Steinbeis

TRANSFER

The Steinbeis Magazine

Knowledge – Transfer – Application

Steinbeis on a local level
Our centers in the Schwarzwald-Baar-Heuberg region

Saving energy the easy way
Using cogeneration units to reduce energy costs

Competitive intelligence
SHB student assesses the nature of strategic market and competitor monitoring

Uncovering potential
Material efficiency and energy optimization

02|2011

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Editorial

Dear readers,

the region of Schwarzwald-Baar-Heuberg is home to a lively community of small and medium-sized enterprises. This hotbed of innovation in south-west Germany stems from the region's entrepreneurs – its visionaries, its busy inventors, its go-getters.

Innovation thrives off such people. Indeed, innovation isn't even possible without people. And something becomes an innovation when the market cries out "Yippee!" Yet three things are needed for an innovation. People striving to bring about new technology, people striving to create new markets, and people striving to savor new successes.

Bringing about new technology entails expanding the realms of feasibility and fostering development. Creating new markets entails increasing the base of users and selling solutions. Savoring new successes entails improving management practices and generating revenues.

Unfortunately, all three aspects depend on each other. So they only work together. They're also dictated by constraints. If a market isn't interested in a certain product, then there's no point trying to improve its technology. You have to market it better first.

Juggling these three interconnected factors, working around constraints and achieving optimization is called holism.

Technology transfer à la Steinbeis aims to achieve this holism. In development, transfer means accelerating outcomes by applying expertise from outside. In marketing and sales, transfer means becoming more precise by focusing on demands. In management, transfer means safeguarding long-term success through the right processes and monitoring mechanisms. Once again, this latest edition of TRANSFER discusses a number of projects that exemplify these specific approaches to transfer.

I hope it provides you with some interesting insights!

Prof. Dr. Werner Bornholdt

Prof. Dr. Werner Bornholdt is a Steinbeiser of the first generation. In his role as the director of the Villingen-Schwenningen-based Steinbeis Transfer Center for New Products, he enjoyed over 20 years of success in fostering and shaping knowledge and technology transfer the Steinbeis way. In retirement, too, he remains true to the Steinbeis organization. To find out more about Steinbeis in the region of Schwarzwald-Baar-Heuberg, turn to the "Steinbeis on a local level" article on page 4 and see the interview with Petra Ohlhauser on page 8.

› **34 Steinbeis companies in the region**

› **18 Steinbeis companies at Furtwangen University**

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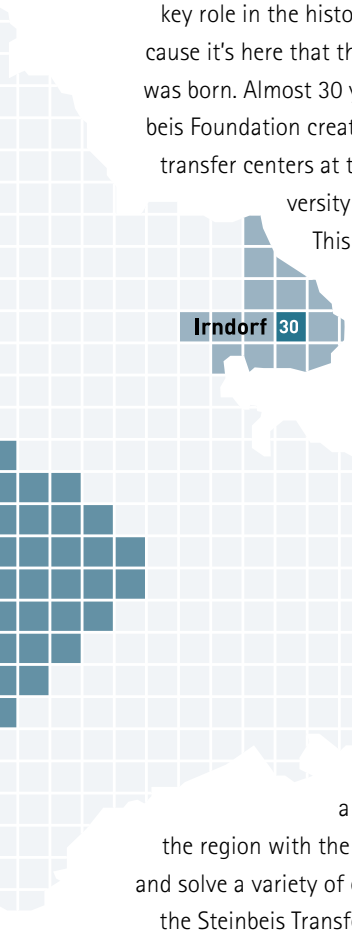
“Knowledge is one thing. Successful transfer – making use of knowledge and applying it successfully to practice – is another.” Petra Ohlhauser

Knowledge and technology transfer in the Schwarzwald-Baar-Heuberg region

Steinbeis on a local level

The Schwarzwald-Baar-Heuberg region has more to offer than just its picturesque landscape – it's also a successful business location. The area is home to companies working in fields such as medical technology, microsystems technology, engineering and precision engineering, alongside automotive suppliers and turned parts manufacturers. As a result, the Schwarzwald-Baar-Heuberg region has a well-balanced and innovation-driven economic structure – ensuring it will continue to be an attractive location for industry in the future. Over the past few decades, local SMEs in particular have become important innovators. Local Steinbeis experts and the Steinbeis Network, which offers a wide range of services focused on delivering solutions specially tailored to companies and their needs, have supported these SMEs in their quest for innovation.



The Schwarzwald-Baar-Heuberg region and the Furtwangen University played a key role in the history of Steinbeis – because it's here that the Steinbeis Network was born. Almost 30 years ago, the Steinbeis Foundation created its first specialist transfer centers at the Furtwangen University of Applied Sciences. This was the first step in making the then-new Steinbeis model a reality, and a milestone in Steinbeis journey toward becoming one of the world's most successful knowledge and technology transfer companies. Steinbeis set up a variety of centers in the region with the potential to address and solve a variety of challenges – such as the Steinbeis Transfer Center for Quality Control in Gosheim (now the TQI Innovation Center), the Transfer Center for New Products and the Infothek in Villingen-Schwenningen. These centers were so successful (and still are) that they now serve as models for other regions.

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A discussion with Petra Ohlhauser

"The vital component is successful transfer – the hallmark of Steinbeis!"

Petra Ohlhauser

Ms Ohlhauser, knowledge and technology transfer – mirroring markets, based on business practice – is a hallmark of the Steinbeis Network. It's something that small and medium-sized enterprises benefit from particularly. Your Steinbeis enterprises, TQU and IQU – what services do they provide to specifically help SMEs in the Schwarzwald-Baar-Heuberg region, and beyond?

Given the constantly evolving nature of customer-specific demands, laws, guidelines, methods and social structures, a basic prerequisite for successful work is lifelong learning. So a lot of our work revolves around training and professional development. Two of our other main services are our measurement center and our consulting. We offer a variety of staff training programs, especially to SMEs in the region – including one-day seminars specially tailored to SMEs. We also offer university-level certification through Steinbeis University Berlin (SHB), plus a Bachelor of Engineering project competence degree. This runs in parallel to work, so even people without a university entrance qualification (Abitur) can study. So it's particularly appealing to staff at SMEs in the region.

One of the assumptions underlying the services we offer through our accredited measurement center is that modern manufacturing methods, cost-efficient technology and innovative testing equipment go hand in hand with the development of new products. The days of defining precision with calipers and plug gauges are long since over. As machines and production lines have become more and more high-tech, the demands placed on testing and measurement technology have also intensified. As an accredited testing laboratory with the German Calibration Service (DKD-K-30801), our customers in this service area are also mainly SMEs from the region. We support them with an increasing number of tasks, including providing professional advice and a variety of flexible services centering on quality assurance, measurement and testing.

We also provide consulting services, tailoring each solution to the specific needs of the company. This involves a lot of work in the automotive industry, but also for firms in the power and medical sectors.

The TQI Innovation Center can be proud of its status as an "old hand" in the Steinbeis Network. It started out as a pilot project in 1990, as a regional Quality and Measurement Center supported by the state, the district, the local authority and a group of backers made up of regional companies. You took over as director of the center in 1997 and have been extremely successful. Have the demands placed on your center shifted over the years? What does every day work life look like for you?

There's currently a strong trend among successful companies toward setting up improvement processes, at all stages of the value chain. The key to success is the ability to systematically involve people in processes – with the emphasis on "systematically". In 1997 we were already setting up integrated management systems by involving management and workers in process definition. At the time, the focus was on defining process controls, responsibilities and general methods. Now it's about establishing these within companies and making them as efficient as possible and as effective as necessary. The key idea here is to optimize costs and productivity without affecting quality, as this is determined by customer needs. When I speak to sales and product managers, I often notice that quality expectations at SMEs are based on achieving the non-existent economic principle of "maximum quality at the minimum price". You'll never get consensus on this.

For us, the priority is to use tools and methods efficiently and effectively – in sales, design, construction, purchasing, process planning and along the value chain of a product series. The methods we use depend on the company.

Consulting, training, employee development, all kinds of services relating to production and quality... your center in Gosheim is broad-based yet highly specialized. For example, you also carry out Six Sigma projects, as well as offering measurement and calibration services. So where do you think company demand lies at the moment? What projects and services are firms most inquiring about?

One area of interest is methods for preventing errors and highlighting and solving problems. There's also strong demand for systematic implementation of continuous improvement programs, raising material efficiency by redesigning components and processes, and projects to reduce waste and improve factory infrastructures. Another hot topic is process analysis – auditing processes in line with the new VDA 6.3 standard. This has been signed off by the automotive industry and now serves as a standard for suppliers. Analysis highlights plenty of room to improve in this area, especially in supplier and project management. As a licensee, the TQI is an official partner to the automotive supply industry regarding issues like these, although we also advise companies in other sectors. The key issue here is involving managers and workers in industrial projects and improvement processes, always based on the premise that a project can become a continuous improvement process. These kinds of topics are also in strong demand when it comes to professional development. It's not just about the knowledge, it's about successfully translating things into practice through transfer projects within the company – the vital component is successful transfer, the hallmark of Steinbeis!

Steinbeis in Gosheim is an established part of the technology infrastructure in the Schwarzwald-Baar-Heuberg region. What challenges do you anticipate in the future? What targets have you set yourself?

One thing we're keen to do is expand our services relating to methodological skills, by working with others in the Steinbeis Network, the German Society for Quality (DGQ) and the Association for the Automotive Industry (VDA). On the one hand, this is about knowledge, and on the other, successful transfer: making use of knowledge and applying it successfully to practice. For us, this means working with clients to develop company-specific concepts – in process development, product development and serial production. It's important to have the right methodological skills and to know how to manage teams and moderate groups.

Future challenges for us include training and certifying testing and measurement engineers, using effective measurement processes, and calibrating testing equipment professionally yet economically. Another important step in transferring knowledge will be to keep expanding our engineering degree, by adding new areas of emphasis such as production engineering, measurement technology, component design and internal logistics – both at the Steinbeis Center and at clients. This is a good way for our clients to retain good staff keen to gain more qualifications – through a local program that keeps them in their profession and in their company.

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Region of Schwarzwald-Baar-Heuberg

The region of Schwarzwald-Baar-Heuberg lies in the south of Baden-Württemberg. It includes the districts of Rottweil, Schwarzwald-Baar and Tuttlingen. The area is home to a large number of companies and is also an attractive area for leisure and relaxation.

The region stretches from the Black Forest uplands in the west to the area around the Grosser Heuberg plateau in the hills of the Swabian Jura to the east. With a variety of industries – modern yet rooted in tradition – plus beautiful countryside and a rich and varied cultural life, the Schwarzwald-Baar-Heuberg region is an attractive area to live and work in.

The business environment in the region is dominated by small and medium-sized companies. This has made it a particularly successful area for Steinbeis, which is reflected in the large number of transfer projects that have been implemented for companies in the region.

To find out more in German, go to:

www.steinbeis-regionsbh.de

175 people attend the 1st Steinbeis Engineering Forum

Processes can't be imposed on people – you have to live them!

In the future, only innovative companies will be able to survive in the marketplace. This was the take-home message of the 1st Steinbeis Engineering Forum in Stuttgart on April 12, 2011. The aim of the forum was to give participants plenty of food for thought and suggest practical ways to work out new solutions – thereby contributing to continued improvement across the entire product development process. Experts from the Steinbeis Network and representatives of participating companies shared their experiences with the audience.

To improve the product development process in the long term, you need to do more than draw level with your competitors – you need to be ahead of them. And you need to make quicker decisions, display superior methodological skills, and recognize and make necessary changes. This is what Prof. (asoc. univ.) PhDr. Arno Voegele (Steinbeis Transfer Center for Production and Management) explained in his opening speech. This encompasses three areas: recognizing the right tasks and projects for the company, tackling them in the right way, and aligning them appropriately with the company's existing goals. The best way to rise to this challenge is by bringing together product, process and project engineering in a concerted manner.

