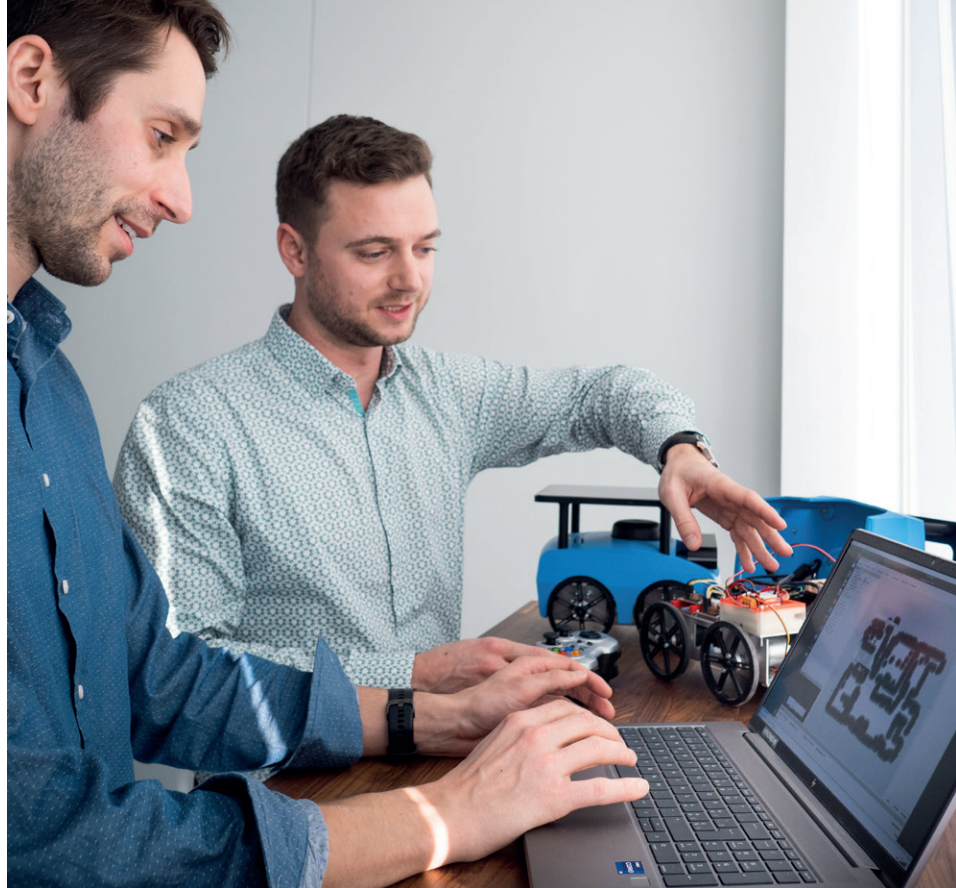


helbling



Robotics & Industrial Mechatronics

We give you the support you need with robotic systems development and industrial process automation – especially if you're aiming to set your company apart from the competition.

Helbling Technik

Innovation, together we do it

We make your project successful

Our industrial mechatronics and robotics experts help you to develop and implement technological innovations. Experience gained from a host of projects for customers in semiconductor manufacturing, intralogistics, sorting and conveying, autonomous mobility, and sophisticated production provides the foundation for our outstanding service commitment. Our system-independent conceptual approaches are based on a wide range of areas of expertise, enabling us to devise creative, disruptive solutions that make a real difference. This, coupled with our professionalism and efficiency, provides the inspirational spark for our customers.

Interdisciplinary project teams with in-depth expertise and industry know-how develop your product, handling everything from the initial idea through to market readiness.

We invest in building a successful partnership through continuous development of our methods and professional skills.

A balanced mix of young and experienced employees enables us to effectively identify innovative solutions.

We generate new ideas and develop successful products using high-performance engineering tools, backed up by our state-of-the-art facilities, and in-house labs.

Whatever your day-to-day operations, our specialists are at your side to help you achieve your development targets.

Thanks to our portfolio of clients from a range of industries and our strong financial base, we serve as a long-term partner for our customers.



Following detailed analysis of the task, we assume responsibility for achieving specific performance goals, providing a contract-based service package.

Helbling's development methodology and certified QM system guarantees a structured approach to project execution in accordance with international standards.

Monthly reporting and clear communication structures deliver outstanding transparency and management options during the development phases.



Our services

Your ideas and challenges motivate everything we do. From defining specifications, through the engineering and design phases, all the way to creating a market-ready product, our proven expertise in robotics and mechatronics makes us the perfect partner for your innovation plans. A tried and tested systematic approach enable us to design concepts and solutions, to reduce risk early in the process, and to generate valid results with maximum efficiency. We use the latest development methods, tools, and technologies without losing sight of established and reliable approaches.



