Steinbeis

TRANSFER

The Steinbeis Magazine

Nicely networked

Steinbeis on a local level
Our centers in the Neckar-Fils region

Help yourself
Steinbeis is partner in the Hyderabad Megacity project

Nice welding, laser!
Development of a groundbreaking laser welding process

Fits like a glove
Using smartphones to determine shoe size

03 | 2012

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Dear readers,

Prof. Dr. Jürgen van der List
is the former rector of Esslingen University of Applied Sciences and heads up the Steinbeis Transfer Center of Microelectronics in Göppingen.

All Steinbeis Enterprises in the Neckar-Fils region are presented on pages 4 to 6.

The Neckar-Fils region is nestled in the broader metropolitan region of Stuttgart and is considered one of the most attractive locations in southern Germany – not just because of its strong technological skills force, but also because of its patchwork quilt of countryside. There is a predominance of machine tool makers in the area, as well as automotive companies. Apart from major companies such as Daimler, Robert Bosch, Festo and Schuler, a variety of small and medium-sized enterprises have settled in the region – important sources of ideas, products and services who have also successfully entered the international scene of their own initiative. On a ride through the Neckar-Fils region, one rarely sees household names. Rather, the region is peppered with hidden champions, developers of technologically advanced products who have successful international track records. The academic expertise needed to achieve this is supplied by the universities in Stuttgart, Esslingen, Nürtingen, Göppingen and Geislingen. The non-academic expertise in the area stems from its establishments of higher education, vocational schools and company training workshops.

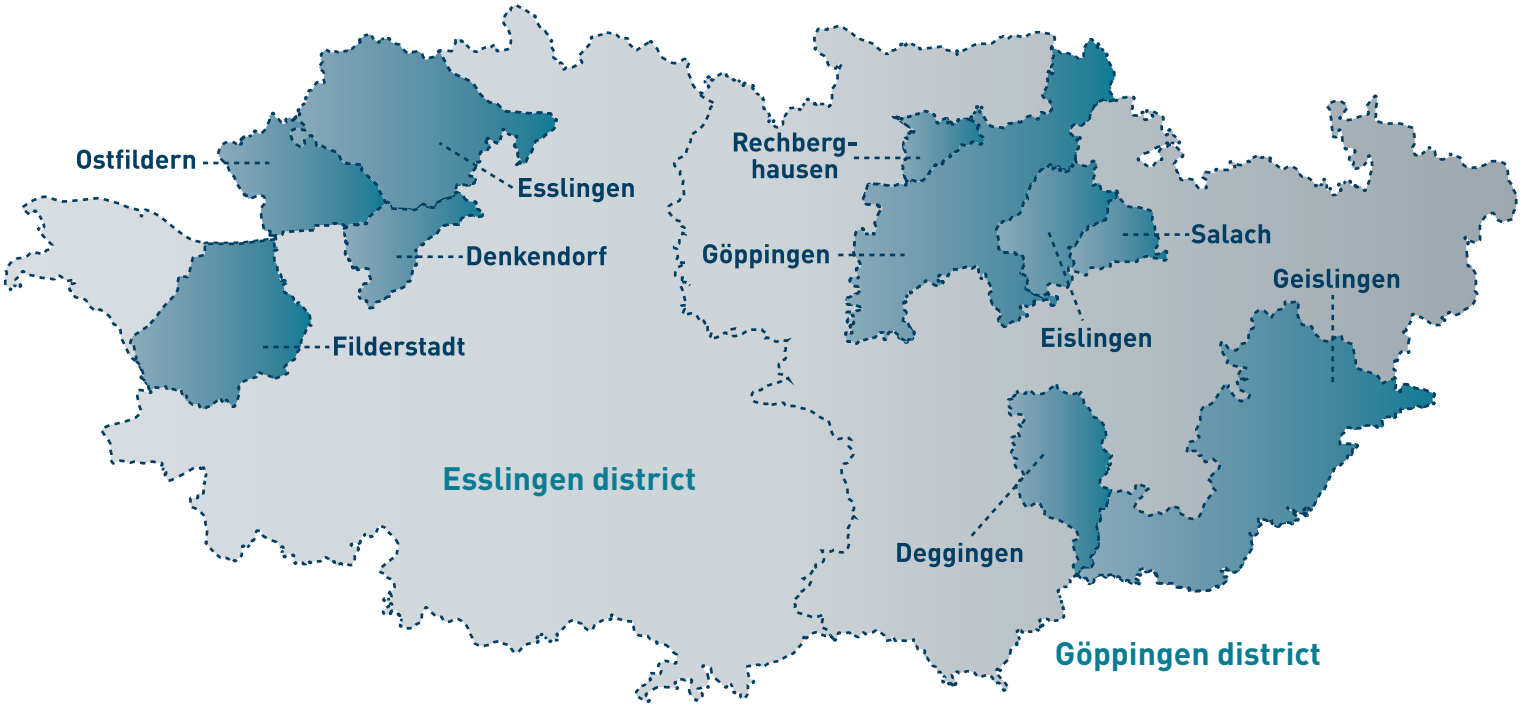
It's on this fertile soil that the Steinbeis concept has taken root, with the aim of transferring technology from universities into enterprise. The technology transfer projects in the region fuel important developments and services, frequently culminating in solutions ready for serial production. The Steinbeis Enterprises (SEs) here are often confronted with new and up-to-the-minute issues, which require a high degree of creativity, a wealth of knowledge in any given specialist area, the ability to work in teams and hands-on experience. To carry out such projects professionally, our SEs need educated academics and technical specialists, especially in the "MINT" disciplines – mathematics, informatics and computer sciences, natural sciences, and technology. This resource has been in short supply on the market for many months now. Some economic scientists and politicians still claim there isn't actually a shortage of skilled workers, but the fact is, there is a shortage and it's slowing the pace of innovation severely. According to a survey carried out by the German Chamber of Commerce (IHK) regarding skilled workers in the Stuttgart region, we are facing an upcoming shortage of around 38,000 academics and 193,000 commercial specialists – despite huge university expansion over the past few years. The forecast by 2021 is that the shortage of skilled workers will continue to worsen if training and staff development is not improved significantly in the short term. This could present SEs with another big opportunity for future activities – by joining forces with universities to offer training and thus expand technology transfer through knowledge sharing.

An additional service provided by SEs, that receives scant attention, is "personnel transfer." Projects carried out for – and often with – industry generally result in close collaboration between the client company and our SE specialists. As projects come to fruition and both parties express satisfaction, there is a growing interest from our clients to invite SE experts to push ahead, based on the results of the project – after all, our experts are by then familiar with the technical details, and personal issues. As of late, the practice of exchanging personnel has become much more common due to the shortage of skilled workers. The fact that, time and again, client companies are able to take on staff known to them – people who are exactly right for them, who are familiar with their project, and who are quick and inexpensive to recruit – is a tremendous advantage to the companies that work with Steinbeis Enterprises. And perhaps this is still not sufficiently appreciated by the companies.

I hope you enjoy reading this latest edition of TRANSFER.

J. van der List

Prof. Dr. Jürgen van der List



There are 36 Steinbeis Enterprises (SE) in the Neckar-Fils region, one SE at the Nürtingen-Geislingen University (specializing in economics and environmental studies) and 18 SEs at Esslingen University of Applied Sciences.

To find out more, go to:
www.steinbeis-neckar-fils.de

Steinbeis on a local level

Know-how and technology transfer in the Neckar-Fils region

The Neckar-Fils region has plenty to offer – an outstanding business infrastructure combined with charming countryside brimming with ways to unwind. Overall, the area is an appealing location that offers not only an excellent environment for doing business, but also an outstanding standard of living. The region stands out for its large and in many cases internationally renowned businesses, although it is also home to a variety of small and medium-sized enterprises. Many of these SMEs are highly specialized and even if they are not well known, they tend to be leading suppliers in a niche market. The region is also popular as a scientific location with a well-oiled scientific network that works in close collaboration with industry. The interplay between these factors in the region is excellent for facilitating know-how and technology transfer. Through their broad spectrum of specialist services, a variety of Steinbeis Enterprises in the region also play an important role in this transfer.