Dr.-Ing. Rainer Eckert (Trautwein SB Technik GmbH) expanded on these thoughts. Instead of seeing product development and optimization purely from a functional perspective, it's time to move toward a well-managed product development process. In his lecture, Prof. Dr.-Ing. Frank Mücklich (Steinbeis Research Center Material Engineering Center Saarland) drew on the example of the car to illustrate the role that materials research plays in the development of a product. Dietmar Ausländer (Steinbeis Transfer Center for Logistics and Factory Planning) and Andreas Zünd (Swiss Federal Railways) presented a successful way to optimize production processes using a "process/product/tooling" approach, based on an actual project carried out at a major international transport company. Dr.-Ing. Günther Würtz (Steinbeis Transfer Center for Management – Innovation – Technology) and Hubert Groß (ZF Lemförder GmbH) explored the importance of systematic variant management in successfully controlling the product life cycle.

Prof. Dr.-Ing. Ulrich Günther (Steinbeis Transfer Center for Production Technology and Waste Handling Logistics) and Rainer Strehle (TRUMPF Sachsen GmbH) underlined the importance of the link between design and production in ensuring effective, efficient production technology. Prof. Dr.-Ing. Aleksandar Jovanovic (Steinbeis Transfer Center for Advanced Risk Technologies) and Theo Hack (EADS Deutschland GmbH) presented a safety and risk management system which can be used to control product risk. And in his lecture, Prof. Dr.-Ing. Michael Kauffeld (Steinbeis Transfer Center for Manufacturing Technology & Machine Tools) discussed the key role that process quality plays in safeguarding successful production in the aerospace industry.

The forum showed that engineering in the product development process covers a very wide spectrum. High-end engineering requires efficient, modern methods and approaches. There is still significant potential to boost efficiency in this area. And there are a variety of starting points for this that often fade into the background and are overshadowed by day-to-day tasks. What's more, it is especially important to find committed employees, play to their strengths and invest in their professional development.

The next Steinbeis Engineering Forum will be held on 17 April 2013 in Stuttgart.
To find out more, visit also
www. steinbeis-engineering-group.de

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Social media marketing for hospitals

Communicating via web 2.0

Ask a doctor or hospital manager to create a profile on a social media site like Facebook, and more often than not, they'll break out in a cold sweat. However, patients are increasingly using online portals to review doctors and hospitals, and to share praise and criticism regarding the medical care they received. Posts of this kind are generally clicked on and read between 150 and 1000 times – a statistic that underlines the enormous importance and impact of this kind of information sharing. The Steinbeis Consulting Center for Business Performance in Munich helps hospitals to establish a presence in social media.

Monitoring, analyzing and reacting to comments on review websites for doctors and hospitals forms the crux of successful social media reputation management. The main reason that hospitals are cautious with social media is the potential to lose control over communication and how the hospital presents itself. Almost every hospital has an informative, functional and appropriately positioned website. Despite this, many hospitals have decided not to actively participate in social media marketing or web 2.0. This is also due to the inscrutable haze of confusion regarding sensible goals, recommended approaches and supposed success strategies. Based in Munich, the Steinbeis Consulting Center for Business Performance has been running online patient consultation services on behalf of hospitals since 2009, thereby addressing the growing importance of social media at an early stage. In doing so, the Steinbeis experts have recognized that social media harbors great potential for hospitals. After all, the hospitals with the best websites are already using social media!

Social media marketing differs from conventional marketing in that the parties in question – in this case, doctors and hospitals – have no choice about whether they become involved. Most of them are already being discussed online, and sometimes only discover this by chance or when things go wrong. One of the first projects in this field undertaken by the Steinbeis social media experts was to search blogs and forums, both active and inactive, for posts relating to a highly regarded specialist surgical hospital. The reason? Patients had written extremely insulting posts about the hospital, primarily directed at nursing staff but also at doctors. It was no longer possible for hospital managers to ignore the situation – but the hospital was unable to find the blog in question using its own resources. The insulting posts were written by an extremely dissatisfied patient who had documented his hospital stay in detail, telling the online community about every perceived mistake that hospital staff made and commenting maliciously on each incident. The search results and final report presented by the Steinbeis team came as a surprise to hospital managers. The hospital used the findings to develop a strategy to address the actual issues raised, empower employees and protect the hospital against verbal and written attacks.

The Steinbeis Consulting Center for Business Performance has developed a clear roadmap for hospitals so that they do not "miss the boat" on social media, and so that their social media activities are based on defined goals and a clear strategy. The three steps in a successful social media strategy are:

1. Analysis: basic data and target groups

The first task is to carry out a customer-specific analysis of popular social media platforms and relevant forums to determine if the hospital has been discussed online by third parties. This is followed by a search for industry insights and benchmarks relating to the hospital in question. The aim here is to pinpoint and monitor key hospital groups, strong local competitors and other medical competitors. The next stage is to work out special circumstances relating to the situation faced by the hospital, especially with regard to its services and how suitable they are for potential social media applications.

Social Media in der Klinik
© wordle.net

2. Preparation and execution: defining goals and drawing up initial guidelines

The first part of this step is to present the results of the analysis. This is an important opportunity to answer questions and clarify any uncertainties. A key item for discussion at this point is the set of internal guidelines that need to be established regarding social media usage. Another area to address is the role and relative importance of various target media and how to use them. Next, specific measures tailored to the hospital are defined, and tools are put in place to monitor social media. This allows customers to gain an overview. Once everything is in place, a basis has been established on which to shape the strategy.

3. Strategy: developing a social media strategy

The final step is to define and evaluate relevant target groups and media, then select the chosen target media. Next, develop a content strategy, including the following steps:

- Decide on the content
- Define the form (text, images, videos etc.) and format (information, survey etc.)
- Consider possible cross-media use
- Define key performance indicators for specific media
- Agree on ways to monitor and evaluate appropriate benchmarks

Once this is complete, an action plan can be drafted defining the procedure for social media monitoring and (where necessary) the use of specific tools, as well as budgets and additional details relating to the number of employees needed.

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A date for the diary: September 30, 2011

The 2011 Steinbeis Day

The last Friday in September marks a Steinbeis tradition: As in previous years, we're opening our doors again in 2011 to the Steinbeis Day in Stuttgart's Haus der Wirtschaft. This year's event takes place on Friday September 30 with a variety of Steinbeis enterprises attending in Stuttgart and showcasing their expertise. It's an excellent opportunity to compare notes with experts, fact-find and discuss specialist issues. A series of short talks in the afternoon also provide interesting insights into the work of the Steinbeis Network. Entrance is free although we do ask attendees to register in advance.

Program (Last updated, August 2011):

- 10.00 a.m. Official reception
- 10.15 a.m. Bestowal of the 2011 Prof. Adalbert Seifriz Award
- 11.00 a.m. Steinbeis Marketplace opens: Steinbeis Center exhibitions
- 12.00 p.m. Lunch
- 12.00 p.m. Steinbeis Corner opens (short presentations of Steinbeis projects)
- 1.15 p.m. Alternative program (for partners of Steinbeis directors)
- 5.45 p.m. Official program ends
- 7.30 p.m. Evening program in the Liederhalle Convention Hall (invitation only)

For more information on the Steinbeis Day and to register online:

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Using cogeneration units to reduce energy costs in manufacturing processes

Saving energy the easy way

Manufacturing heavy ceramics such as brick is extremely energy-intensive. During brick production, heat energy is used for drying, preheating and firing, as well as for generating electricity. Since the 1960s and 1970s, most brickworks use tunnel kilns. They perform extremely well and ensure uniform product quality. But as they also require a lot of energy, rising energy prices are having a major impact on manufacturers. A joint project funded by the German Federal Ministry of Education and Research is investigating possible alternatives to fossil fuels as a primary energy source in the manufacture of high-grade facing brick using cogeneration units. A team of experts from the non-profit Innovation Center at the Steinbeis Transfer Center for Power and Environmental Engineering in Oelsnitz is leading the project.

Using cogeneration units powered by fossil fuels can achieve primary energy reductions of up to 40% compared to conventional power generation methods, and CO_2 reductions of up to 58%. And when renewable energy sources such as vegetable oil or biogas are used, the CO_2 reduction is even higher – much higher. This project aims to determine the scientific and technical basis for this application of cogeneration units and prove its feasibility in a reference project.

There are a variety of ways to boost energy efficiency in a brickworks by using cogeneration units powered by vegetable oil – while simultaneously maintaining quality and production safety. Analyses of the atmosphere, flow conditions and temperature profile of a kiln have shown that directly introducing gas emitted from the cogeneration unit (at temperatures of up to 550°C) back into the tunnel kiln only makes sense at the start of the process. There is much more potential to save energy by using the cogeneration unit in the drying process and during preheating of the raw bricks, as this requires lower temperatures (180-300°C) than in the tunnel kiln. The amount of energy needed to dry raw bricks varies greatly depending on the type of brickworks and dryer, and additional gas burners are often used to maintain a constant flow of air. Exhaust gas emitted by cogeneration units can be added directly to the air flow used for drying, thus replacing gas burners.

Based on the energy flows observed in the brickworks participating in the project, the project partners decided to integrate the vegetable oil-powered cogeneration unit into the drying process. Energetically relevant state variables are recorded continuously and can be read remotely. A pilot plant powered by heating and vegetable oil, complete with a direct injection diesel engine with an in-line injection pump, is currently in operation. Exhaust gas emitted by the cogeneration unit takes the place of reserve energy from gas burners. Similarly, heat generated by the engine's cooling system takes the place of drying energy, which accounts for around half of the heat energy consumed by the brickworks in question. Power generated by the cogeneration unit is used by the brickworks, thereby helping to optimize overall efficiency.

During the first stage of testing, the team investigated the effect of gas emitted by cogeneration units on brick quality. At first, the results after drying were markedly different – the surface of the raw bricks was discolored due to soot, even though the residual water load was almost the same as normal. However, there were no visible differences in quality after firing. As testing continued, the level of soot contamination in the test chamber increased, and as such, continuous operation without a diesel particulate filter is not recommended. In the second stage of the test, a platinum-coated silicon carbide monolith was used with no other additives. This filter works according to the closed principle, using a passive continously regeneration trap (CRT principle). This had the effect of reducing particulate emissions by over 95%. Initial tests showed that gas emitted by the cogeneration unit had a significantly lower soot content. Results after drying showed no visible difference to the usual production process.

The project partners are currently of the opinion that bricks can be successfully dried using gas emitted by cogeneration units powered by vegetable oil, thereby negating the need for gas burners. The brickworks participating in the project – Deppe, based in Uelsen in Lower Saxony – saved up to 275 kJ of energy per kg of bricks using this drying method, without compromising production safety or quality. The team is now pressing ahead with further investigations needed in this area. In most cases, the thermal output of the cogeneration unit is limited by the baseload electricity. One of the reasons why brickmakers have not fully exploited the energy-saving potential of cogeneration units powered by vegetable oil is the poorer quality of fuel compared to gas. There were also unresolved issues regarding how to channel heat from cogeneration units back into processes. However, using cogeneration units powered by vegetable oil is a viable alternative in the long term, and allows major CO_2 reductions, even in energy-intensive production processes.

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Steinbeis consultants help companies enter international markets

Off to pastures new

It's not always easy doing business in foreign countries. With differences in language, mentality and culture, it's not unheard of for contracts to fall through just because somebody didn't do things "the way they're done" in that country. On top of that, there are different laws and bureaucratic channels. The Steinbeis Consulting Center Global Advance helps European companies expand into the People's Republic of China, and Chinese companies expand into Europe. This ranges from initial planning to developing a strategy and hands-on support in putting these plans into action.

The Chinese parent company of Cosmax GmbH develops, manufactures and markets cosmetic products for use after cosmetic surgery. The company was quick to realize that setting up a European base, complete with the right infrastructure and organizational instruments, would not be possible without the support of a professional partner. After a certain amount of research, the company spoke to the Global Advance Steinbeis Consulting Center. The international team of consultants at the center feels at home in both worlds and is deeply ingrained in the worlds of both Chinese and European business. "We have an excellent understanding of country-specific idiosyncrasies and business practices, and know the local situation on the ground" explains Da Li-Schumann, who was born in China. Da Li-Schumann heads up the Global Advance center alongside Carsten Wortmann, who has over a decade of experience in international consulting companies and was the CEO of the Chinese subsidiary of a German SME.

