solar, wind and other types of renewable energy plants) and local power generation (e.g. solar panels on residential housing or industrial buildings). Smart grids are also important in relation to energy storage, electrical appliances supported by smart meters, electric vehicles, and equipment used in energy transmission and distribution networks.

Sustainability, smart mobility, scientific informatics and personalized medicine are among the most important current global trends. If applied appropriately and responsibly, they will help to improve the lives of people everywhere. At Helbling Technik we are already playing our part, and are planning to expand our range of services in these areas.

HELPING THE PLANET THROUGH RESPONSIBLE INNOVATION

The Development of a highly efficient solar panel: an innovative cell connection technology significantly improves efficiency and life expectancy.

Development of a resource-efficient powder press: thanks to intelligent servo-electric drives, electricity consumption can be reduced by over 80% and water consumption by 75%. The press also requires less servicing and is cheaper to run.

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Sustainable mobility is crucial to responding to increased levels of environmental awareness in society, especially when it comes to creating tomorrow’s smart cities. Smart mobility encompasses areas such as modernization of public transport systems with innovative vehicle fleets, electric drive systems, synthetic fuels, new types of vehicles, use of sustainable materials, and lightweight design.

**Intelligent transport**

There is also a digital aspect to smart mobility. Existing infrastructure is being upgraded with new information and communications technologies. Advanced traffic management systems are being used to control moving and stationary vehicles. Mobile apps allow us to select from different modes of transport and routes, calculate accurate journey times, and buy tickets electronically. And mobility-as-a-service (MaaS) models are employing precise positioning systems to offer on-demand options from public transport and car, scooter and bike sharing providers. Autonomous vehicles are also just around the corner, and set to usher in a new age of smart mobility thanks to intelligent driving control systems and networked cars.

**Passionate about transport**

Helbling offers a range of well-established services that make us ideally equipped to offer expert support for rolling stock, vehicle technology, software, and sensor technology projects connected with these new developments. We are continuously expanding our services to assist the breakthrough of forward-looking smart mobility solutions.

### Current projects: the transition to electric vehicles

For instance, Helbling is supporting a niche supplier, respected as a quality leader among German automobile manufacturers, to reduce its dependence on combustion engine technology. The transition to electric vehicles is forcing established automotive suppliers to rethink their strategies. This means identifying suitable applications that match the customer’s capabilities – and we support this process with application scouting. Our approach is proving itself to be a key element in meeting customers’ requirements.

A manufacturer of special and heavy goods vehicles also came to us for support in reviewing its options regarding potential new drive technologies and laying the groundwork for strategic development of its products. The client is highly positive about the options we have presented for reducing environmental impact through use of cutting-edge drive technologies.
Scientific informatics is about much more than just software, and encompasses areas such as data processing, algorithmics, big data, edge computing and AI, to make software intelligent. We have a wealth of experience in developing system and standalone software solutions. By continuously updating our service portfolio, we are able to make valuable contributions to technological and product innovations in all of the industries we serve, applying our interdisciplinary scientific informatics expertise.

Informatics is having a big impact on every aspect of our lives. Its applications are all around us, even if we don’t notice them. Today’s society just wouldn’t be possible without informatics. Industry, agriculture, retail, energy supply, medicine, transport and every other aspect of our civilization could not function as they currently do without electronic data processing.

Dawn of a new era
It is only about 80 years since the invention of the first computer, and around 50 since the birth of the internet – so we are just at the beginning of a process that is set to fundamentally change the world we live in. If applied appropriately and responsibly, scientific informatics will help to improve our lives – and at Helbling Technik we’re already hard at work making this a reality.

Current projects: a wealth of new possibilities
An example of this is our development work for a totally new device that facilitates personalized medical treatment and improves patients’ quality of life: the retinal health monitor is a handheld scanner for monitoring the progression of retinal diseases using optical coherence tomography. The device is straightforward and safe to operate, so it can be used by patients at home. The data it records is automatically processed, analyzed using deep learning AI, and can be accessed by healthcare professionals via the cloud. This allows doctors to monitor the effectiveness of treatment, and determine the optimal time for performing specific treatment steps.

This innovation is an example of how digitization can improve patients’ wellbeing as well as the effectiveness of treatment. Cybersecurity considerations are especially important, as the process involves private patient data. The retinal health monitor also uses AI to make continued improvements on the basis of the acquired clinical data.

Another exciting project concerns development of an existing device used in the hospitality industry. The aim is to package the customer’s technology within a modular, affordable system platform that enables it to be used in other products. A cloud connection is being added to simplify maintenance and operation. New considerations always crop up in the product development process, and are taken into account in later improvements. We devote considerable attention to the aspects of modularity, serviceability and ease of operation, which is why we are developing both the system and software architecture.

Development of a low-cost, low-power platform that enables HD videos to be streamed to the cloud using image recognition. The platform is specially designed for use with limited resources such as buffers and processing power. This is the first off-the-shelf solution of its kind.
INNOVATIONS FOR PERSONALIZED HEALTHCARE

We are systematically expanding our service portfolio in this field by building on our technological and scientific expertise to offer you support in playing a decisive role in personalized medicine in the future.