Steinbeis has been operating in and around the Neckar-Fils region since the early days of the Steinbeis Foundation at the end of the 1960s, actively working to foster targeted knowledge and technology transfer. To this end, Steinbeis works with the following partners in the area:

Nürtingen-Geislingen University of Economics and Environmental Studies: Originally founded in 1949 as a "Higher College of Agriculture," the Nürtingen-Geislingen University of today not only works in agriculture, but is also home to one of the biggest economics departments in Baden-Württemberg. The university offers its students a variety of bachelor and master degrees with an emphasis on practical application, making it a professional partner to industry and the region as a whole.

Esslingen University of Applied Sciences: Engineering, business, social sciences and nursing form the backbone of Esslingen University, which has around 5,600 enrolled students across 11 departments and offers 25 bachelor and 11 master programs. The university enjoys close ties with business and local associations, underpinning its strong focus on practical application.

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"Material issues will be crucial in metal working"

A discussion with Prof. Dr.-Ing. Manfred Stilz

Professor Stilz, your Steinbeis Transfer Center (STC) for Metal Working and Work Organization is at Esslingen University of Applied Sciences and thus right in the middle of the Neckar-Fils region, an area with a strong emphasis on R&D. There is an innovative atmosphere in the area, fuelled by a long list of successful small and medium-sized enterprises (SMEs) as well as large companies. Does this also have an impact on the work of your Steinbeis enterprise?

It certainly does. There's hardly anywhere else in Europe with such a high concentration of SMEs. This has a huge impact on fields like mechanical engineering and automotive engineering. Few of these companies are well known but they're extremely strong on the international stage and that's only possible with cutting-edge technology. My Steinbeis Transfer Center also currently does the majority of its business with SMEs, in contrast to the larger companies which were the source of our turnover in the beginning.

You're the vice rector of research at Esslingen University of Applied Sciences. How do you see your interaction with Steinbeis? What synergies are there and what are the future prospects?

As far as the quality of education at the university is concerned, Steinbeis is totally beneficial to us. The people who head up a Steinbeis enterprise can only sell their services through competition. Their know-how has to be up to date, valuable and based on actual business practice. That's something we also want in teaching. When it comes to

research, the answers are more varied. Not all active members of the Steinbeis community are also busy researchers. There are exceptions, but not many. What we have to do is to make it a win-win situation in both areas and that's something we're currently holding talks with Steinbeis headquarters about.

The services profile of your center contains a surprise or two: Your key areas of activity are two completely different fields – metal working and work organization. How did you arrive at this combination?

This stems from my career which involved both topics. Over the years there's been a strong shift toward metal working.

You founded your Steinbeis Transfer Center in 1993 and can now look back on many years' experience with the university as well as with Steinbeis. In retrospect, what developments in the industry, but also within your center, had the most influence on the direction your center is headed in today?

In essence, the emphasis hasn't really changed that much. It's just that public awareness has heightened. Lightweight construction, which I'm primarily referring to in terms of materials, has always been and still is the topic in metal working. The fact that you need energy to shift weight is no less true now than it has ever been – no one wants to have to keep refueling. A balance had to be struck and still has to be struck between vehicle safety, driving comfort and vehicle weight. You don't have to be clairvoyant or Einstein to figure that out. The conundrum stays the same, no matter what drive a vehicle uses, no matter where it is – in the air, on the railroad or on the highway.

That was looking back, so how about if we look to the future. What challenges await us and what goals have you set for yourself?

Material issues will be crucial in metal working. Modern materials – whether they're steel, aluminum or magnesium – have their own distinctive characteristics, with pros and cons, whether you're processing them or just using them. Finding the right material to use in a component is no easy task. And of course the material also has to be as cheap as possible. Alternative techniques are also a really exciting area: plastics or molded materials. This is where it would help to be clairvoyant.

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Portfolio of Services

- Consulting
- Applied Research and Development
- Expert Reports
- Staff training, seminars
- Simulation of metal working processes (mass forming)

Key Areas

- Tribology
  - Lubricant analysis for sheet and mass forming; determination of friction values depending on forming speed, tool temperature and material temperature
- Forming using auxiliary media
  - Internal high pressure forming of pipes and tubes based on simple material constructions
  - Hydromechanical deep drawing
- Forming tools
  - Phase planning of smaller tools through prototype production
  - CAD construction of forming and closing tools
- Work organization
  - Introduction of new work organization techniques and working hours in manufacturing companies

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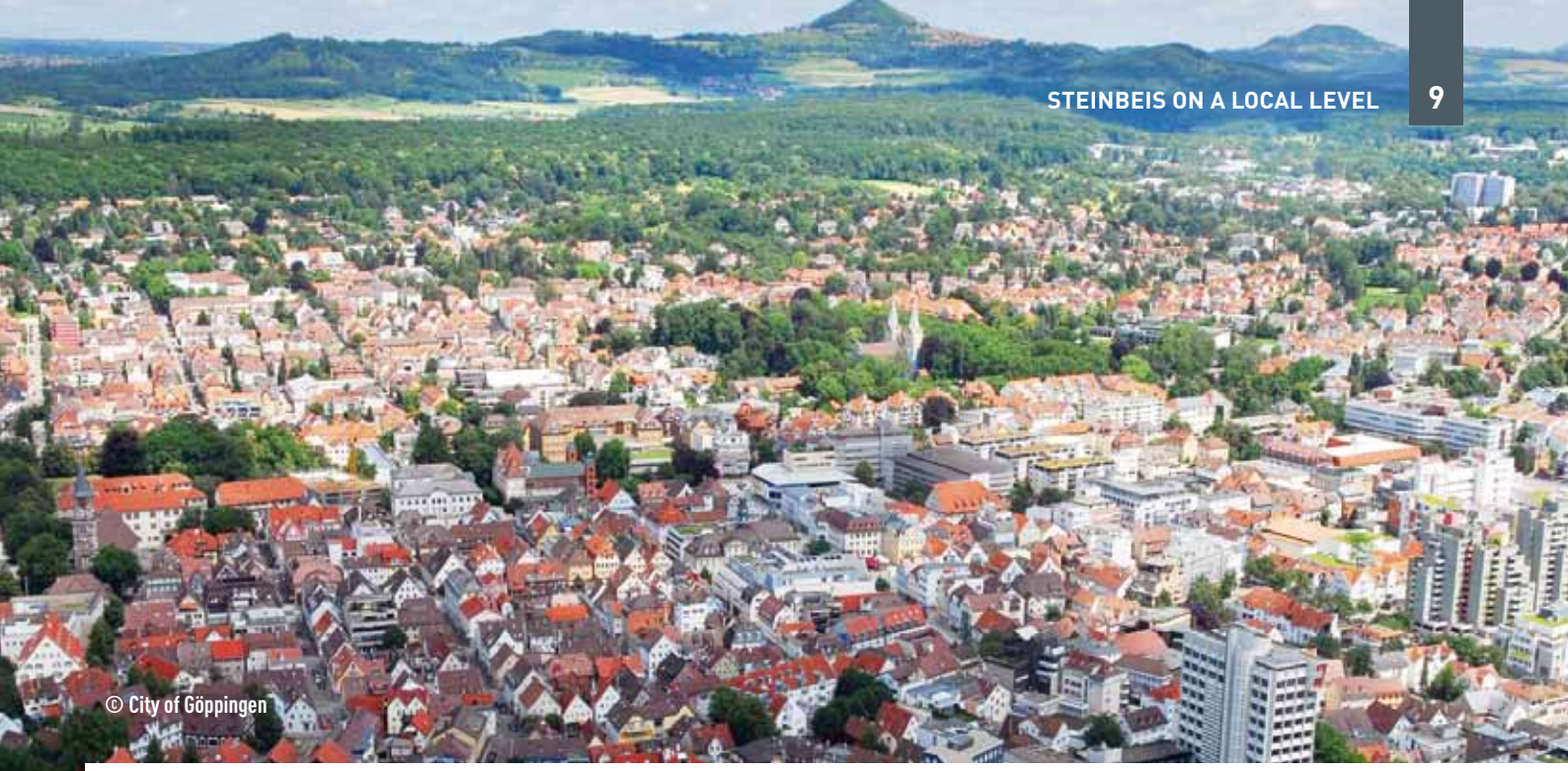

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Steinbeis injects innovation into regional management

Economic development and fostering innovation in the Neckar-Fils region

The district of Göppingen has become increasingly active in economic development over the past 20 years, mainly thanks to a successful partnership with Steinbeis, which puts structures into place for companies to share know-how and technology developments quickly, efficiently, and without red tape. In 1995, a limited company (Wirtschaftsförderungsgesellschaft für den Landkreis Göppingen GmbH) was set up in collaboration with district authorities, the regional savings bank Kreissparkasse, local authorities, small communities and Steinbeis. This year, the company started focusing on fostering innovation and providing innovation consulting to individual companies. This represented a shift of emphasis now reflected by its new name, Wirtschafts- und Innovationsförderungsgesellschaft für den Landkreis Göppingen mbH (or WIF, The Economic And Innovation Development Society).