The consultants started by organizing a workshop with the management of the Chinese parent company to pinpoint goals for the new undertaking and, based on a detailed market analysis, formulate a market entry strategy. Not contented at just doing the planning, the Steinbeis consultants played an active role in putting the ideas into practice. So they began looking for suitable premises and a location where the company would be able to manage each of its European target markets equally well. After considering the options, the decision came down in favor of Frankfurt. The company will soon be moving into its new premises, comprising offices and a warehousing area. Prior to this, the company had to register as a German limited company (GmbH) and present a credible business plan to the foreigners' registration office in Frankfurt. This was needed to gain work permits and fill management positions with Chinese workers. The next step involved recruiting and training suitable European staff that matched profiles agreed with management at the parent company. This ensures everything is in place for the company to enter the market.

Since it was founded, as well as helping Chinese companies enter the European market, the Global Advance center has helped many European companies enter the Chinese market, in both procurement and downstream production and sales. In particular, this has included a number of renewable energy companies for whom the Steinbeis Consulting Center manages the complete procurement and supply chain.

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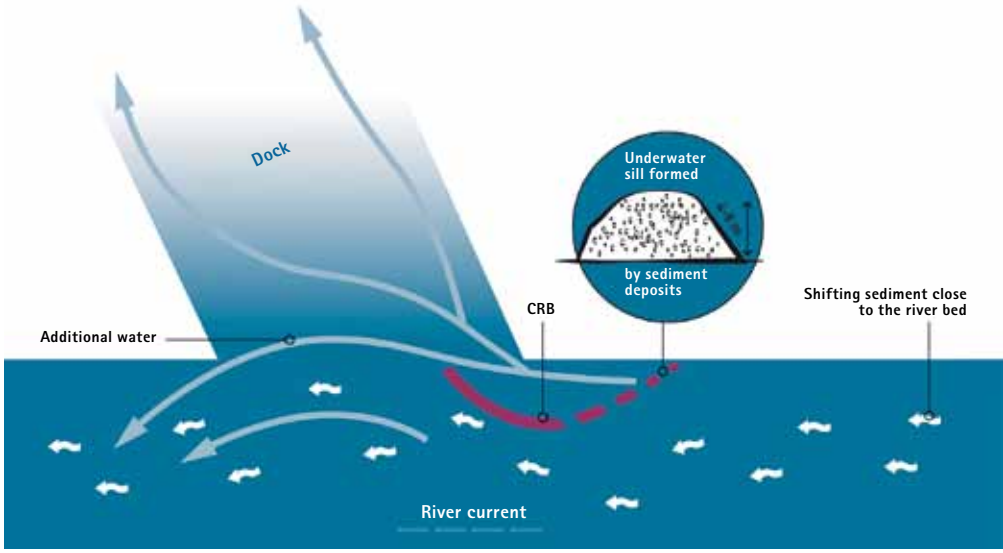
Steinbeis evaluates the licensing potential of a patented current redirection wall

There'll be no piles of sediment here!

Around two million cubic meters of silt and sand are deposited every year in the docks that form the Port of Hamburg. Most of this sediment accumulates right at the port entrance, due to the "teacup effect". As the river flows past the harbor entrance, it generates a column of rotating eddies. Meanwhile, frictional forces on the river bed generate eddies directed towards the center of this column. If this process is allowed to continue without interruption, large quantities of silt and sand accumulate in the centre of these circular eddies, forming lenticular deposits several meters in height. As a result, sediment at the harbor entrance has to be dredged regularly to ensure the water is deep enough for vessels to pass – which is a costly business. The solution? A current redirection barrier (CRB). Steinbeis TIB Technologiebewertung und Innovationsberatung helped the inventor of this barrier to license his patents.

After exhaustive measurements and research, a construction to prevent circular eddies of this type at harbor entrances was tested using models. If successful, it would also prevent the accumulation of sediment due to the teacup effect. And that was exactly what happened: The new current redirection barrier stopped the circular eddies completely. Now, as the stream of the river passes the dock, some of the current is redirected into the channel created between the current redirection barrier and the bank. Developed by Dr. Hermann Christiansen, the current redirection barrier was first piloted in the Köhlfleet dock in Hamburg until 1999. It is 150 m long and extends 1 m above the surface at the average high watermark. During the monitoring period, sedimentation conditions were determined using sonar and compared with those before the construction of the current redirection barrier. The results spoke for themselves:



- Deposits fell by around 50% in the main sedimentation area.
- The deposition pattern of sediment changed fundamentally. Instead of lenticular deposits, sediment was deposited evenly and had 50% less volume.
- Vessels were easier to maneuver at the harbor entrance as the large circular eddies were gone.
- Although the cost of constructing the CRB was around € 1.5 million, it saved annual dredging costs of € 1.9 million, thereby paying for itself and becoming profitable within a year.

Dr. Hermann Christiansen commissioned the Steinbeis TIB to assess the licensing potential of his international patents for building and operating the current redirection barrier. As the results were very positive, he agreed for the patent to be licensed via German patent company Alpha Patentfonds. As a partner to Alpha Patentfonds, Steinbeis TIB selects and evaluates patents with strong marketing potential. The Steinbeis TIB team includes experts from a variety of fields. As well as patent licensing, Steinbeis TIB also offers services such as research and evaluation of intellectual property rights, portfolio management and international property strategy consulting.

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Online video mediation

Solving conflicts quickly and effectively

The Steinbeis Consulting Center Mediation of Business is partnering with a number of organizations and companies to create instruments that settle disagreements between companies. The approach they are developing is based on online video mediation. This ground-breaking project is being backed by the European Commission with funding worth around € 420,000.

Business is now global, so companies often find themselves in disagreement with other companies, sometimes in totally different areas of the world. In fact, it's not uncommon for physical separation to be a root cause of conflict. Distance impedes quick communication, information and consensus, as well as efforts to build trust. And when companies disagree, working out how to resolve a dispute is equally difficult. Again, distances makes it difficult to act quickly and this is made worse by language challenges. By mediating online via video link, many difficulties can be sidestepped. This can be an inexpensive yet efficient way to find suitable solutions. In fact, video links often make it possible to compensate for problems caused by face-to-face mediation.

The approach is based on an online video platform tailored to the needs of mediation. Supported by a trained mediator, two sides can quickly be pulled into mediation from their different locations. All that participants need is a laptop with a webcam and broadband internet access, which most people in business already have. The online platform is encrypted to safeguard confidentiality. Apart from video and audio through the webcam, it's also possible to show a variety of materials with a whiteboard, desktop sharing, a drag and drop system for file sharing and even a chat room.

Especially when there are disputes between people from different cultures, it has been found that it is better to involve two mediators, even if they are not in the same location. Their role is to manage the mediation process and help both parties by "inputting" with their different skills, making it possible to exchange views fairly and constructively. The mediators have already conducted successful online mediations with up to six directly affected participants, plus mediators. These days, however, there are still cases when it makes sense to revert to face-to-face mediation, especially if the people involved already know each other quite well. Under such circumstances, mediation via online video link is not suitable.

Both parties have to have a good understanding of the technology involved. Issues such as data protection also need to be considered. Body movements and small gestures are not perceived as easily as in face-to-face mediation. There is also a tendency for people to neglect seemingly trivial factors such as greeting someone or "small talk" in online video mediation. From a mediation point of view, it has been found that some methods and techniques can not be used online. Experienced mediators also ask participants to adhere to certain rules of online etiquette. There may be none of the classic handshakes to make the results of mediation binding, but agreements are generally adhered to.

EU mediation guidelines provide the necessary foundation for written agreements and enforceable protocols, so the parties involved can rest assured that the agreements made in mediation will also be implemented. Online video mediation is therefore a serious contender for conventional face-to-face mediation!

The benefits of online video mediation

- Staying in a location they know puts conflicting parties at ease. They find it easier to focus on the mediation process.
- If disputes escalate, meeting face-to-face can be avoided.
- People are more aware of their actions in online mediation. Communication between different parties is sometimes better.
- One-on-one conversations can be set up quickly, assuming arrangements can be made. The same applies to third-party input from experts.
- Online video mediation is transparent and can be documented.
- It's easier to set up more appointments and involve others.

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As part of the project, Italian mediation experts Resolutia and the Steinbeis Consulting Center are staging culture.communication – an international conference on online video mediation (October 19-21, 2011, Florence). Visit the center website for more information.

It starts with an idea and ends in an invention

mikromakro: Little heads – big ideas

Baden-Württemberg is number one when it comes to inventions. To keep things that way, talented young people need to be excited about the natural sciences, math and technology. They also need support to bring their fresh ideas to life. That's precisely what the experts at the Steinbeis Transfer Center Infothek have been doing since 2008 with the Baden-Württemberg Foundation's mikromakro program.

The project is clearly a winning idea. Today, over 200 teams of inventors from a student body of over 1,500 are already working on putting their ideas into practice. "What's unique about this project is how it combines funding, the availability of expert knowledge and having those experts on-hand", explains Wolfgang Müller, head of the Steinbeis Transfer Center Infothek in Villingen-Schwenningen. Essential know-how – something that schools don't usually offer in depth – is provided by staff from the Steinbeis Transfer Center. They play an active role in coordinating groups in workshops on creativity, project management, markets, technology and copyright law.

"Inventor teams" of at least four members apply for a place on the mikromakro program by submitting a project outline, detailing exactly how much money they'll need. Candidates who win over the expert jury with their ideas receive a budget of up to € 8,000 over a two-year period. The goal isn't just to launch an idea in the real world – these young inventors are also supposed to keep working on solutions to a particular challenge. This means they have to be able to alter the scope of their project, react to changing circumstances and find a suitable partner who will help them navigate their way through the project.

The Internet and Facebook fan pages are an excellent and obvious way to share information. Groups can introduce themselves, showcase additional things they have learned and even publicize interesting events and competitions. Participants are also spurred on by success stories of mikromakro teams who've made considerable advances in their work or already completed their projects. However, since virtual interaction is no substitute for face-to-face contact, regional meetings are held throughout Baden-Württemberg on a regular basis. This is where projects are showcased and teams can share their experience. Young inventors are also aided by students from the Festo educational fund. These students act as mentors for the mikromakro team, providing expertise and advice on how to overcome technical hurdles.

In the meantime, the first promising prototypes have been developed. One example: Six students from the Romäusring Gymnasium in Villingen-Schwenningen have designed a safe that opens remotely via telephone. Five young inventors at the Johann Christoph Blumhardt School in Mühlacker created a straw that shows the pH value of a drink as it's being consumed. Six other students at the Werkgymnasium in Heidenheim dreamed up an automated, intelligent underwater weed mower.

2010 marked the first appearance of the mikromakro booth at IENA, the international trade show for inventors in Nuremberg. Nine teams of inventors had the opportunity to show their work to the public and make important contacts. With the aim of maintaining the inventive spirit and an interest in scientific and technical professions, mikromakro was named a "Selected Landmark for 2010" in the "365 Landmarks in the Land of Ideas" initiative, which has no less than the German president as its patron. Backed by the Baden-Württemberg Foundation, the mikromakro project is an effective way to encourage students in their endeavors in technology and the natural sciences. Not only is it fun for everyone involved, it promises to be successful in the long term, too.

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Consulting spotlight

Charging station planned for Wüstenrot

Development area to house bioenergy village

An increasing amount of development land is being earmarked for the generation of electricity and heat using alternative energy. Introducing a bioenergy village with a difference: Vordere Viehweide II in the town of Wüstenrot. "Agrithermics" is big here. One hectare large, this residential and mixed-use land will have a demo unit installed for new geothermic technology. To plan the project and market the properties, town administrators called in the team at the Steinbeis Consulting Center Project Development for Renewable Energies and Energy Efficiency, as well as staff from a Backnang-based company called "Die Erneuerbaren".

The German Federal Ministry of Economy asked the community to flesh out its initiative called "An Energy-Independent Wüstenrot by 2020" and submit a request for funding. Agrithermics is a completely new approach to energy in that the earth's heat is used for heating and cooling by using a heat pump. The farmer or company begins by plowing in panel absorbers (plastic hoses) two meters below the surface. This cold geothermal heating grid supplies nearly 30 houses in the Wüstenrot building area with energy. This doesn't exist anywhere else in Germany. Nearly 1½ hectares of collector surface is required. There are roof-mounted solar panels to deliver electricity. An intelligent energy management system uses and stores electricity in each household, allowing users to do all kinds of things such as recharge the battery in their electric vehicle. Since this blend of sources generates 1.6 times the amount of actual energy needed, any excess can be tapped into by adjacent buildings or the nearby outdoor swimming pool.