COVID-19 has shined the public spotlight on the healthcare sector, and developments such as personalized and digital medicine were already hot topics before the pandemic.

**Personalized medicine**
People are living longer than ever and want to remain active members of society. Maintaining good health is crucial to this, and technological advances – which have brought about the advent of ‘personalized medicine’ or ‘targeted healthcare’ – are making it possible. Personalized medicine corresponds to a growing general demand for products and services tailored to people’s specific requirements. Technological advances in other fields are helping to drive forward personalized medicine. Like many experts, we believe that it is going to be the most significant development in medicine in the 21st century.

**Digital and personalized**
One development in personalized medicine, for instance, is new molecular-biological diagnostic techniques that enable early detection or establish predisposition by means of gene sequencing or the presence of specific enzymes – enabling doctors to treat individual patients with tailored therapies. Modern diagnostic techniques can determine patients’ genetic, molecular and cellular characteristics to estimate how effective a specific treatment is likely to be. This means that, through a process which combines medical and information technology, patients can be given precision treatment according to their individual biological makeup.

Other applications include regenerative medicine (e.g. tissue engineering and stem cell therapy) and biotechnological manufacturing processes, while 3D scanning and 3D printing technology are enabling on-site manufacture of implants and prostheses. Digital technologies are bringing about brand new ways of treating patients.

**Current projects: focus on the eye**
Helbling has been supporting a research group developing a new optogenetic treatment for people who have lost their eyesight due to retinal loss. The process involves making certain nerve cells sensitive to light. Helbling is developing a system that can stimulate these specific cells using light in order to create a detailed, dynamic visual impression. The core of the system is an implant that uses numerous light guides to direct light to the responsive nerve cells. A projection system throws the external dynamic light patterns onto the light guides in the implant to generate the desired visual impressions.

The retinal health monitor keeps track of the progression of retinal diseases by means of optical coherence tomography. The patient uses the device regularly at home, and the data recorded are automatically processed and transferred so that treatment can be monitored.

Development of a wireless implantable pressure sensor (WIPS) for monitoring the eye pressure of glaucoma patients. Data transfer allows the medical team to evaluate the effectiveness of treatment in real time.
GLOBAL PRESENCE

LOCAL FOCUS AND GLOBAL REACH

We know what it takes to execute projects with global reach; most teams are no longer located in the same office, as expertise is often distributed across multiple sites and countries.

We have the processes, infrastructure, technical and people skills to accommodate local considerations and to think internationally. Our staff is based at locations in Europe, the US and China and work together in project teams with you, no matter where you are.

Understanding cultural differences
Physical proximity is not crucial to success, but a good working culture is – and this is more important to us than how far away you happen to be. Effective cooperation is the key consideration, and we regard the cross-cultural experiences gained when working on international projects as a benefit. Cultural differences present challenges, and we make sure we are prepared for them through our hiring approach and training measures. As an international company, we believe that our staff’s intercultural working is essential and will benefit you.

Long distances
Physical distances can be overcome and technical means for achieving this are becoming more widespread. Personal interaction is possible for every project regardless of geography. We have been using efficient remote cooperation and communication for many years, and they are fundamental aspects of our business model. At the beginning of a project, we work together with you to create a communication plan tailored to your needs and to the requirements for a successful outcome. Every plan provides for thorough exchange of information, usually in the form of regular update meetings held virtually or in person if possible.

WE REALIZE YOUR VISIONS

We have over 40 development teams at our eight state-of-the-art sites in Switzerland, Germany, the USA, and China. With first-class technical facilities, we cover the entire innovation cycle – from research and development through to the finished product and market launch.

Helbling’s sites in Aarau, Bern, Wi, Zurich, Munich, Boston, San Diego and Shanghai are equipped with cutting-edge workstations and highly specialized development laboratories, including EMC and virtual reality labs. We have over 400 staff from the fields of engineering, computer science and physics dedicated to making your project a success.

Comprehensive expertise and innovative technology
We utilize high performance tools and test equipment and advanced infrastructure to support our project teams. The team members use their expertise and our assembly and testing facilities to build and assemble the prototypes and conduct experiments to demonstrate the design’s performance. Working models and prototypes are important tools in our box.

Our laboratory capabilities support work in mechatronics, electronics, microfluidics and acoustics, optics and metrology. In addition to providing the technical facilities, we also offer you access to our open innovation center called Innolab, where we hold creativity workshops for our clients to get the collaborative working relationship off to a good start.

Full range of advanced services
Effective and secure wireless data transfer is becoming an increasingly important requirement for our clients. We have responded to this trend by enhancing our expertise in the fields of electronics, software and testing. We also develop powerful embedded systems, from initial brainstorming through to production readiness. This puts us in a position to successfully implement a variety of wireless applications using applicable data standards in a wide range of projects including automotive, consumer goods and medical technology projects.

In power electronics, we can provide industrial clients with expertise and tools for EMC-compliant design as well as simulation of control circuits and magnetic fields. Development of IEC 62304 compliant embedded software for medical technology applications is another of our areas of expertise.

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