The WIF works closely with economic development specialists at the district office, whose remit is to take care of classic economic development activities such as issues relating to industrial areas, or overseeing management and approval processes. The district of Göppingen is a leader in the region in terms of the breadth of economic development services it offers. There are regular meetings with all parties to ensure information flows as smoothly as possible and collaboration functions properly.

Combined with shifts in the economic infrastructure, the pressure of international competition now bearing down on companies made it necessary to reinvent local and regional economic development strategies. So now, thanks to the WIF, companies and organizations in the district have been given access to the full spectrum of Steinbeis Network services. Steinbeis experts throughout the organization can jump in to deliver services. The Steinbeis Transfer Center of Technology and Innovation Management, which is also based in Göppingen, works as a catalyst and moderator on behalf of the Steinbeis Network, drawing on its own pool of techniques and methods.

Economic development will only be successful in the future if it focuses more on observing current trends in the economy and the employment market. Also, it will have to be geared more to local and regional collaboration, and respond directly to the individual requirements of businesses. By proactively approaching and advising firms, technology assignments can be brought on board, analyzed and worked on as projects.

This field is not just about analyzing issues, but also solving problems individually with companies. There is a huge variety of often complex issues involved, from helping clients give structure to the problem at hand to innovation planning, applying for funding, forging contacts at research and development establishments, and joint ventures. Experts' work on innovation and technology consultation projects involves issues from the entire field of technology, relating to business processes, manufacturing organization and even technical feasibility.

An increasingly important role is now played by education and advice to sector-specific and regional networks of companies. This is because firms can be helped to solve their problems through interdisciplinary, multi-company collaboration and by integrating open source insights. The WIF is a member of a business development cluster called Kompetenznetzwerk Mechatronik Baden-Württemberg, which, like Albtrauf healthcare park, is typical of the facilitator role played by regional collaboration – in the Neckar-Fils region and beyond.

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www.stw.de → Our experts

Knowledge.Networking.Success.

The 2012 Steinbeis Consulting Day

"With innovative networks, we can enhance business success." This was the motto of the first Steinbeis Consulting Day held on June 21. 150 people gathered in Stuttgart to discuss how businesses and employees can improve their competitiveness and strengthen their market position effectively through collaboration with and within their networks. The event took place as part of the Steinbeis Consulting Forum, a Steinbeis event for business consulting and economic development.

During his presentation, Prof. Dr. Michael Brucksch (Healthcare Research Institute, Steinbeis University Berlin) explored the key success factors for setting up and maintaining networks, and contrasted many years of front-line networking experience in different sectors of industry with scientific studies.

Prof. Dr. Urs Frey (KMU-HSG, Steinbeis University Berlin) addressed the topic of experience exchange groups in his presentation, expanding on their importance, especially for small and medium-sized enterprises. Prof. Dr. habil. Gabi Troeger-Weiß of the Steinbeis Consulting Center for Regional and Communal Development examined collaborations and networks on the regional and community level and discussed potential strategies and courses of action given current developments and conditions.

Together with Uwe Remer (2E mechatronic GmbH & Co. KG), Prof. Dr.-Ing. Günther Würtz (Steinbeis Transfer Center for Management-Innovation-Technology) delved into the topic of networked engineering and explained how businesses can use the "magic triangle" to sustainably shape and control costs, time and quality – from product generation and the delivery of individual projects to complete product portfolios throughout the entire life cycle.

Dr.-Ing. Günther Schöffner (Steinbeis Consulting Center for Business Excellence) focused on how industry consulting and innovations can be promoted through networks, since successful networking is key to increasing business and customer benefit.

Following a successful premiere, the event is now scheduled to take place every two years, alternating each year with the Steinbeis Engineering Day (next date: April 17, 2013). The next Steinbeis Consulting Day is set to take place in July 2014.

All presentations made at the Consulting Day will appear in the conference proceedings to be published in Steinbeis Edition. Video documentation and event snapshots are retrievable at **www.steinbeis-consulting-tag.de.**

The first Steinbeis Consulting Study "Working World. Job Satisfaction. True Happiness.", compiled to coincide with the Steinbeis Consulting Day in cooperation with the Baden-Württemberg Junior Chamber (see Transfer 2/2012), is also available through Steinbeis Edition.

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Skills.Degrees.Employability.

Fifth Annual Stuttgart Competence Day

It's nothing new – in fact, it's been patently true since the onset of the global economic crisis: The world in general and the world of business in particular have become more dynamic, uncertain and complex, and are constantly evolving into something structurally different altogether. For businesses to remain competitive under these circumstances, they increasingly need employees who are capable of and willing to confront the new and different on their own. Demographic trends beg the question: how can businesses play a role in securing and developing the innovative capacity of their employees? The Steinbeis Competence Forum's Fifth Annual Stuttgart Competence Day on 29 November will examine this issue in depth.

As the economy grows more and more dynamic every day, personal resumes will also become more dynamic and colorful in the future: typically, resumes will contain periods of volunteer work on a project, a permanent position, and maybe partial or complete self employment. As things develop this way, people will need the ability and mindset to adjust to and consider new positions, companies, employment conditions and even careers. Not just despite, but also specifically because of the Bologna Process, one issue does still arise, however: What can universities do to help students develop the skills and even the courage they need to cope with the situation on the labor market?

"Employability" means being able and willing to prepare oneself for the world of tomorrow, and it is becoming a crucial factor in both entrepreneurial and personal success. The Fifth Annual Stuttgart Competence Day will bring this success factor center-stage. The symposium will focus on the extent to which businesses and universities have embraced the concept of employability. Speakers from the fields of science and industry will discuss different perspectives related to this fascinating topic. Prof. Ulrich Rüdiger (University of Constance) and Prof. Dr. Johannes Heil (College of Jewish Studies in Heidelberg) will present skills development at universities, Prof. Dr. Julian Nida-Rümelin will give an overview of general educational goals at universities. Attendance is free, although registration is required.

Speakers:
Prof. Dr. Urs Baldegger | University of Liechtenstein
Prof. Dr. John Erpenbeck | Steinbeis University Berlin (SHB)
Prof. Dr. Werner G. Faix | Steinbeis University Berlin (SHB)
Prof. Dr. Helmut Haussmann | former Federal Minister of Economy, Steinbeis University Berlin (SHB), GEMINI Executive Search
Prof. Dr. Johannes Heil | College of Jewish Studies in Heidelberg, Ignatz-Bubis
Annette Horne | Steinbeis University Berlin (SHB)
Silke Keim | SAPHIR Kompetenz
Stefanie Kisgen | Steinbeis University Berlin (SHB)
Prof. Dr. Tina Klein | University of California
Christiane Konegen-Grenier | Cologne Institute for Economic Research
Prof. Dr. Julian Nida-Rümelin | former Federal Minister of State
Prof. Dr. Ulrich Rüdiger | University of Constance
Prof. Dr. Rudolf Tippelt | Ludwig Maximilian University, Munich

To find out more and register online, go to:
www.stuttgarter-kompetenztag.de

Helping others to help themselves

Steinbeis signs on as partner to Hyderabad megacity project

"One of the biggest challenges facing newly industrializing countries like India is how to make full use of the benefits brought by economic development – for the good of the millions of people in the country who earn their living as simple farmers, or manual workers, or in similar ways," believes Vineet Kumar Goyal, director of the Steinbeis Center for Technology Transfer in India. Accordingly, developments that bring benefit to these people should not be limited to improvements in healthcare provision or living conditions, but better education, training, or employment opportunities. The Indian government has made some important steps forward with a variety of education projects. The Steinbeis Center for Technology Transfer in India is playing an active role in projects aimed at introducing modern technology to help people help themselves.