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Steinbeis takes part in the ZUMO project

Getting around in the future

A German transport initiative called "Zukunftsmobilität" (Future Mobility), which is being spearheaded by the Steinbeis Consulting Center for Innovation and Energy in Trossingen, is also helping to coordinate a similar project by the same name in the Black Forest region. Part of an ongoing "Summer of Automobiles" event, which was launched to celebrate Baden-Württemberg as the cradle of the automobile, ZUMO looks to the future of the automobile and propulsion – plus the whole idea of transport and how it relates to tourism.

People who visit the ZUMO office get a hands-on opportunity to experience different modes of transport and enjoy a few hours of fun in the Black Forest. ZUMO holidays are carbon-neutral and include concept cars, local public transport, accommodation and locally-sourced food as well as vehicle fuel. The offers allow visitors to take alternative vehicles for a test drive and experience the Black Forest in a completely new way, from individual tours on e-bikes and Segway excursions to electric cars and vehicles running on biogas or fuel cells.

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Complimentary consultations for SMEs

Short consulting sessions

With its short consulting sessions, the Steinbeis Foundation helps small and mid-sized businesses tap into sources of technology and knowledge. The aim is to open the door to the latest scientific findings and technology. Other benefits of these sessions include direct contact with the Steinbeis network of experts and sound business advice.

Requests for a short consulting session can be submitted by companies, representatives of various chambers, the L-Bank, institutions of economic development and managing directors of Steinbeis Enterprises, specifying what the session needs to address. All forms can be found online.

Short consulting sessions must meet the following criteria:

- The organization's head office must be in Baden-Württemberg
- Annual revenue (last financial year) cannot exceed € 100 million
- Only one session per year
- Applications, decisions and contracting are managed by Steinbeis
- The session is free of charge

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Steinbeis experts demonstrate new ways to sell coaches

Tracking down image drivers

Not everything that is said about the image of tourist coaches is positive. They're often associated with cheap day trips and pensioner outings. But German bus and coach makers have every opportunity to improve how they market their products. The Eberbach-based Steinbeis Transfer Center for Logistics and Marketing Management was asked by coach maker EvoBus to carry out a detailed assessment of the current image of coaches, including an evaluation of German tour bus companies' marketing activities.

Coaches and tourist trips in travel buses have a number of advantages over other means of transport, especially when it comes to value for money, safety in road traffic and travel comfort. Theoretically, this should mean they have a higher market share. But in reality, their market share in Germany has dipped slightly. Despite the benefits of coach travel, coach tourism experts continually point to the negative image of coaches among the general public in Germany.

An important source of information for the analysis carried out by the Steinbeis experts was a survey of 51 coach tour operators about their image among end-customers and their marketing activities. To investigate the image of coaches methodically and in detail, the results of the survey were pooled with the results of a direct image analysis within individual customer target groups. This was based on desk research, drawing on any scientific studies that were detailed enough to apply to the topic of research. This was supplemented by expert interviews with selected representatives of omnibus associations. The survey showed that around two thirds of companies interviewed feel that coaches and coach tourism have a predominantly negative image in Germany among the general public. A third of companies said the image was mainly positive.

The analysis of specialist publications on the image of coaches showed that very few studies have actually looked at the issue. One key finding of the Steinbeis study was that the image of coaches in Germany is not uniform or applicable to all people. Instead, opinion varies widely according to the target group interviewed. Questioning a representative sample of the German population shows that the image tends to be negative. Only around 8% of consumers preferred coach travel for a holiday trip. The positive aspects they point to are the social benefits, reliable planning and organization, comfort and environmental friendliness. When existing coach passengers were questioned, the majority of respondents' image of coaches was positive. The Steinbeis study also highlighted a number of shortcomings in the marketing and sales activities of many German coach companies. For example, target groups were not being addressed properly, the marketing mix was not being matched to target groups, and there was insufficient collaboration with travel agencies and tour operators.

To significantly improve the image of coaches, it will be necessary to define a uniform target image in the future. This will mean involving everyone in the tourism value chain. The next step will be to carry out a joint, target group-based marketing and media campaign to improve the image of coaches in the medium term through bundled activities. Special attention should be given to today's non-customers as a potential new target group – mainly 20 to 50-year-olds who like cars. The effectiveness of marketing activities will also need to be assessed professionally. Also, consideration should be given to the fact that many German people find it difficult to distinguish between buses used in local transport and coaches. Future image campaigns will have to take both segments into account at the same time.

The Steinbeis experts clearly identified the weaknesses of marketing and sales activities currently carried out by the mainly small and medium-sized German coach companies. There are many microeconomic market-based activities the companies could become involved in. At the same time, the omnibus associations and bus makers could provide know-how and support coach companies with modern marketing and sales tools.

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Seeing engineering projects through to completion

The art of getting everything done

A Herrenberg-based company called Feinmetall has plenty of experience in safely bonding electronic components in the test room. In fact it's one of the electronics industry's largest manufacturers of test equipment. As the corporate philosophy stipulates that no customer solution can be "off the shelf", product innovations and projects that drive innovation are growing in number and complexity. The Steinbeis Transfer Center Management – Innovation – Technology (MIT) is supporting Feinmetall with the optimization of its product engineering process (PEP) and helping the company implement a sustainable engineering system. The aim: to complete projects on schedule and in line with quality standards.

The number of test card and test adapter projects and their level of complexity rose so sharply over the last few years that the management at Feinmetall decided to take actions to cope well with this situation. The next step: introduce a standardized process for completing engineering projects. This process needed to do three things: help staff meet stipulated project completion deadlines, reduce the number of rounds of changes and in doing so, improve productivity among the project team.

For years, Feinmetall has used a project management system that organizes the scope of projects as well as timings. "But I was increasingly getting the impression", notes Wolfgang Bürkle, managing director of Feinmetall, "that we weren't all going in the same direction". So the mandate for the project was clear. From now on, engineering projects needed to follow one standardized process – from the first stage of development to the production handover – and include defined work packages to help staff accurately assess costs and necessary resources.

Joining forces with the Steinbeis experts, the Feinmetall team embarked on the project using an engineering method called 3PRO. This links product engineering with process engineering and project engineering, uniting the seasoned approaches of simultaneous engineering with project management to create an integrated project engineering system. Designed around each individual company, 3PRO integrates and synchronizes three core components: work packages that outline the PEP; working guidelines (consisting of checklists and design rules) that govern how products and production must be designed; a kit of ready-to-use tools for fully functional products and processes within budget.

Work packages needed to create two things: product development based on established routines and carefully coordinated production procedures. One important resource in this phase was a classification covering three types of projects: standard; application/change; one-off. One-off projects are the only ones that require engineers to work through the work packages according to plan. For application/change and standard projects, engineers agreed to use a streamlined, shortened version to make the best use of limited resources and man-hours. Spanning checklists and design guidelines, the set of rules outlines standards drawn from best practice. One task lay in clearing up applicable procedures and checklists. Some of them were subsumed, those that remained were revised, shortened and tailored to each particular application. The greatest gains in efficiency were made when the teams structured the methods. Over the years, employees at Feinmetall had amassed an arsenal of product development and process planning methods. Here again, a cleanup was the order of the day. The methods that were kept in place were trimmed down to an easy-to-use "light version" and assigned to individual work packages.

But the decision makers didn't stop when the project was determined. "We realized that if the new project engineering approach was going to succeed in the long run", explains Bürkle, "our employees were going to have to adopt a different mindset. They'd have to recognize the benefits of standardization – and not view them as a hamstring to their creativity." As a result, Steinbeis devoted a separate, parallel training project to this area. The outcome: a standardized product engineering process that primarily allows Feinmetall to offer a greater sense of security to all of the project stakeholders. This means that senior managers can manage the right projects with the right priority, thus minimizing risk. Heads of specialist departments will also have fewer fires to put out as they will be able to take other departmental needs into account earlier. Project managers will spend less time checking up on things internally. And project team members will see their productivity rise – now that they know precisely what needs to be delivered, by when, and what that will require.

"This tailor-made PEP affords everyone involved in the project more time to come up with solutions to the real technical and business challenges we're faced with" emphasizes Dr. Günther Würtz, managing director of the Steinbeis Transfer Center MIT. "The supposed drain on creativity has been transformed into a catalyst for creativity!"

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Two SHB alumni found their own business consultancy

The call of self-employment

No investment, no growth! After years of investing in education and expertise, two SHB alumni, Anja and Johannes Glatzle, made this their motto as they embarked on self-employment. Called "Die Fitmacher" (The keep-fitters), their business consultancy focuses on project and change management and is aimed at companies seeking extra support with change management. The first step in the Glatzle's bold move into self-employment: the MBA program at the School of International Business and Entrepreneurship (SIBE) at SHB.

The focus on "project competence" of the Steinbeis degree gave the pair excellent hands-on experience; Johannes Glatzle worked as a project and change manager at Daimler, while Anja Glatzle held a position at Dekra Consulting. These jobs also equipped them with the tools they need to succeed as consultants – complete with management methods learned in the classroom, which are now second nature.

Having envisioned what they want to achieve and how, the Glatzles made their first investments and spent considerable time planning the road ahead at the start of 2011. Their work has already paid off: the pair has just landed a major contract for workplace health management at a German "hidden champion". Their task is to reduce sick-leave in the long term while boosting employee satisfaction. By 2014, productivity should be 20% higher per employee versus today. What do these entrepreneurs see as their recipe for success? Part of it is down to the link between theory and practice – a hallmark of Steinbeis University Berlin. In laying the foundation for their project work, the alumni also draw on two tools from their time in the classroom: the Six Loop Concept® and the principle behind the Management-Competence-Test (MKT®).

Anja and Johannes Glatzle can already point to successful ventures with SMEs and public bodies that value accomplishment and motivated employees. Over the course of their studies, the pair learned to structure tasks as professionals, adopt a hands-on approach and work out feasible, real-life solutions.

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Steinbeis Compliance Monitoring evaluates whistleblower systems

Company whistleblower systems: detecting and preventing white-collar crime

Whistleblower systems in businesses and administrative organizations can be used as an instrument to detect and prevent abuse and wrongdoings such as white-collar crime. In the past, whistleblowers – i.e. people who blow the whistle on perceived irregularities – have helped uncover inhumane treatment in care homes and rotten meat that had illegally re-entered the distribution chain. In the United States and UK, there are already laws in place to protect whistleblowers. This is not yet the case in Germany. Steinbeis Compliance Monitoring is a system developed by the School of Governance, Risk and Compliance (School GRC) at Steinbeis University Berlin to evaluate the degree of compliance within companies, including the level of protection afforded to whistleblowers.

When allegations of white-collar crime become public knowledge, the damage to everyone involved can be serious, regardless of how true the allegations are. There is a loss of trust and respect among third parties, such as clients and suppliers, not to mention banks and stakeholders as well as investigators. It's also difficult to quantify the damage to a company's reputation. Many potential whistleblowers lose heart, worrying about the mental anguish and the work and legal implications if they are identified.

Until now, whistleblowers in German companies and public authorities have enjoyed little public recognition, personal support or legal protection. This may be because whistleblowers are seen as "informers" who denounce companies for their own ends. It could also be due to the absence of a legal framework and the resulting lack of protection for whistleblowers. But introducing a whistleblower system in corporations is more than just a useful way to uncover and prevent white-collar crime. It can also be a reflection of professional management practice and promote corporate culture.

The United States has introduced a slew of laws to protect people who "speak out". The Sarbanes-Oxley Act (SOX) gives special protection to people at companies listed on the American stock exchange if they reveal wrongdoings in accounting or financial practices. Companies must have whistleblower systems and people in place to re-

ceive tip-offs and investigate allegations relating to accounting practices, accounting controls and auditing issues. It's forbidden by law to sack, demote, suspend, threaten, bully or in any way discriminate against whistleblowers. People are also allowed to contact the authorities, members of congress and superiors who have the authority to investigate and rectify abuse or wrongdoings. The Dodd-Frank Act, which came into effect in 2010, provides further incentives to whistleblowers in the form of rewards for uncovering abuse or wrongdoings. The law makes special provisions for the protection of anonymity.