Product development

Do you have an idea for a product where robotics has a key part to play? We provide support with development, fine-tuning, and implementation: offering systems-based approaches to bring your product to market.

Process automation and optimization

Want to make your manufacturing processes faster, more robust, or more cost-effective? You can count on our experience and expertise.

Autonomous systems

Does your product need to respond to varying environmental conditions with a high degree of agility and autonomy? We know the options inside-out and can deliver innovative solutions.

Implementation

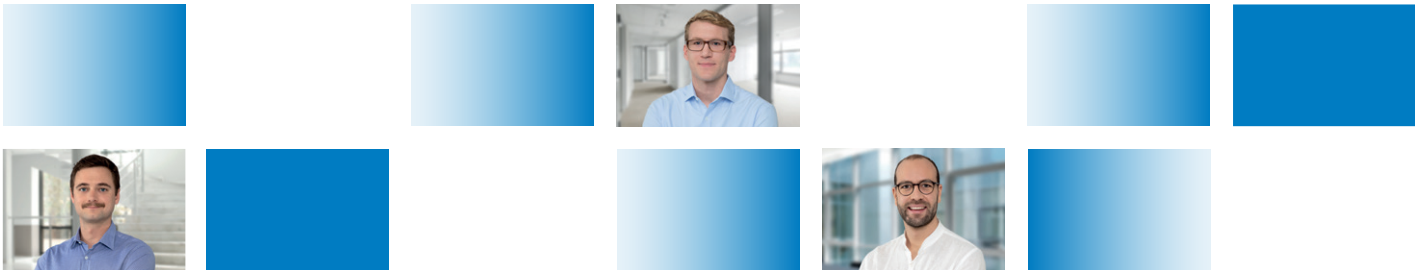
Are you an expert user of a certain technology that you want to bring to market? We have the know-how and experience to make your plans a success.

Industrialization

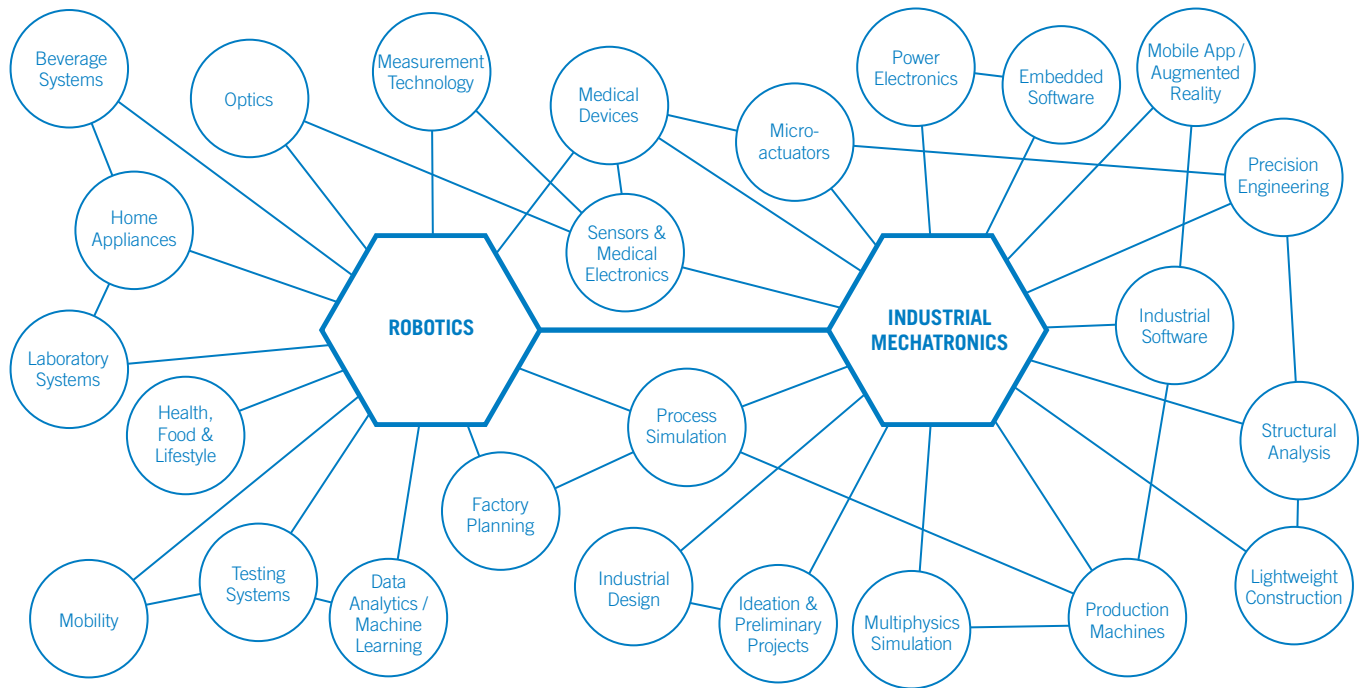
Have you already integrated your technology into a prototype and successfully completed feasibility tests? Great! Together we can get your prototype ready for volume production.