In every village, town and city in India there are people working or providing services on their own account in small shops, bakeries, barbershops or snack bars. They might be offering services such as train ticket reservations or electricity bill payments, for which they charge a small fee. Most entrepreneurs work in farming or as skilled craftsmen. They are crucial for the long-term development of the country, which is why it is all the more important for India to support these entrepreneurs and give everyone an equal opportunity to be part of the nation's rapid economic and technological development.

When Vineet Kumar Goyal talks about people empowerment, he is mainly referring to the introduction of modern technology. "Empowerment is not just about improving qualifications in themselves, it requires an environment which promotes development," he explains. Introducing new technologies can improve conditions for skilled craftsmen, living standards, the educational system but also lots of other areas. This was already India's experience with the telecommunications revolution ten years ago. Poorer people in rural areas, even people like rickshaw drivers and vegetable sellers, were given access to extremely cheap cell phone

technology, opening the door to telecommunication services. This resulted in improved development potential for millions of small business owners throughout the country.

The Hyderabad-based Steinbeis Center for Technology Transfer India is a team member of the Hyderabad Megacity Project (HMP). The idea behind the project is to support businesses that develop sustainability models aimed at reducing energy consumption. Central to the project is the need to involve the population and support individual citizens' initiatives, as people need to be made aware of the necessity of lifestyle changes. The project is being carried out on behalf of the German Federal Ministry of Education and Research (BMBF) and is being coordinated by researchers at Humboldt University in Berlin.

As part of his work on the project, Christian Kimmich, a researcher at Humboldt University, examined the usage patterns and working practices of thousands of farmers who depend on local wells to water their fields. The aim was to find a way to improve the energy efficiency of watering systems. Working in cooperation with non-governmental organizations (NGOs), local politicians, the authorities, electricity supply companies, trade associations, technical consulting organizations, and trade and industry, the goal was to implement a model aimed at improving the use of engines and pumps, based on sustainable technology. The result of the project was simple: The watering systems used by certain farmers are now equipped with power factor correction units (PFCs) fitted with capacitors. The project aims to form a small farmers' cooperative which would be responsible for coordinating the maintenance and fitting of PFC capacitors in the long term. A local NGO called the Self-Employed Welfare Society (SEWS) will ensure that farmers have access to the right information and can communicate with one another and exchange views. The Steinbeis Center for Technology Transfer India is providing technical expertise and making its experience available to others. Working alongside CWS Hyderabad, the Pune-based Prayas Energy Group, the Power Systems Research Center at IIIT Hyderabad and the social scientist Philip Kumar, the transfer center is helping SEWS and the collective electric supply society CESS with the setting up of the project, which would then be extended to other areas.

One project at the HMP is called Solar Powered Schools. Its main aim is to develop a sustainable and scalable model for introducing solar energy systems to schools. The Steinbeis Center for Technology Transfer India is supporting the project with consulting services. A number of schools with different financing models will be examined to pinpoint the requirements and possible approaches for introducing solar energy systems. The Nexus Institute from Germany already identified three schools for the project - Sri Aurobindo International School, which is mainly attended by middle-class children in Secunderabad, and Kallam Anji Reddy Vidyalaya - operated by Dr. Reddy Foundation - a school and hostel for the children of migrant city labourers in Hyderabad, and Meridien School - serving the children from higher income group people in the society. Phungmayo Horam of Humboldt University has already worked with school principals, former pupils and parents on funding models based on donations, voluntary support, state funding and saving schemes. The project managers would also welcome financial support from other project partners.

Vineet Kumar Goyal is convinced that the project will be sustainable, particularly given the social and technological nature of the project and the way both mutually dependent factors are being taken into consideration. His goal: Based on experiences with the Hyderabad Megacity Project, he would like to develop further models for implementing the concept in other regions of India.

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IVY – Virtual training for interpreters

"Second Life" technology for training purposes

IVY (Interpreting in Virtual Reality) is a joint project funded by the European Commission in which experts are developing a virtual training environment for business and community interpreters, as well as for clients of interpreter services. The Constance-based Steinbeis Transfer Center for Language Learning Media is a partner in the project.

Although English is increasingly becoming the lingua franca, in business most people still prefer speaking in their native language, especially when it comes to important business transactions. This calls for professional interpreter services. In various areas of the municipal sector, so-called community interpreters are in high demand as well. These interpreters work to bridge the language and culture gap between e.g. immigrants on the one hand and social workers or medical staff on the other. For interpreters, this means it is important to have access to training facilities with a wide variety of authentic practice opportunities.

To meet this increasingly demanded need for training options for business and community interpreters, an online training environment was created as part of the IVY project. The three dimensional world of "Second Life" offers great possibilities for creating environments and situations in which users, represented by avatars, can easily interact and communicate in a real-life fashion. This functionality was used to design IVY training rooms, with realistic virtual scenarios for various modes of practice and exploration.

In Exploration Mode, interpreter trainees are introduced to the subtasks, requirements and work processes related to interpreting. This mode is also intended for clients of interpreter services, giving them an idea of the kinds of things they should consider when working with interpreters. Examples are given to familiarize users with the particularities of interpreted communications and to prepare them for their work with the interpreters.

Interpreting is a highly specialized and extremely demanding activity and requires intensive training. With its prefabricated scene-based

monologs and dialogs, the Interpreting Mode is thus the core of the virtual training environment offered by IVY. Interpreter trainees can select an interpreting task in their respective working languages. They are then given exercises to help them prepare for the actual interpreting activity. This includes tasks for analyzing the interpreting assignment and, in particular, ways to familiarize themselves with the topic and its unique specialist vocabulary. After this preparation phase, the interpreter trainees can select an interpreting situation of their own choice and enter a corresponding Second Life room via their avatar. Once inside, they are run through a simulation of the selected interpreting situation. Users can activate recorded communication samples such as interviews or presentations, and practice to develop their interpreting skills. Afterwards, they are given follow-up assignments for a critical analysis and evaluation of their interpreting performance.

Another realistic training option is offered by the Live Interaction Mode for simulating interpreting situations with potential clients. In this mode, Second Life scenarios are provided for various professional or everyday situations relevant to interpreting, e.g. a courtroom, an office, or a conference room. In this mode, the interpreter trainee gets to "meet" real people represented by avatars, who act as speakers or discussion participants in the chosen situation, and whose utterances are to be interpreted in real time. The set-up could be a simulation with instructors or other students. However, it could also be used for interpreting contacts with unknown "clients." In this way, interpreting trainees can benefit from a variety of exercises of varying difficulty levels which reflect authentic interpreting situations and help them gain relevant practical experience.

The results of the IVY project will be made public through presentations and workshops at the symposium "Exploiting Emerging Technologies to Prepare Interpreters and their Clients for Professional Practice" set for 23 November 2012 in London.

Steinbeis Transfer Center
Language Learning Media

Portfolio of services
- Profile and needs analyses
- Consultations and training
- Development, production and evaluation

Key Areas
- e-Learning/blended learning with Moodle and Web 2.0
- Web-based pedagogic language corpora for CLIL
- Intercultural lingua franca communication
- Interpreter training in the virtual 3D world of Second Life

Target Groups
- Language teachers, tutors, training managers
- Schools and universities
- Institutions of general adult education
- Institutions of continuing professional development
- Language training programs in companies
- Language training service providers and publishers

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This project has been funded with support from the European Commission. This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

The CONCERTO project "Energy in Minds!" in Weiz-Gleisdorf, Austria

In the future, how do we want to build and live?