In the UK, whistleblowers are protected by the Public Interest Disclosure Act. In July 2011, the Bribery Act also comes into power, and this will also affect German companies. This act lays down tight restrictions regarding compliance and corruption avoidance guidelines, although the law doesn't specifically mention whistleblowers. Nevertheless, companies are obliged to introduce compliance systems to avoid corruption. Indirectly, this means whistleblowers will have more protection, and guidelines for setting up the necessary anti-corruption procedures will need to be drawn up. These will have to include instructions, checklists and forms for specific scenarios, including guidelines covering the anonymous reporting of suspicions. Firms will face criminal action if corruption is uncovered or if they fail to implement suitable measures.

Until now, there have been no laws regarding whistleblower protection in Germany. In 2008, legislators did attempt to alter infringement arrangements under the German Civil Code (BGB, Section 612a). However, this failed after constitutional concerns were raised regarding anonymity protection, the lack of specific sanctions that could be threatened if an employer failed to comply, and the difficulty of proving wrongdoings as a result of the wording "sufficiently definitive indications".

If employees choose to hand on company information, their freedom of expression is already subject to special restrictions due to clauses in their contract of employment. But even if there are no special contractual obligations, workers do have a loyalty and allegiance towards employers, which stems from their obligations as a employee. The integrity interests of an employer are easily affected. Confidentiality obligations, often the norm in employment contracts, frequently go beyond the statutory non-disclosure obligations captured under Section 17, Paragraph 1 of the Act Against Unfair Practices (GWB). This relates to unfair competition, i.e. the protection of corporate and trade secrets. It also covers information declared confidential by the employer and any other issues worthy of protection, of a personal nature or relating to a business. It is not difficult for a would-be whistleblower to enter an area of legal uncertainty regarding who may be told what. Employees who disregard non-disclosure obligations can be dismissed instantly under Section 626, Paragraph 1 of the BGB.

It is evident how important it is for companies and senior managers to understand the benefits of whistleblower systems and to work out – and put in place – suitable procedures. The Steinbeis Compliance Monitoring system developed by the School of Governance, Risk & Compliance makes it possible to evaluate and understand systems and procedures already in place, and understand how best to design systems according to the overall degree of compliance needed, by industry, size of company and location.

Companies can use Steinbeis Monitoring, a standard for compliance check launched by School GRC, to regularly inspect and evaluate their degree of compliance. The assessment is based on the current situation in the company, with the aim of ensuring the implementation of suitable and effective compliance standards. The assessment looks at individual measures to see if they are in place at all (i.e. their integrity) and whether they are effective and efficient (i.e. their quality). All of this is captured in a four-box model. The assessment also considers the elements that make up a whistleblower system and whether there are tools in place to ensure the system is sustainable.

Factors that affect the integrity and quality of systems include anonymity protection and the existence of whistleblowing channels, such as an ombudsman, help lines, electronic or web-based systems. The key issue is whether employees know who to turn to, and where, if they discover wrongdoings or abuse – and whether they can expect sanctions, or whether the whistleblowing system is accepted in all areas of a company, and can thus be considered an integrated and established part of the corporate culture.

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training spotlight

Next certification course for compliance officers starts in late 2011

Gain expertise – become a compliance expert

What requirements does a compliance management system have to fulfill? How do companies and administrations protect themselves from white-collar crime? How do companies prevent false accounting? Training as a certified compliance expert at the Berlin-based School of Governance, Risk & Compliance at Steinbeis University Berlin provides answers to all these questions. The next course starts in October.

The certification course runs in parallel to full-time work and builds on participants' specialist knowledge of compliance. It also provides a strong theoretical grounding as a step into this new vocation. On completion, students are a Certified Compliance Expert (CCE). The course takes one year, involving 35 classroom sessions covering core competences with direct reference to business practice. For example, the course looks at management and company liability issues, setting up compliance structures, in-house investigation and international inquiries, media training for professional crisis management and best legal practice when dealing with fraud. This graduate degree program is targeted at specialists and managers in all sectors of industry, from companies, public administration and other organizations, as well as people working in specialist departments such as legal areas, auditing, fraud management, compliance and even HR.

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Bachelors, masters and courses in psychotraumatology

Recognizing and treating psychological trauma

The Steinbeis Transfer Institute for Psychology and Psychotherapeutic Science (IPPTW) is offering a bachelor's degree in psychology, a master's degree in psychology and psychotherapeutic science, and certification courses to become a specialist caregiver, advisers and therapist. All courses are aimed at addressing the lack of skilled workers in psychotraumatology.

Before the 1990s, very little was known in Germany about the effects of psychological trauma as a psychological and psychosomatic disorder. Even today, it often takes years for the medical system to recognize traumatic effects, let alone treat them. Many patients have to wait years for psychotherapy. Even 20 years after it became an established occupation, psychotraumatological psychotherapy still boasts few professionals. As a rule, patients are treated along traditional lines such as behavior therapy or psychoanalysis. The reason for this mainly stems from the lack of understanding of psychotraumatological issues and therapies. There are also not enough ways for therapists to gain such specialist knowledge.

Further, at a fundamental level any professional first coming into contact with a traumatized person needs a specialist understanding of traumatology. This is particularly true for firefighters, the emergency services, the police, the military and HR managers. By recognizing symptoms early and taking appropriate preventative action – on a primary, secondary or tertiary level – there is a significant opportunity to mitigate psychological and physical suffering.

During the bachelor's degree, students can already acquire a certificate as a "Specialist Adviser in Psychotraumatology". The bachelor curriculum has been designed to provide the right mix of scientific and practical background for people wanting to go into clinical consulting or organizational psychology consulting. Alternatively they may want to enter research, teaching or psychotherapy practice.

During the master's degree, students can build on their understanding of research and practice. Students are given a thorough grounding with an emphasis on psychotherapeutic science, in some areas arming them with skills that go beyond traditional clinical psychology. After graduating, they can gain their medical license on the road to setting up a practice for psychotherapy out-patients.

The fundamentals laid out during the certification courses mainly come from the field of psychology and psychotraumatology. Afterwards, students can specialize in more detailed areas of practice.

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The Steinbeis Network takes root in Mexico

A successful start

On May 3, 2011, Germany's president Christian Wulff took time out of his state visit to Mexico to attend the signing of the agreement that officially founds Steinbeis Mexico. With its Neo-Mudéjar architecture, the famous theater in the colonial-era city of Guanajuato was the perfect backdrop for the signing. The founding of the Steinbeis technology network in Mexico is a first for the German international technology and business partnership.

The signatures on the declaration of association are the result of a wide-ranging process of building consensus – and building on existing foundations. It all started when Wolfgang Wolf (State Association of Baden-Württemberg Industry, or LVI), Jan Bandera (Steinbeis), Joachim Elsässer (LVI) and Günther Schmid (Baden-Württemberg Ministry for Economic Affairs) went to Mexico on a fact-finding mission sponsored by the Konrad Adenauer Foundation to explore the possibility of a business and technological partnership.

Signing the agreement (l-r): Lic. Rodrigo Lanuza (Steinbeis Mexico), Luis de la Peña (USEM Business Association), Prof. Dr. Dr. h.c. mult. Johann Löhn (Steinbeis University Berlin), Lic. Ramon Alfaro (Economics minister, Guanajuato), PSts. Hans-Joachim Otto (German Ministry of Economics, BMWi), Johannes Hauser (Delegate for the German Economy in Mexico), Dr. Fernando Mendoza (CONACYT Research Center CIO), Enrique Aranda (COPARMEX Leon Business Association)

Encouraged by the LVI and with the support of the Konrad Adenauer Foundation, a delegation of top-ranking business representatives was assembled in November 2010 and flew to Germany. At a ceremony on November 11, the Federation of German Industries (BDI) saw the German BDI and LDI representatives sign an agreement with Mexican representatives of COPARMEX and USEM, two business and economic associations. Besides fostering bilateral collaboration between companies and business clusters, the partnership focuses on strengthening ties between technology, business and education. This particular aim prompted the Steinbeis Foundation, LVI and COPARMEX to sign a secondary agreement parallel to the main one.

The initiative is already bearing fruit. As part of their planning workshop, the Mexican technology council CONACYT commissioned the Steinbeis Foundation to evaluate ways of applying Steinbeis experience and structures to the situation in Mexico. Mexican business associations are particularly eager to embrace the Steinbeis model, so it makes sense that they are the co-founders of Steinbeis Mexico along with three German partners: Steinbeis, LVI and the German Chamber of Commerce for Mexico.

The Steinbeis Network in Mexico will be responsible for:

- founding technology transfer centers at Mexican institutes of higher education (much like Steinbeis Transfer Centers in Germany) and working together with counterpart centers in Germany,
- launching and expanding bilateral partnerships between business clusters (such as LR BW, Baden-Württemberg Aerospace Forum, and PU Umwelt) to strengthen entrepreneurial relationships,
- launching and supervising bilateral partnerships between universities (such as the Baden-Württemberg Cooperative State University and Steinbeis University Berlin) to bolster the educational infrastructure particularly for undergraduate and post-graduate students,
- supporting CSR initiatives launched by Mexican companies by sharing experience and working with partners in Germany and
- bringing German and Mexican businesses closer together by sharing experience and promoting communication in business, technology, environmental and educational policies.

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SHB student assesses the nature of strategic market and competitor monitoring

Competitive intelligence – an integral part of corporate decision-making

Strategy development is a living process. The overall situation affecting a company's ability to operate within a market evolves continuously, and companies constantly find themselves having to adapt their strategies. As part of his MBA degree at the School of International Business and Entrepreneurship at Steinbeis University Berlin (SHB), Jörg Simon, who is responsible for Market & Competitive Intelligence at Deutsche Telekom, looked at the changing nature of modern-day strategy development processes. Based on this, he drafted an optimized competitive intelligence strategy.

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The business environment that companies operate in these days can change very quickly. One moment a new competitor pops up. The next, an established competitor exits the market. There is probably no more visible example of this rapid rate of change than in the telecommunications industry. Deregulation of many international telecommunications markets at the end of the last century opened the floodgates to new market competitors, posing a challenge to the old monopolies. Parallel to this, technology has moved forward in leaps and bounds in recent years, hand in hand with digitalization, allowing many companies in related industries such as IT, the media and entertainment to expand operations and enter the telecommunications arena. So mobile phone manufacturers, such as Apple, have threatened to steal core business from established cell phone companies with value-adding services sold directly through their application stores. Are these companies still just suppliers or business partners to the industry, or have they become competitors?

In the long term, companies like Deutsche Telekom can only maintain a grip on the market if they spot such trends quickly and continually adjust their strategies accordingly. As part of his degree at SHB, Jörg Simon decided to start by analyzing the sweeping changes affecting international

telecommunications markets. The competition is becoming more and more cluttered, and companies are coming under pressure to make faster and faster decisions. Simultaneously, as competition intensifies, they are being forced to minimize the risk of making a wrong decision. Key to this is having a reliable "navigation system", and this is precisely the underlying idea behind competitive intelligence. In simple terms, competitive intelligence can be described as a system for monitoring and managing a company, taking other "road users" into account in the global business environment.

According to Michael E. Porter, one of the spiritual patriarchs of competitive intelligence, to lay down a competitive strategy, companies should focus primarily on competitors within their own industry. But as the borders between sectors of the telecommunications industry become more and more fuzzy, this approach is no longer sensible. Focusing too strongly on known competitors runs the risk of overlooking new competitors from related markets and thus reacting too late to corresponding threats, or failing to exploit the growth potential of related markets. The classic strategy process can no longer do justice to this level of complexity. So the aim of Jörg Simon's project was to start by optimizing the strategy process, and based on this, draft a concept for an optimized competitive intelligence strategy for the CTIO Business Development department.

There is a tendency amongst businesses to concentrate too much on foreseeable issues and thus focus too much on known competitors. And by only focusing on internal issues, things stay the way they have always been. Often, companies only start looking properly at competitors, and really seeking opportunities to innovate, when a niche market or new competitor reaches a size that can no longer be ignored by the business. The sign of a modern strategy process is that the company is being managed with the future in mind, and managers are not blindly placing trust in successful recipes from the past. Once it is clear which direction management is steering in, it is possible to set individual waypoints more accurately – in the short and medium term. In other words, the strategy can be translated into actions.