Simulation and laboratory

Is the focus on testing the feasibility of your ideas? Our simulation-based verification methods go hand in hand with prototype testing in our in-house labs.



Reap the benefits of our interdisciplinary network



Helbling's unrivalled strengths are built on an internal network of specialists driven day in and day out by the goal of developing high quality new concepts and products. You will have at your disposal, all under one roof, our full range of deep development know how, which includes mechanics, sensor and actuation technology, control engineering, electronics, firmware and software.

“The automation of our encapsulation process was extremely complex. But Helbling came through with flying colors.”

“Outstanding expertise, professional collaboration. Helbling exceeded all our expectations!”

“Helbling’s contributions on the conceptual side helped us to steer the project in the right direction.”

What our customers say

“An excellent, world-class product development partner!”

“We really appreciated the way they compiled and validated an extensive range of potential solutions, using a diligent, thorough and far-sighted approach.”



Capitalizing on innovative technologies and methods

Our development methods combine the best of the digital and physical worlds. Comprehensive systems expertise, coupled with our ability to rethink system architecture, lies at the heart of everything we do. We are constantly enhancing our methods and capabilities, ensuring that our approaches – and your products – are always state-of-the-art.

Digital Twin

Digital twins serve as the platform for cooperation between experts from various disciplines. This also helps to bring mechatronics systems to life virtually at an early stage of the development process – enabling us to evaluate feasibility, to develop control technology, and to manage software before the hardware is actually available. This significantly shortens commissioning times, while at the same time boosting quality.

Robot Operating System (ROS)

We use the ROS software framework to ensure fast implementation of working models, paving the way for rapid feasibility assessments, while keeping investment to a minimum.

Computer vision and deep learning

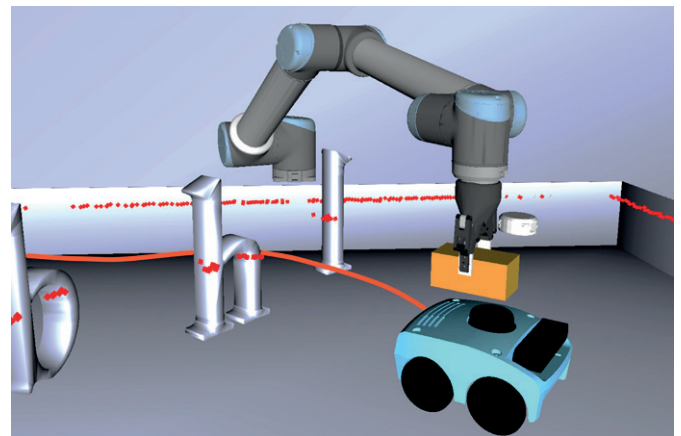
Our positioning and quality inspection operations are supported by optical systems and digital image processing. Backed up by various machine learning methods, computer vision enables us to develop algorithms for the automated recognition and classification of objects, and for determination of their position.

SLAM and path planning

The simultaneous localization and mapping (SLAM) method allows mobile robots to find their way through unfamiliar surroundings autonomously without localization or GPS infrastructure – a key consideration for indoor applications. Optimized path planning enables your autonomous system to identify the most effective route between two given points.



Demonstrator “HelMoRo” in real ...



... and in virtual environment.





Stellate Encapsulation System (Lyndra)



Powered Wheelchair "BR0" (Scewo)

Helbling Gruppe

Established in 1963, the Helbling Group is owned by its managing partners. The international engineering and consulting company Helbling employs more than 550 professionals in four divisions with main focus is on providing selected services in the fields of innovation and product development, management consulting, mergers and acquisitions, business turnarounds and financial performance management, IT, real estate, and construction planning.

Helbling Technik

Helbling Technik currently employs more than 400 professionals in Switzerland, Germany, the USA, and China. Our vision "Innovation, together we do it" positions Helbling Technik as a trusted long-term partner within the client's innovation network. Helbling Technik's highly trained and skilled engineers, computer scientists, physicists, and human factors experts utilize state-of-the-art development tools, processes, laboratories, and equipment to develop innovative and successful products, and support clients across the globe from ideation to market launch.



**Visit our
website!**

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