CONCERTO provides models of energy-efficient construction and renewable energy usage

More than half of the world's population lives in cities. According to estimates, the number of city dwellers will reach 70 percent by the year 2050. Today, 70 percent of total emissions are produced in cities. This fact has brought the issue of energy consumption to the forefront recently. CONCERTO, an initiative backed by the European Commission, shows how a total of 58 cities and communities across 23 countries can build with more energy efficiency, reduce carbon footprints, and combine and successfully utilize renewable energy resources and technologies. The Steinbeis-Europa-Zentrum (SEZ) is working with the Karlsruhe Institute of Technology (KIT) on know-how transfer that will allow other cities to learn from these examples.

The energy and climate targets set out by the EU 2020 strategy are rather ambitious: The plan envisions a 20 percent increase in renewable energy use and a 20 percent improvement in energy efficiency. There are already successful pilot projects all over Europe. In Germany these include Neckarsulm, Ostfildern, Weilerbach and Hanover. A total of 58 municipalities in 23 countries received funding through the CONCERTO initiative to design individual city districts in keeping with these energy targets. 5.2 million people live in CONCERTO cities and the 70 associated communities. A total of 1,830,000 square meters of buildings were either newly built or refurbished. The result? A reduction in CO_2 emissions of 530,000 tons.

SEZ and KIT have pooled their experience gathered on 22 CONCERTO projects in total. This makes it possible to draw comparisons when planning future construction and renovation projects in public and private buildings – and take measures into consideration that were not previously thought about. The key priority here is to strike the right balance between technological solutions, energy resources and materials. To ensure full use is made of existing energy-efficient construction know-how, experts at KIT and SEZ are seeking active dialog with city and municipal representatives across Europe. An internet forum serves as the main platform for this transfer of experience and know-how. The SEZ is responsible for coordinating, marketing and publicizing project results.

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Energy Technologies
Further Steinbeis-Europa-Zentrum projects in this field:

Building-up
Eleven European players from the fields of research and innovation have dedicated themselves to the issue of energy-efficient building technology. They are developing a strategic road map to create synergies between European Technology Platforms, large European initiatives and, hand-in-hand with this, industries involved in manufacturing materials. SEZ is a project partner responsible for public consultation. The project team has set up a database that brings together experts in the area of energy efficiency in buildings.

KnoholEM
Together with KIT, SEZ is a partner on the EU research project KnoholEM (knowledge-based energy management for public buildings through holistic information modeling and 3D visualisation). 13 partners from six countries are testing and validating intelligent energy management solutions in four test buildings. SEZ is responsible for the dissemination and evaluation of research findings.

KIC InnoEnergy
SEZ is a partner in KIC's InnoEnergy, one of three Knowledge and Innovation Communities (KICs) that have received funding from the European Institute for Innovation and Technology. Here, businesses, universities and research institutes work together to reach their common goal of a sustainable energy system for Europe by 2050. One of the network's priorities is to merge research, innovation and education activities more closely. The SEZ's job is to make sure that the intended technology sharing benefits SMEs.

Steinbeis-Compliance Monitoring©

SHB develops an evaluation method for compliance management systems

In 2008, the School of Governance, Risk & Compliance (School GRC) and the Transfer Institute of Corporate Integrity Management at Steinbeis University Berlin developed Steinbeis Compliance Monitoring©, a standardized quality testing and evaluation method for compliance management systems. Since July 2012, specialist compliance experts can earn a license in Steinbeis Compliance Monitoring©, a method that has been continually improved since its inception. The license makes it possible to expand compliance consulting services offered to customers.

The Steinbeis Compliance Monitor© gathers relevant data and information, and estimates the integrity and quality of compliance management systems. After this initial assessment, the monitor consults with the School GRC, and together, they produce an expert report. In addition to revealing the actual status of the system, upon request, this report can provide strategic recommendations for improvement of compliance levels.

The licensing model grants the School GRC exclusive access to research data and further information on the organization, effectiveness and efficiency of compliance structures in various industries, systematically extending the existing data and knowledge base at the school, related to effective compliance management. In turn, these newly acquired findings flow back into the further conceptual development of Steinbeis Compliance Monitoring©, offering companies truly independent comparisons of systems within their respective industries.

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Applied Market and Social Research

New SHB bachelor program

Applied Social Research is a new, interdisciplinary SHB program and the first of its kind in Germany. It is being offered by the Steinbeis Transfer Institute of Financial Behavior and Ethics in cooperation with goFAMS e.V., an association that promotes further education in market and social research.

Market and social research plays a dominant role in our information society. While there is an increasing demand for results and forecasts, it has become incumbent upon research facilities, organizations, and companies to manage growing volumes of data and handle the increasing complexity of statistics and materials. This creates demand for specialized experts, with the right training to meet the new challenges of market and social research.

The aim of the Applied Social Research program is to prepare students for the various areas in which market and social research is used while bridging the gap between areas of the humanities and the findings derived from empirical social research studies. This is why the program's curriculum includes sociology, psychology, economics and economic history. Further core topics covered by the program include ethics and values. The syllabus also consists of empirical social research methods and statistics. The program is due to start in early 2013. Students can apply for the program at any time.

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Distinction for SHB Graduates

7th advancement award for skilled crafts

Markus Böser has been awarded the 2011 advancement award for skilled crafts. The award and associated € 5,000 prize were bestowed on behalf of the Chamber of Crafts in Karlsruhe, in recognition of an academic paper he wrote as part of his bachelor studies at the Steinbeis Business Academy (SBA) at Steinbeis University Berlin.

His paper – "Business Plan Content for Startups in Trades" – illustrates the importance of combining sound business planning with the skills of a craftsman when launching a business startup. In particular, detailed financial planning and risk assessment supply craftsmen with the business insights they need to take their first steps toward self-employment.

Markus Böser is a master craftsman in interior design with a commercial degree in manual crafts. In 2011, he successfully completed his bachelor's degree at the SBA and is currently setting up his own company. The president of the Chamber of Crafts, Joachim Wohlfeil, and the institute's

Joachim Wohlfeil (Chamber of Crafts, Karlsruhe), Birgit Gaida (SBA), Markus Böser (left to right)

director, Birgit Gaida, congratulated him on his excellent work and underscored the need to dovetail academic science with business. The practical aspect of academic work must not become swamped by theory. Manual trades must play an active part in both the application of innovation as well as the development of new products and processes – a modern branch of business that constantly faces new challenges.

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Sales Engineer, it's your career

Certification as Sales Engineer

Six participants have completed the six-month Sales Management and Marketing (SM) certification program and can now call themselves sales engineers. The course has been offered since 2002 by the Steinbeis Transfer Center for Technical Sales and Management at the University of Applied Sciences in Karlsruhe. Professors at the university and instructors from industry and business consulting develop the curriculum and impart theoretical and practical skills.

The Karlsruhe Transfer Center specializes in continuing education and technical sales. It aims to provide services to companies that help improve the quality of their marketing; especially for highly technical products or solutions that require intensive consulting in sales. The participants of the certification course learn skills related to marketing, sales, sales management and international sales.

"Particularly now, in times of intense globalization where labor markets are undergoing rapid development, our course helps participants raise their own profiles," explains Professor Reinhold König, head of the Steinbeis transfer center. The course is primarily targeted at engineers, IT specialists and scientists with several years of experience.

Many engineers work in technical sales, and they are frequently ill-prepared for sales tasks. Technical specialist knowledge is no longer enough to convince customers and be successful in sales. "This training is an ideal basis for conventional engineers and technical specialists who want to further their personal and professional skills set while taking on new challenges in sales, marketing management and the like," underscores Volker Paroth, a graduate of the latest training course.

Upon completion of the course, each participant receives a certificate from Steinbeis University Berlin qualifying them as a sales engineer. The courses take place on weekends.

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Walking@SIBE for the Lebenshilfe organization

Steinbeis Transfer Institute starts walking for a good cause

A small team that took some great steps: ten alumni, students and employees of the School of International Business and Entrepreneurship (SIBE) at Steinbeis University Berlin took part in a Stuttgart charity walk in June. But the long walk wasn't the only challenge. In addition to walking, each participant had to find a sponsor who was willing to donate money to a good cause. The team excelled both in terms of walking and fundraising: € 1,100 were donated to the German Lebenshilfe organization in Herrenberg!