Planning the strategy is a core function of senior management and it cannot be delegated to business departments or third-party consultants. The key challenge is still to link the strategy coherently with the management processes that control the operative side of the business. There is no specific dividing line between strategy and tactics (i.e. implementation activities). Continuously revisiting strategic decisions and tweaking the selected strategy in "control loops" further down the line, thereby balancing short-term objectives with the long-term perspective, ensures that the company maintains its course – even if there is a sudden change in its situation.

The business environment Deutsche Telekom operates in is subject to increasingly rapidly change, and this change is also becoming more radical. So it is particularly important for the company to tackle future issues, even if they are highly uncertain. The number of key influences on strategic decision-making is increasing. The number of (potential) competitors and additional markets or customer segments that need to be monitored, analyzed or evaluated is also growing constantly. So as the business environment becomes increasingly complex and fast-moving, the pressure to accelerate decision-making throughput – without compromising the quality of decisions – is also rising. One of the key findings of the project was that, given these developments, competitive intelligence has actually become a core competence of modern business – an integral part of the strategy process. Competitive intelligence is much more than just gathering and documenting market and competitive data. As a core element of an evolving organization, it helps companies answer some key questions: "What do we have to do to win (versus the competition)?"

To do this, on the one hand competitive intelligence must provide the analytical input needed in the strategy planning process. On the other, it must critically assess the course being steered. So this completely redefines the role of the competitive intelligence manager. As a sparring partner, the competitive intelligence manager has to help managers with questions relating to the current business, and offer credible second opinions during the decision-making process based on their experience and skills. Working jointly with management, competitive intelligence managers help pinpoint suitable solutions, from a outsider's point of view.

Given the increasingly dynamic, globalized nature of markets, more and more variables are wielding an influence on the competitive environment – so the importance of competitive intelligence will continue to grow. The potential optimizations identified by Jörg Simon are thus currently being introduced step by step within the corporate CTIO Business Development function at Deutsche Telekom. At the same time, channels of communication with other competitive intelligence departments in the company are being opened up further to improve the quality and effectiveness of strategic market and competition monitoring throughout the group.

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The experiences of a participant on an SHB certification course

The woman destined to give public speeches

Giving speeches is nothing new to Dr. Christiane Nill-Theobald. Quite the opposite: She heads up her own strategic communication consultancy, putting her heart and soul into consulting and coaching. Training and seminars are bread-and-butter business to her. As well as planning and customizing solutions for companies, she is a lecturer, sparring partner for HR development experts and managers, and an "analytical observer" – all in one! Yet she's still been driven for years by a desire to step into the limelight, to motivate people, to inspire, to inject energy into events and add those important finishing touches. As a participant on the Steinbeis University Berlin certification course "Professional Speaking", Dr. Nill-Theobald describes her experiences and impressions of life back in the (university) classroom.

Christiane Nill-Theobald

The Professional Speaking course had hardly got out of the starting blocks when I heard rumors about the high ambitions of the German Speakers Association (GSA) – they were planning to make "speaking" a university subject. By collaborating with a university, "Public speakers" should become an official profession, based on vocational training, with a challenging final examination. Sounded good to me.

At the beginning I wasn't totally sure what "speaker training" would entail. I'd been making speeches for years so the area wasn't exactly new to me. But what I heard about the course won me over on two fronts. First, the high level of professionalism with which the course was pulled together. Second, the broad scope of the program: 26 modules, spanning eight weekends, each brimming with content, over a whole year. This was coupled with a not-insignificant price tag, an exam including a business plan for a public speaking business, and finally the task of writing and delivering a keynote speech.

An important key contact for me was Markus Hofmann, a leading memory coach, keynote speech presenter and the director of the Professional Speaking Steinbeis Transfer Institute. His advice said it all: "If you've already been toying with the idea of going into public speaking business for a long time, then do the training." I can now say that this training was the best on the market. The fees and time investment were compensated for a long time ago. I haven't regretted my decision for a second.

Coming back to my decision and how it went: I actually broke off a holiday to attend the first module. I wanted to be there from the beginning. It turned out to be a wise decision. There was an amazing sense of openness from the moment everyone got together. The moment we sat down, there was a kind of spirit. We immediately connected with each other. It was a feeling of "being a student again", as a group; we all felt younger again. On top of that, it was amazing how we just took off. This was partly because of the lecturers. Sure, they were demanding. Sessions lasted from nine in the morning until late in the evening. We did body language, voice exercises, dealing with stress and stage fright, the art of improvisation, being authentic on the stage, and starting with the second block, marketing, sales, positioning and sales strategies. But all of the lecturers are masters of their trade; all are excellent in their own way and prepared to give everything it takes.

Apart from the lecturers, there are mentors who I find crucial and whose role is priceless: other people on the course. I've joined up with five of them to set up our Master Mind Group. We noticed early on in the process that in our own way we're also experts within our respective areas. So why not benefit from this? We now meet regularly, once a month, to compare notes, practice our speeches for the final exam, and of course network.

I'm conscious of the fact that compared to other people in the training market, after my exam I'll be a clear step ahead of the others and that's tremendously motivating. Overall, I can only say that it has be one of the best decisions I've ever taken!

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Steinbeis student asked to come up with an integrated management system

Implementing strategies innovatively

Gruner AG is a global player specialized in the integrated manufacture of relays, magnets and actuators. A family-owned medium-sized enterprise, Gruner is based in the Swabian town of Wehingen and designs a variety of products for applications in automotive markets, smart metering, building management and automation technology. Gruner currently employs around 800 people worldwide at sites in Germany, Tunisia, Serbia and India. As part of his studies towards his Master of Business Engineering at the School of Management and Technology at Steinbeis University Berlin, Martin Spreitzer was asked to identify a way to steer future business developments and develop – and then introduce – a strategic management system based on the principles of the Balanced Scorecard (BSC).

The primary aim of Martin Spreitzer's project was to improve his company's ability to implement strategies. It should also simplify management processes, break down corporate goals in a systematic manner and improve process and customer orientation. There is broad agreement among scientists that to integrate the BSC into business processes successfully, strategic goals, key performance indicators and targets need to be derived from the company vision and departmental strategies. This has to be charted on a strategic roadmap. Also central to the success of the BSC: the definition of the strategic steps to be undertaken to achieve business goals, and the documentation of correlations between the causes and effects of strategic goals.

Apart from looking at finances, Spreitzer also examined customers, processes and potential. After a strong period of growth in recent years it would be necessary to restore a sense of equilibrium and expand management horizons. To gain as much acceptance as possible for the new target-setting system, Spreitzer involved managers – early on and from a variety of departments. After setting up a company-wide BSC, each unit within the organization was aligned with the corporate strategy.

At this point, the need for more focus on processes and customers meant that it was necessary to adapt the standard BSC model. So corporate goals were not broken down directly by area or department. Instead, to cascade the scorecard down the business, Gruner inserted a new level between the company scorecard and departmental scorecards. This consisted of two further BSCs which were derived from Gruner's actual core processes. This made it possible for Spreitzer to break down the organization into functional segments and improve the process of reconciling dotted-line goals between areas and departments in advance. Strategically aligning the organization through the innovation process and the supply process also helps simplify collaboration at crossover points pivotal to success, based on common goals. This step towards "departmentalized thinking", turning the spotlight on the whole functional chain. The result of this is that workers become more aware of what is happening and the actual value-added, i.e. actual value for the customer.

In keeping with this awareness, Spreitzer translated the strategy into action, top-down throughout the entire organization such that it became part of everyday business. Using the BSC as a channel of strategic communication conveys a uniform message regarding the strategy to employees. It also helps managers translate management tasks into their area, a key factor in successfully implementing strategies. The BSC also performs an important role at Gruner as a management reporting tool, keeping recent and future business trends transparent for decision-makers. The BSC thus makes a significant contribution to management decision-making. As well as reacting to a given situation, managers can actually start working proactively and thus achieve better results.

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Material efficiency and energy optimization in metal processing

Uncovering potential

The European Commission is committed to energy efficiency and resource management. In 2010, it published the strategic paper "Energy 2020 – A strategy for competitive, sustainable and secure energy". By the year 2020, the aim is for the EU to lower emissions by 20 percent, increase the proportion of renewable energy used by 20 percent and raise energy efficiency by 20 percent. To do this, companies need to change the way they think and act – and a number of European projects are already setting benchmarks in this area. The Steinbeis-Europa-Zentrum is supporting the scheme with a number of initiatives.

Scrap metal used once or even twice. Photo: © ABAG-itm

In light of rising prices in the energy sector and a shortage of resources, companies are having to think about energy efficiency and ways to save money. A study by the German Material Efficiency Agency (DEMEA) determined that material costs account for 45.4 percent of manufacturers' expenses. So material efficiency has become a key issue.

Only 6 percent of SMEs in the EU have an environmental management system (EMS) in place. And only 29 percent have introduced measures to conserve resources – as opposed to 46 percent of large enterprises. So to help SMEs improve their resource efficiency and life cycle assessment, the Steinbeis-Europa-Zentrum (SEZ) is giving SMEs vouchers for an analysis of potential environmental protection measures in the workplace, and for energy analyses. This is being funded by the European Commission as part of the EU projects EURESP (European Regional Environmental Services Platform) and ESMI (Environmental Services for Metalworking Industries). As a partner in both of these projects, the SEZ is able to offer its environmental services to SMEs at a reasonable price. Both projects aim to improve SME access to services tailored to their needs that help them become more environmentally friendly. Another aim of the projects is to develop strategies to optimize energy efficiency, and make these strategies a sustainable part of company practice.

To do this, the SEZ has signed cooperation agreements with service providers and held a number of seminars with key regional players. In March, the SEZ hosted a panel discussion in Stuttgart entitled "Conserving raw materials in metalworking and metal processing." Innovative companies presented sample projects showcasing how to use resources more efficiently. The SEZ's partners in this initiative were the Baden-Württemberg Ministry of Finance and Economics, the not-for-profit association Modell Hohenlohe, the Südwestmetall Association for the Metal and Electronics Industry in Baden-Württemberg, and the Gosheim Metal Efficiency Center.

Adolf Schnorr GmbH & Co. KG, an SME based in Sindelfingen in south-west Germany, presented its findings from a material efficiency project. The company specializes in manufacturing disc springs and fuse elements. As material costs account for around 25 percent of production costs at Adolf Schnorr and around 50 percent of metal is wasted, in 2009 the company decided to launch a project to improve material efficiency. The project was sponsored by the VerMat program run by the German Federal Ministry of Economics and Technology, and included an analysis of potential, followed by an in-depth consultation with ABAG-itm, based in Pforzheim. The analysis of potential brought greater transparency to company material flows and material losses in production. It also pointed to plenty of optimization potential. In the second stage, a material efficiency team defined and evaluated specific measures for optimization. So far, the company has defined over 50 individual projects in this area – all profitable and with a maximum break-even of 2 years. The main focus is on optimizing material use during stamping, minimizing waste and loss during production, and sorting and separating different types of metal turnings. Schnorr put 30 of these individual projects into action in 2010, resulting in annual savings of € 65,000. And once the remaining projects are up and running, they should save an additional € 60,000 per year.

The Steinbeis-Europa-Zentrum is keen to work with companies in other sectors of industry and is continuing to award vouchers. In January, the SEZ held a workshop in Neresheim entitled "Innovative ideas for concrete components: financial success through innovation and eco-friendliness". The workshop was run in partnership with three industry associations: Concrete Components Bavaria (Beton-Bauteile Bayern im BIV), part of the Bavarian Stone and Earth Industrial Association, south German concrete marketer BetonMarketing Süd, and the Baden-Württemberg Professional Association for Concrete and Prefabricated Component Producers. In April, the SEZ presented funding options in Pforzheim to promote innovation, eco-friendliness and energy efficiency at bakeries and confectioneries. In February, the SEZ also talked to wine cooperatives about energy saving and water management in wine production.

The SEZ voucher system

After completing a detailed assessment of the status quo at the company, the SEZ works with experts to perform an energy/environmental analysis. During the consultation process, the company's potential savings are quantified and the areas with potential for optimization are defined. This makes it possible to introduce initial measures to make savings immediately. Companies only take on part of the cost, as well as paying for the consultant's travel costs.