"This contribution will come in very handy as we continue to expand the services we offer to people with disabilities; for example, in the work we do with children and adolescents, and our aid for people in need of extensive care. But it will also go toward the materials we need for creative projects as part of our leisure time activities and in our work with seniors," explains Peter Eßlinger from Lebenshilfe. The Lebenshilfe charity was very happy to receive the large contribution and thanked all of the walkers and sponsors. Participation in the walk was organized by the Steinbeis Transfer Institute SIBE Alumni, the association of graduates and students at SIBE.

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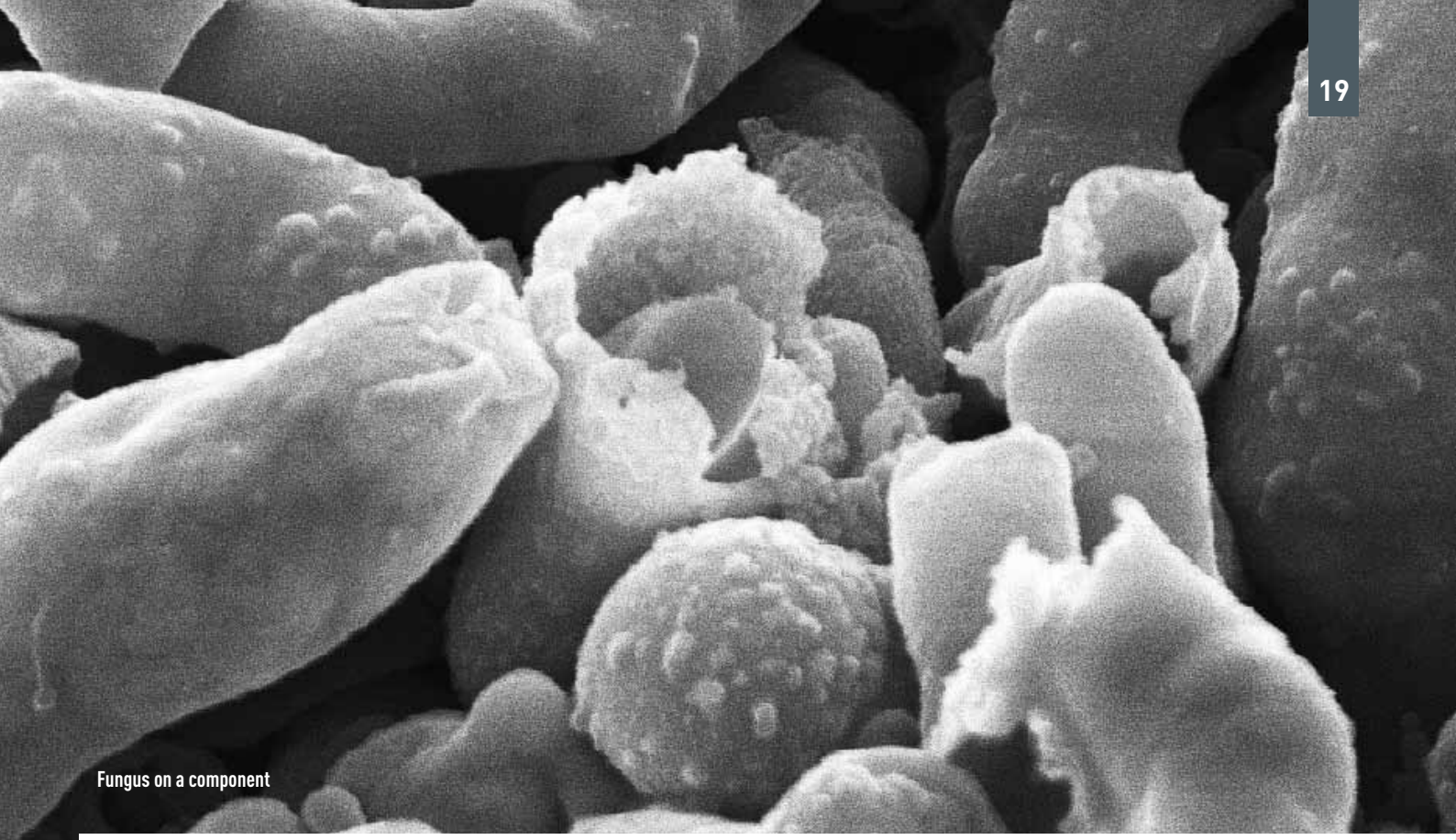

Fungus on a component

Tracking down biological culprits

Corrosion in systems and component parts

A baffled customer turned to the Steinbeis Transfer Center for Chemical Engineering: One of his sprinkler systems was showing signs of leakage despite carefully selected base materials. What was the culprit? Defective materials? Or was it corrosion, even though no contact elements or low-alloy steels were used? The Steinbeis team, based in Reutlingen, was able to help. It determined corrosion, induced by microbiological factors.

After examining the micrographs under both a scanning electron microscope and a fluorescence microscope, microfissures could be excluded as the source of the problem. The culprit was definitely corrosion, but the cause of the corrosion was mystifying.

To prove that the corrosion is being induced by microbiological factors requires a special analysis method, since these initially look the same as any other type of corrosion source. Thanks to the MSB-FISH method (Metal Surface Biofilm – Fluorescence in situ Hybridization), a unique technique developed by The Steinbeis Transfer Center for Chemical Engineering, there is an accurate and quick way to analyze such situations. The method helps identify microorganisms directly on metal surfaces (without intermediate cultivation) by using probes marked with nucleic acid. The major advantage of this method lies in the precise chronological representation of microbiological colonization.

Using the MSB-FISH method, the Steinbeis team was able to detect microbiologically induced corrosion. An image of the chronological colonization sequence explained the state of the individual section of pipe. They were also able to give a prognosis regarding further corrosion development. As a result, the customer was able to take preventative measures and protect the sprinkler system over the long term.

The cause of corrosion in Microbiologically Induced Corrosion (MIC) is typically a biofilm. This is a term used to describe biocorrosion or biofouling. Biofilms are the oldest known sign of life. In fact it would be impossible to imagine our modern environment without them. Every classic type of corrosion can be triggered or made worse by microorganisms that embed themselves in biofilms. The rate of deterioration can increase up to 30-fold. MIC is triggered by the metabolic byproducts of microorganisms which form substances such as hydrogen sulfide and nitric acid. Sulfate-reducing bacteria and acidic bacteria play a primary role in biocorrosion. Sulfate-reducing substances contribute to local acid concentrations that can damage even high-alloy materials. Practically no surface is safe from colonies of microorganisms: nearly all metals, organic materials, glass, ceramics and plastics can be affected. Other than titanium, molybdenum and nickel-cadmium, no metal is resistant to corrosion caused by the effects of microorganisms. Simple conditions suffice: moisture, nutrients, microorganisms, and a surface. And this can cause far-reaching technical and hygiene-related problems. Biofilms can result in complete and irreversible blockages in the membranes of ultra-filtration and reverse osmosis systems. Corrosion related to MIC is often found in systems using cutting fluid, machining systems and parts cleaning equipment. Even coolant recirculation systems and sprinkler systems are often affected, without the root cause being identified.

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Full steam ahead!

A development concept for the Rhine docklands in Karlsruhe

Major changes in goods transport and logistics have had an effect on inland waterways and docks. This is especially visible in the excess capacity in shipping cargo areas, the growing desolation of docklands as a result of shutdowns and relocations, structural changes in the service portfolio of inland docks, and the intensifying conversion of docklands into residential and leisure facilities. Karlsruhe Rhine Harbors, the shipyard division of Karlsruhe Supply, Transport and Harbor (KVVH), called on the Sinsheim-based Steinbeis Innovation Center for Logistics and Sustainability to come up with a long-term dockland development concept.

The starting point for the project was a basic analysis of inland shipping and dockland concepts conducted as part of a general transport projection for the region of Baden-Württemberg. This report projected a growth potential of over 80% in the dockland area of Karlsruhe/Wörth by 2025. The Steinbeis experts were challenged with the task of creating a dockland development concept outlining the conditions for future goods and cargo volume handling. The concept should also bolster the image of the Rhine docks as a hotspot for industry and logistics in the long term, create space for businesses, and foster potential to add value.

To kick off the project, a detailed analysis of the docks, vessels mooring in the docks and the general infrastructure was carried out. The standing of the docks in Karlsruhe was gauged using benchmark data relating to general local facilities and projected trends. Expert interviews with business representatives were an important element of this analysis. Next, problems faced by businesses at the docklands were identified, including commercial and location infrastructure issues as well as factors relating to connections to the general transport infrastructure. The third key action point covered by the project was the preparation of concrete strategic recommendations in the form of a long-term dockland development concept.

The Steinbeis team concluded that freeing up (available) space is crucial to coping with the volume of goods projected to flow through Karlsruhe's Rhine docks. The analysis showed a dearth of free space for commercial use. Several approaches would help increase space, such as dockland managers continuing to proactively manage space. Another action would involve entering discussion with operators of vessels that use the docks but have not been on- and offloading goods. They should be shown the options for relocating their place of business. Most importantly, fallow areas within the docklands should be brought back into use.

One way to strengthen the Rhine docks would be to launch an innovative service portfolio spanning combined road and inland waterway transportation, for example by positioning suitable services on the market through a collaboration with the neighboring dockland operators in Strasbourg/Lauterbourg and Wörth. The goal of these measures would be to secure container transport in Karlsruhe's Rhine docks in the long term and gradually step up container volumes over the next few years. Completion of the Saône-Moselle/Saône-Rhine project on the French side of the border should connect the Mediterranean region with the Rhine and Moselle rivers via the Rhône. This canal project would create a new inland waterway connection towards the South and the Mediterranean countries. If the proposal goes ahead, this could open the door to further developments in the Rhine docklands – not only by launching new transport links but also by creating new warehousing and contract logistics services.

The Rhine docks in Karlsruhe provide the city and the surrounding area with a crucial logistics window to the outside world, plus a multiplicity of innovative, international trading companies and manufacturing businesses. These use the docklands as a base for controlling their business activities. Moreover, the businesses in the docks play an important role in safeguarding and creating jobs. Recognizing their economic significance, the Steinbeis experts recommended further expansion of the Rhine docks in Karlsruhe. The advantages offered by the location should also be strengthened in the long term.

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A comfortable place to sit

Steinbeis team designs mobile back rest for outdoor folding benches

Customer-specific solutions, consultations on development and design, and the import of promotional and travel items are the focal points of the Steinbeis Transfer Center, Uniform.Design from Magdeburg, Germany. Its latest project is proof that commercial viability, affordability and practical use are not mutually exclusive: researchers have designed a folding back rest for outdoor folding benches which is made of recycled PET bottles.

Since 2010, professor Franz Hinrichsmeyer, along with Olaf Rack and his team, have been researching and developing products in various areas ranging from medical technologies to promotional items. They carry out this work in the Steinbeis Transfer Center of the Research and Development Center (German: Forschungs- und Entwicklungszentrum, FEZ) at the University of Applied Sciences in Magdeburg-Stendal. The team offers design services from conception through to development, CAD, rendering, even rapid prototyping and manufacturing.

Global Innovations Germany, a company based in Longuich near Trier, noticed the transfer center at a trade fair in Hanover. The international importer of promotional and gift items approached the Steinbeis team with the challenge to come up with an idea for a low-cost yet commercially viable item that could be used for giveaways, for example, by breweries.

The idea needed to meet several criteria in terms of stability, size, price, design, functionality, usefulness for advertising purposes and sustainability. Despite the tall order, the Steinbeis team from Magdeburg was not deterred. Once the idea of a back rest for beer benches was conceptualized, the team focused its efforts on design and construction. Various initial designs were sketched out and presented to the customer. In a second step, they were constructed with CAD software.

An in-depth meeting with Global Innovations Germany yielded a functional sample made of metal, which could be used to test its use in practice: that is, mounted to a beer bench. A structural analysis could also be performed at that point. Although getting this analysis under control proved challenging, problems were ultimately resolved through the design of a strap belt. The idea of using recycled beer bottles for the backrest was an additional argument in favor of the design, which sealed the deal for production.

And Global Innovations Germany found the design from Magdeburg convincing: after the utility patent was registered, they found a manufacturer in China to look into costs. Full of anticipation, the team is now anxiously awaiting the delivery of the first prototypes!

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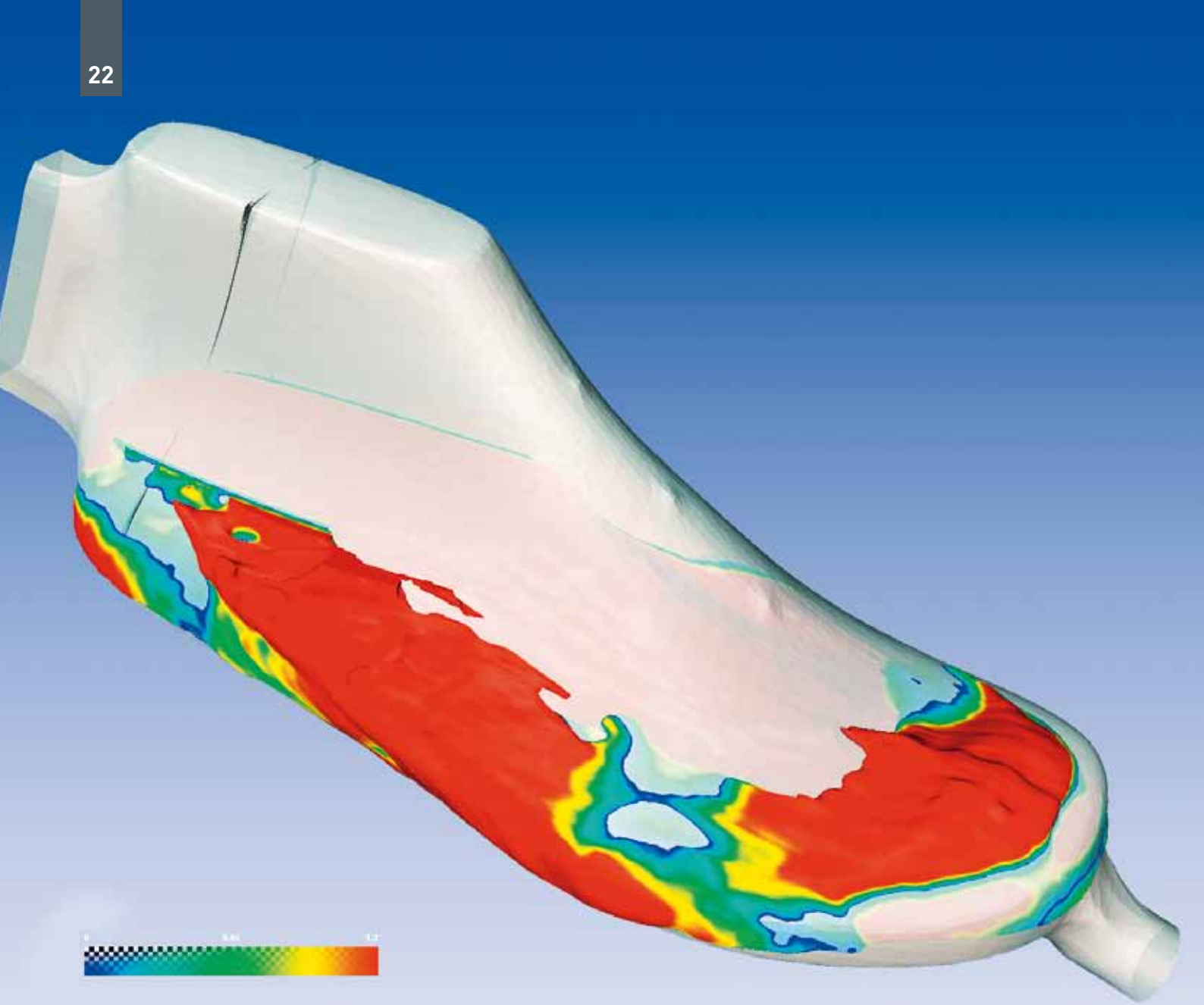