The target group for the vouchers is companies in the metal and construction industries, concrete producers, food producers (wine production and bakeries) and the refuse industry.

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Steinbeis anniversary in Ulm

25 years of the TQU: ensuring quality in companies

25 years ago, Professor Jürgen Bläsing founded the Steinbeis Transfer Center for Quality in Companies (TQU) in Ulm. Since then, the TQU has itself spawned a number of other respected consulting and training companies within the Steinbeis Network. The TQU publishing house, also founded by Bläsing, was the first publishing house in the Steinbeis Network and has made a name for itself in its field.

The TQU was founded in 1986 with three aims: to promote a professional approach to quality management and the development of management systems, to attract young engineers to the field and help them to find exciting professional opportunities, and of course, to be profitable. Without a doubt, one of the deciding factors that spearheaded the birth of the "quality movement" in Germany, which continues to this day, was the introduction of the new international standards of the ISO 9000 family, and the wave of certification that followed. Another factor: the phenomenally successful "lean" organizational structures used by Japanese automobile manufacturers, news of which was greeted with astonishment in Europe. PCs also introduced revolutionary new ways to process data.

The TQU embraced all of these new possibilities. Quality management professionals came to the center to take their first tentative steps in learning how to use a PC. With the TQU's support, companies brought their quality management into line with international standards and achieved their first certifications. The TQU studied quality management methods in Japan and the US, then offered them to the domestic German market. For a number of years, the TQU also hosted panel discussions for professionals in the field – such as the quality managers' forum.

Selecting the right partners is a key success factor for every company – and this is also the case at the TQU. Right from the very start, the center has been part of the Steinbeis Network, made up of innovative companies, professors and dedicated experts. The principles of Steinbeis are also those of the TQU: decentralized organization, complete self-financing, and a service portfolio based on innovation and customer-orientation.

In the same way biological cells divide and multiply, the TQU has successfully reproduced its ideas by spawning new transfer centers itself. A few years after the TQU was founded, a group of staff became independent and founded their own Steinbeis companies. The TQU supports and encourages this process, and it continues today. After all, being able to compete fairly, honestly and successfully is key to Steinbeis principles. Of course, this means there has even been competition between the new centers that have spun off from the TQU – and there still is. Just like there is across the whole Steinbeis Network. This is good for customers, as it means they can select from a variety of outstanding providers. The TQU's core principles, methods and approaches continue to be applied successfully at all the Steinbeis companies it has helped create – which also translates into financial success.

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www.stw.de → Our experts

New centers in the Steinbeis Network

The Steinbeis Network comprises around 800 Steinbeis enterprises spanning all fields of technology and management. Depending on the nature of their work, these may be Transfer Centers, Consulting Centers, Innovation Centers, Research Centers, Transfer Institutes or separate legal entities. The following new Steinbeis enterprises have been founded since February 2011:

SPENGE

Applied Movement Technology (ABT)

Director: Prof. Dr.-Ing. Ralf Hörstmeier

E-mail: SU1494@stw.de

Range of services:

- Preparation and distribution of research results
- Setting up and management of innovation networks
- Knowledge propagation and sharing, continuing professional development
- The interface between people and technology

FREIBURG

Illumination Optics and Lighting Technology

Director: Prof. Dr. Paola Belloni

E-mail: SU1495@stw.de

Range of services:

- Lighting development and feasibility studies
- Development and optimization of optical systems (illumination optics) based on simulation processes
- Lighting measurement
- Standardized, ergonomic lighting plans
- Spectroscopic evaluation of light sources
- Consulting and training in technology and innovation management

BERLIN/REUTLINGEN

Project and Self-management

Director: Dipl.-Soz.Päd. (BA) Patricia Kuppinger-Beck

E-mail: SU1496@stw.de

Range of services:

- Self-management
- Project management methods and instruments
- Managing others and working on projects in teams
- Project management processes
- Conflict in projects
- Multi-project management
- Change and resistance
- Project management tools
- International certification and accreditation in project management; IPMA, PMI, PRINCE2/P30

SAARBRUCKEN

Amorphous Metals

Director: Prof. Dr. Ralf Busch

E-mail: SU1497@stw.de

Range of services:

- Consultation on the material properties of metallic glasses and their underlying technology
- Alloy development
- Thermophysical characterization
- Production of semi-finished glassy solidifying alloys
- Development of special forming processes for processing metallic glasses

BERLIN/BADEN-BADEN

Institute of Bank Management and Financial Accounting

Director: Prof. Dr. habil. Michael Lister

E-mail: SU1501@stw.de

Range of services:

- Research
- Consulting
- Certification

ELLWANGEN

Innovative Drive Technology and Waste Heat Utilization (IAA)

Director: Prof. Dr.-Ing. Markus Kley

E-mail: SU1502@stw.de

Range of services:

- Development of innovative drive solutions
- Development of innovative waste heat utilization systems
- Prototype construction and testing
- Design consulting
- Technology consulting
- Drive train simulation
- Operational stability verification, durability calculation

ESSLINGEN

Processes, Excellence and CMMI (PEC)

Director: Dipl. Math. Gerhard Fessler

E-mail: SU1503@stw.de

Range of services:

- Consulting/coaching on CMMI and process optimization
- Training, SEI-licensed CMMI courses
- SEI-licensed assessments and audits
- Support with CMMI projects and process optimization

COLOGNE

Lean and Quality Management

Director: Amir Mousavi Rizi, MBE, B. Sc.

E-mail: SU1504@stw.de

Range of services:

- Consulting
- Assumption of project management to free up company resources
- Support with auditing and certification projects
- Interim management and support with the setting up of new management

MAGDEBURG

Uniform.Design

Director: Prof. Dipl. Des. Franz Hinrichsmeyer

E-mail: SU1505@stw.de

Range of services:

- Industrial design
- CAD visualization
- Product development

BERLIN

Financial Behavior and Ethics

Director: Prof. Dr. Dr. Sabine Meck

E-mail: SU1506@stw.de

Range of services:

- Research projects and scientific surveys, methods training and consultation
- Training courses, summer and winter schools, workshops, seminars, presentations, certified training, dissertations
- Congress; publications
- Personal development workshops and training
- Corporate communications

UNTERGRUPPENBACH

Fluid Mechanics and Thermodynamics

Director: Prof. Dr.-Ing. Christian Dettmann
E-mail: SU1507@stw.de

Range of services:

- Engineering
- Applied research and development
- Theoretical and experimental examination
- Consulting

MESCHEDE

Institute of Broadband and Media Technology

Director: Prof. Dr.-Ing. Stephan Breide
E-mail: SU1508@stw.de

Range of services:

- Development and provision of broadband services
- Development and consultation in the field of media technology services, including
  - multimedia presentations in museums and at exhibitions
  - metrological examination of news technology systems
  - Development of news technology transmission and measurement systems
  - Presentations and training

BERLIN

Institute of Executive Capabilities (IEC)

Director: Prof. Dr. Mario Vaupel
E-mail: SU1509@stw.de

Range of services:

- Transfer-oriented certificates, master's degree programs for business
- Programs for talent pipelines

Institute of Economics

Director: Prof. Dr. Bärbel Held
E-mail: su1511@stw.de

Range of services:

- Scientific support and evaluation of projects
- Consulting and coaching for industry and the non-profit sector on commercial issues
- Financial accounting in production at SMEs and optimization
- Research studies/valuations

Decentralized Regenerative Energy Systems

Director: Prof. Gerd Heilscher
E-mail: SU1513@stw.de

Range of services:

- Photovoltaics:
  - Consulting in the field of project planning for solar energy equipment, yield evaluations
  - Output measurement of solar modules
  - Analysis and optimization of operating characteristics of existing solar equipment
- Power industry:
  - Consulting on the development and introduction of products and services in the field of smart grids, smart meters and smart homes
  - Examination of the effect of decentralized feeds into distribution networks
  - Load measurement on low voltage transformers
  - Network simulation
  - Integration of local solar output forecasts in network control centers

STUTTGART

Real Estate Management

Director: Dipl.-Ing. (FH) Siegfried Walter
E-mail: SU1514@stw.de

Range of services:

- Real estate business consulting
- Active real estate utilization
- Consultation of creditors
- Utilization of industrial goods

COLOGNE

IT Organisation & Management

Director: Prof. Dr.-Ing. Martin R. Wolf
E-mail: SU1515@stw.de

Range of services:

- Running of research and consulting projects
- Running of seminars and training
- Implementation consulting

MAGDEBURG

Interventional Medical Technology and Telemedicine

Director: Prof. Dr. Georg H. Rose
E-mail: SU1516@stw.de

Range of services:

- Analysis, assessment and evaluation of interventional medical technology
- Medical technology development consulting
- Applied research and development until product is market-ready
- Seminars, courses, training in the area of interventional medical technology
- Audits

HEILBRONN

The Heilbronn Graduate College Institute

Director: Prof. Dr. Ralf Dillerup
E-mail: SU1517@stw.de

Range of services:

- Research projects
- Supervision of doctoral students
- Provision of doctoral student college services
- Training on methods of scientific work

FLEIN

Institute of Strategy and Financial Accounting

Director: Prof. Dr. Ralf Dillerup
E-mail: SU1518@stw.de

Range of services:

- Strategy: consulting, support, (ongoing) development and training
- Financial accounting solutions: consulting, support and (ongoing) development and training
- Financial accounting dialogue

HEILBRONN

Institute of General Management

Director: Prof. Dr. Ralf Dillerup
E-mail: SU1519@stw.de

Range of services:

- Business degree partnerships in Business Administration and Management (B.A.) and Business Management (M.A.) through Heilbronn University
- Bursary program for students on the above degrees

CONSTANCE

Immunoproteasome Drug Targeting

Director: Prof. Dr. Marcus Groettrup

E-mail: SU1520@stw.de

Range of services:

- Immunoproteasome isolation and functional testing
- Immunoproteasome inhibitor validation
- Mouse models for immunoproteasome deficiency
- Preclinical mouse models in the field of autoimmunity

GREIFSWALD

Dental Computing and Cad/Cam Technology

Director: Prof. Dr. med. dent. Bernd Kordaß

E-mail: SU1522@stw.de

Range of services:

- Software engineering (including apps)
- Concept development and running of scientific studies
- Consulting, evaluations, expertise
- Continuing professional development
- Practicality testing of digital dental products

BERLIN

Organizational Management

Director: Prof. Dr. habil. Andreas Aulinger, Dipl.-Betriebswirt (BA) Carsten Rasner

E-mail: SU1523@stw.de

Range of services:

- Provision of master's degree programs
- Running of consulting and research projects

NUREMBERG

Institute of Business Management and Internationalization

Director: Prof. Dr. Helmut Haussmann

E-mail: SU1524@stw.de

Range of services:

- Training and continuing professional development: seminars, workshops and intercultural training
- Certificates: technology and innovation management, international market analysis, project and quality management
- Consulting: support with internationalization projects in central and eastern Europe and the BRIC states
- Research: growth and internationalization (especially SMEs), transnational knowledge management, emerging markets and benchmarking of innovation capabilities in SMEs

OSTFILDERN

Knowledge, Innovation and Technology (TCKIT)

Director: Prof. Dr. Dr. h.c. Helmut Kohlert

E-mail: SU1525@stw.de

Range of services:

- Brokering of research projects
- Training and continuing professional development for businesses
- Technology transfer between Germany and the Islamic Republic of Iran and neighboring states

NORDKIRCHEN

Geoinformatics

Director: Prof. Dr. Ansgar Greiwe

E-mail: SU1526@stw.de

Range of services:

- Development and design of monitoring systems used in earth observation
- Capturing, analysis and visualization of geodata
- Plotting of satellite and aerial maps
- Consulting services on the introduction of geographic information systems (GIS)
- Development of specialist GIS applications and internet solutions
- Provision of training, assessments and market studies

REUTLINGEN

Evaluation of Renewable Energy Projects

Director: Dipl. VWA Thomas Baltzer

E-mail: SU1527@stw.de

Range of services:

- End-to-end, interdisciplinary provision of evaluations of renewable energy projects with a focus on photovoltaics, wind, solar and hydroelectric power plants

DRESDEN

Electromagnetic Interactions

Director: Prof. Dr. habil. Hans Georg Krauthäuser

E-mail: SU1529@stw.de

Range of services:

- The analysis of intentional or unintentional electromagnetic interactions
- Consulting, planning and measurement of electromagnetic compatibility (EMC)
- Consulting and running of numerical computations
- Automation of measurement processes
- Seminars and training in the field of EMC

BREMEN

Sustainable Technology

Director: Prof. Dr.-Ing. Jorg Thöming, Dr. Michael Baune, Dr. Stefan Stolte

E-mail: SU1530@stw.de

Range of services:

- Research and development
- Process development and optimization
- Chemical design and assessment

BERLIN

Business Information Technology

Director: Dipl.-Ing. (FH) Peter Schupp, Prof. Dr. Axel Lamprecht, Dr. Peter Thommes, Jürgen Volz

E-mail: SU1531@stw.de

Range of services:

- Bachelor of Business Information Technology
- Master of Business Information Technology
- IT engineering and organization consulting

Steinbeis shareholdings set to grow

Laying future foundations: Gründler medical

Gründler GmbH, the Freudenstadt-based producer of medical breathing gas humidifiers, embarked on a major undertaking at the end of March, turning the sod on its new administrative building and with it another page in its history of growth. Steinbeis has been a stakeholder in the company since its inception.

The site measures around 7,100 square meters, of which approximately 3,500 sq m is dedicated to business operations in state-of-the-art, energy-efficient buildings. Emphasis was placed on allowing for further expansion – in any direction. The old building proved to be unsuitable for a business enjoying such strong growth. Gründler plans to move into its new premises in the Sulzhau grounds in October. This hitherto biggest investment in the history of the company was made possible thanks to cooperation between company shareholders, the Freudenstadt local savings bank (Kreissparkasse) and additional grants from the rural funding program ELR (Entwicklungsprogramm Ländlicher Raum).

Left to right: Mr. Gebhardt (Freudenstadt Kreissparkasse), Mr. Haensch (architect), Philipp Hiereth (Gründler), Markus Gründler (Gründler), Christoph Gründler (Gründler), Mr. Osswald (Town Mayor), Ms. Broermann (Town Councillor, Local CDU Association Chair), Mr. Staneker (Tax Accountant), Mr. Schuler (Town Works)

Gründler was founded as a classic start-up in 2001. After an intensive period of development, in 2005 the company launched HumiCare, its ground-breaking range of gas humidification products. After some turbulent times before its first sales, it finally achieved a breakthrough in 2007 and has enjoyed promising growth ever since with stable revenues. The latest generation of Gründler's flagship product, HumiCare, is just about to receive approvals. The company is anticipating another sharp rise in sales, underscoring the need to almost quadruple its business premises with the new construction project.

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Reasons to celebrate, Part II

Ten years of keeping an eye on risk

The Steinbeis Advanced Risk Technologies Group (R-Tech Group) has two good reasons to celebrate. The enterprise dates back to 2001 and the founding of the Steinbeis Transfer Center Advanced Risk Technologies (R-Tech). In the years that followed, a further German limited company was set up (GmbH) plus a Transfer Institute at Steinbeis University Berlin. The most recent member is a European Economic Interest Grouping (EEIG) focusing on research, the European Virtual Institute for Integrated Risk Management, or EU-VRi. Now five years old, it also has reason to celebrate.

The founding members of EU-VRi that joined forces with Steinbeis were the University of Stuttgart, INERIS, the Technological Group and the Bay Zoltán Foundation. The institute harmonizes and integrates (domestic) approaches toward emerging risks. It does this on a European level and is currently overseeing projects worth around 50 million euros for around

40 European members, made up of research organizations and companies.

In 2011, the R-Tech Group and EU-VRi are celebrating ten and five successful years respectively. With annual sales of around 1.5 million euros and over 120 live and completed projects, they are optimistic about the future. The current customer base ranges from SMEs to some of the world's biggest companies, representing as many industries as the portfolio of projects. Apart from projects as part of European and domestically backed research and development, which currently make up around two thirds of EU-VRi turnover, they are also involved in industrial services, which amount to around two thirds of R-Tech Group turnover. Future work in the R-Tech Group is expected to center on emerging societal trends and the significant rise in interest in risk, especially with regard to emerging technology (e.g. nanotechnology, CCS) and innovations in general.

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Reasons to celebrate, Part III

From pioneer to market leader in ten years

If a survey had been carried out in 2001 to gauge the awareness of the term "digital signage", the results would have been somewhat sobering. Modern life is inconceivable without digital media as a means of communication, in advertising or in guidance systems. The Stuttgart-based company netvico has witnessed many developments since it was founded. It has also played a major role in fostering these developments. In 2011, the company, which Steinbeis has a shareholding in, marks its 10th anniversary.

Photo: © netvico

When Christopher Colshorn founded netvico ten years ago, he needed plenty of pioneering spirit – and even more personal conviction – to steer the start-up company on the path to success. The netvico workforce has now grown to 30. The entrepreneurial vision of the company is underscored not only by its commercial success but also by a string of design and technology awards, including the red dot award, the design prize of the Federal Republic of Germany and the if communication design award. Long-term collaboration agreements with leading customers are a reflection of the sustainable policies of the company.

The company's unquenchable thirst for innovation is reflected in the new technologies netvico has prepared for market, almost like clockwork every two years. From illuminated stelae to light screens and LED flooring – the company's portfolio spans a variety of digital audio-visual technologies, all of which can be controlled using in-house Play-Everywhere software. Without question, one milestone was the first digital guidance system which netvico developed in 2005 and was first used by Peek & Cloppenburg. Netvico's most recent development confirms the company is armed for future challenges: Only Glass Media Facade is the first digital media facade to seamlessly combine the full functionality of an LED display with insulated glazing.

Despite the international, visionary outlook of the company, central to netvico's business philosophy is also an emphasis on sourcing hardware and parts from local suppliers. The company's affinity with its local heritage is also reflected in the ongoing support it has lent to artists from the Stuttgart region.

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Documentary film produced by the SEZ and the Enterprise Europe Network

Making technology transfer tangible

Under the remit of the State of Baden-Württemberg and the EU, the Steinbeis-Europa-Zentrum has now been advising companies and research bodies on cross-border technology transfer and EU research for 20 years. So it's time to capture this on film!

Six animated shorts and four documentaries have now been produced to show how Baden-Württemberg's companies and research institutes carry out successful EU projects, move into international markets and strengthen their ability to innovate. The profiles include the company Anoxymer from Esslingen, the Institute of Plasma Technology at the University of Stuttgart, the Hamburg/Karlsruhe-based company Harms & Wende, organ maker Mühleisen from Leonberg and the Fraunhofer-Institute for Building Physics (IBP) in Stuttgart.
All German clips are on the Steinbeis-Europa-Zentrum website.

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New releases from Steinbeis-Edition

Experts.Knowledge.Sharing.

Steinbeis-Edition, the publishing arm of the Steinbeis Foundation, regularly publishes works mirroring the scope of the Steinbeis Network's expertise. All titles can be easily ordered via our online shop at www.steinbeis-edition.de.

Steinbeis Engineering Forum 2011
Faster. Better. More efficient.
(in German only)
Steinbeis Foundation (Publ.) | Publication of Proceedings
ISBN 978-3-9808292-0-5

Work faster, improve quality, adapt time and again to changing parameters, answer the specific needs of customers, faster and faster, despite the increasingly complex nature of products – these are the typical demands placed on modern businesses as they strive to remain competitive and effective.

Without a doubt, a company's deftness in the product development process (PDP) dictates its competitiveness. The Steinbeis Engineering Forum is a business-oriented platform for managers from small and medium-sized enterprises to draw on the experience of experts and contemporaries from other companies – and return to their own companies with ideas for applications and new ways of doing things.
The first event was headlined "Faster, better, more efficient – thanks to targeted product development processes", addressing a topical issue at many companies today. The forum on April 12, 2011 aimed to promote networking between product engineering (design and construction of products), process engineering (configuration of processes, industrial engineering) and project engineering (hitting project deadlines and budgets, and - in particular - customer requirements). The proceedings contain German abstracts of speeches and profiles of speakers.

Interest rate management in industrial enterprises.
Banking management and financial accounting series, Volume 3, published by Michael Lister
(in German only)
Stefan Leippe | Michael Lister (Publ.)
ISBN 978-3-941417-59-5

The most recent financial crisis was not the only time it has been seen how companies' fortunes are dictated by interest rates – and not just in the financial sector. As fixed rates are tied to different interest levels, companies often have to work out what loan capital to borrow at what fixed rate. Solutions worked out by the banking sector can not be simply transferred to businesses, as payments are stipulated by different levels of uncertainty. This publication contains the first concept aimed at breaking down payments, with unsafe business payments going toward safe interest accruals and an unsafe portion of payments staying under the control of the business. This allows treasury managers at companies to apply lessons learned by the banks in managing interest rates, even allowing companies to completely eliminate interest rate fluctuation risk.

The author
Stefan Leippe studied economics in Bochum before graduating in Lahr with a Master of Finance and Banking. He gained his PhD at Steinbeis University Berlin in 2010 as part of a project at the School of Management and Innovation.

The Allocation of Communication Budgets.
An empirical analysis of factors influencing decision-making in the allocation of communication budgets with particular regard to parameters related to decision-makers
(in German only)
Ralf Kiene
ISBN 978-3-941417-56-4

Despite the financial pertinence of decisions relating to the allocation of communication budgets, apart from normative-focused optimization models for defining budgets, until now there have been few exploratory scientific studies that analyze factors influencing decision-making with respect to the allocation of communication budgets. Against this backdrop, this dissertation starts by drawing on theory in order to pinpoint possible factors influencing decision-making with respect to budget allocation. The influence of these factors is then evaluated empirically as part of an online experiment. The selection of parameters used in the study was primarily limited to factors related to decision-makers. The dissertation concludes by deriving implications for companies involved in the process of allocating communication budgets and by deducing possible ways to conduct further scientific work in this complex area.

The author
Dr. Ralf Kiene studied business at the University of Münster and the University of Sydney, majoring in marketing and supply chain management. From 2006 to 2010 he worked as a scientific assistant for the SVI endowed chair for Marketing and Dialog marketing at Steinbeis University Berlin. He gained his PhD in 2010.

Physiotherapy and Osteopathy in Teams. Determination of the options for restructuring an existing physiotherapy practice into an interdisciplinary practice for physiotherapy and osteopathic medicine
(in German only)
Barbara Hoess
ISBN 978-3-941417-57-1

Physiotherapy is currently in a state of upheaval, fueled by changes in health care policies and demographic change. Parallel to this, patients are increasingly taking the initiative and looking for ways to manage, maintain and improve their health themselves. In light of this, owners of medical practices are faced with adapting their strategies to the changes and customer demands, to restructuring processes and, if necessary, identifying new ways of working. There is still a great deal of uncertainty regarding the overall situation, with many ways to set up interdisciplinary practices to choose from. This set of guidelines highlights the general situation and underlying statutory factors. They can be used by therapists to pinpoint a fitting solution for their strategies.

The author
Barbara Hoess completed her studies last year at the Steinbeis Business Academy, culminating in a Bachelor of Arts for Osteopathic Medicine. Her German bachelor thesis is now available as a selected dissertation in Steinbeis-Edition, under the title "Physiotherapy and Osteopathy in Teams". Steinbeis Business Academy currently has around 1800 enrolled students and is the largest network institute at Steinbeis University Berlin.

New editions of the following publications are now available:

Business Intelligence & Controlling Competence:
Volume 1 – Fundamentals of Business Intelligence
(in German only)

Andreas Seufert,
Karsten Oehler
2nd Edition | ISBN
978-3-941417-60-1

Business Intelligence & Controlling Competence:
Band 2 – Business Intelligence and Injecting Dynamism into Planning
(in German only)

Karsten Oehler,
Andreas Seufert
2nd Edition | ISBN
978-3-941417-61-8

Diversity Management. Fueling unseen potential.
(in German only)

Marco Bambach,
Christine
Kuhn-Fleuchhaus
4th Edition | ISBN
978-3-941417-64-9

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