Computer tomography for the three-dimensional recognition of footwear geometry

Fits like a glove

Using your smartphone to determine your shoe size

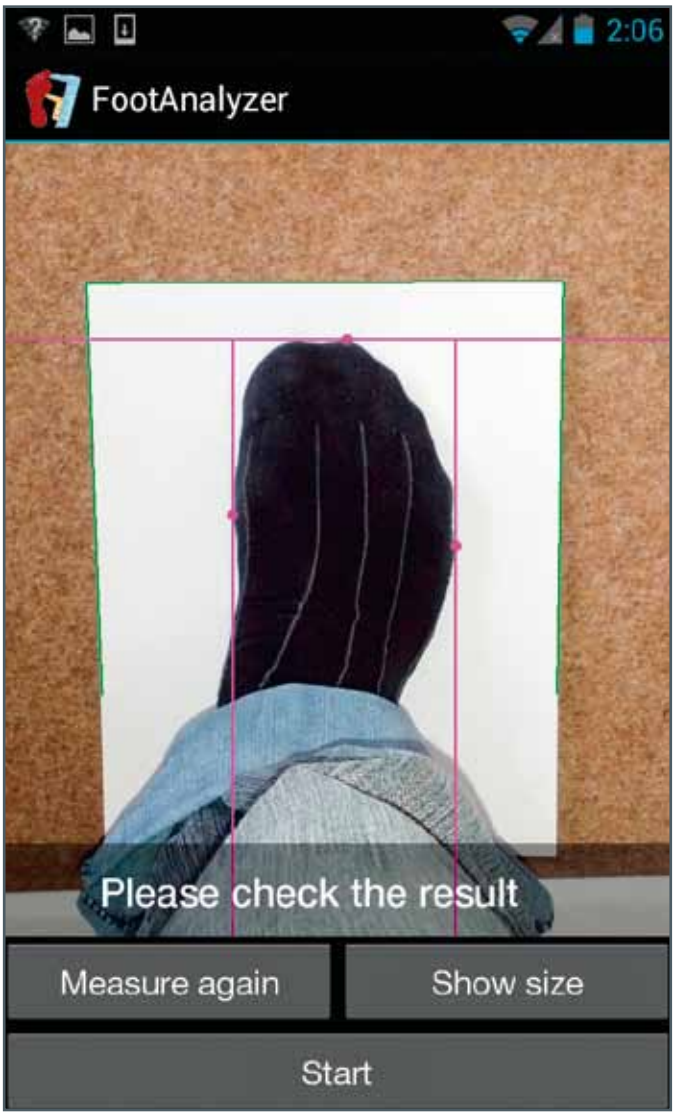
Although online shoe retails are flourishing, the increase in product return rates is limiting profit margins. While shoe stores offer customers various high-tech options for determining foot length for the appropriate fit, buyers using the Internet are stuck with trying for the right measurements at home. The CMOS chip technology typical in smartphone cameras can be useful here, as it can be applied as a tool for optical foot measurements. Experts at the Stralsund-based Steinbeis Transfer Center for Image Processing and Medical Technology have developed a method to accurately, quickly and easily determine foot length and width using conventional smartphones.

Biometric foot measurements are important when it comes to selecting the right footwear, especially for kids. When trying shoes on for size, children often can't give reliable feedback regarding the fit of the shoe. That's because the bones of growing children's feet are soft and malleable, reducing their sensitivity to pain or discomfort: but shoes that don't fit right can cause foot damage early on – damage that could have been prevented. Well-fitting footwear offers the foot plenty of room to expand under pressure, without nudging the inside of the shoe. Also, if the shoe fits in terms of width, it gives the foot the right support while not constricting free movement. This is why many shoe manufacturers have developed sizing options for a variety of widths: one shoe length for several widths.

So it's very important to determine the right shoe size when buying a new pair. This is particularly challenging in the case of online shoe purchases. Retail sites now generally offer various options for determining the best fit possible: anything from instructions for measuring with paper, pencil and a ruler, to separate sizing guide printouts – some even

recommend holding the foot up to the screen and tracing the outline with the mouse/cursor. But the new smartphone app developed by professor Hans-Heino Ehricke and his team at the Steinbeis Transfer Center for Image Processing and Medical Technologies offers a more elegant and more precise option. It works as follows: first, a sheet of paper is laid on the floor with one edge to a wall. The foot to be measured is then placed on the sheet of paper so that the heel touches the wall. This defines a measuring point for the heel of the foot. Next, only the forefoot is captured with the smartphone camera. The image analysis software integrated in the app then determines the precise length of the paper's edge, in addition to the tip of the foot and the outermost medial and lateral points. These measurements are then used to calculate the foot's length and width. The paper serves as a calibration aid, so that distances between pixels in the image can be converted to metric measurements.

The biggest challenge for the image analysis experts was dealing with various constraints such as image lighting, structure and shape of the background, color and patterns of socks, or quality and focal distance of camera optics. Among other things, the project team developed an algorithm for removing glare caused by the camera's flash hitting the ground. The fruit of their efforts is a method that can be used to accurately measure feet with a precision of 1 to 3 mm. As CMOS chip technology develops, even better results will be available in the future.



Caption: The image analysis calculates the positioning of the paper's edges along with the tip of the foot and the outermost medial and lateral points. This data is then used to calculate the foot's length and width.

The app also offers the option of integrating various shoe sizing scales. This way, users can have the measurement data displayed not only based on the metric system, but in accordance with any desired shoe sizing system. Converting a shoe size to another sizing system can be difficult if the exact foot length is not known. This is most often caused by rounding errors. And it's why common conversion charts (as those found on most shoe retailer websites) aren't generally very helpful. However, if the precise foot length is known, the foot can be classified accurately within a sizing system, helping customers find just the right fit.

In 2011, nearly 12 million smartphones and 2 million tablet PCs were sold in Germany. With statistics like that, it's feasible that foot measurements determined by smartphone can become a standard method for sizing – a method that will be employed by conventional shoe retailers as well. And that's why the apps developers applied to patent the method last year.

In addition to foot measurements, the proper measuring and labeling of footwear is another important aspect of shoe retail. Three-dimensional recognition of shoe geometry using computer tomography is already being implemented by shoe manufacturer's as a modern day quality assurance measure. But this isn't a simple solution: the automated recognition of image data presents its challenges; especially when entire shoe collections have to be measured. The Steinbeis team in Stralsund worked with several partners from the footwear industry and shoe retail to develop a viable technique and software solution. These solutions may help to standardize and automate image analysis to a great extent.

The interplay between the two image-based methods for foot and footwear measurements can improve the way a shoe fits. Simultaneously, modern technology can maximize customer satisfaction in online sales and improve sales by reducing the number of products returned.

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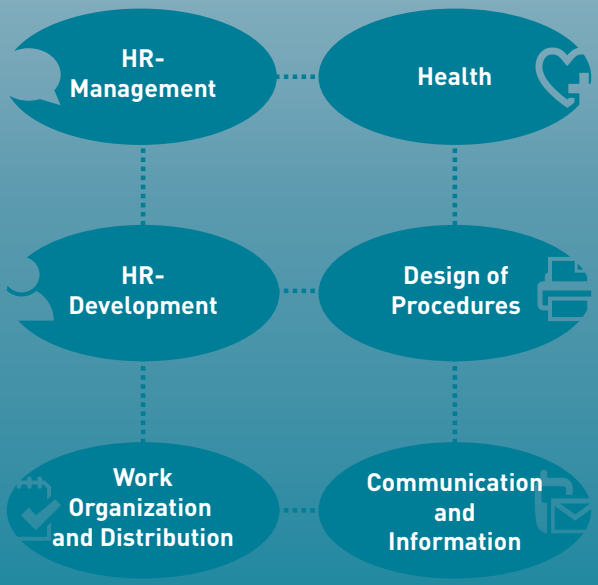

Full commitment to health

Workplace health promotion gains significance

Workloads are becoming heavier in many branches of industry. Employees are expected to be more flexible, produce higher quality work, and show a willingness for professional development. Increasing pressure to perform on top of physical job-related stresses can jeopardize the health of a workforce. For that reason, it's good that an increasing number of businesses are recognizing how healthy, motivated workers improve the potential of the company and indirectly counteract skills shortages. 2011 saw the start of a workplace health promotion project in the greater Berlin-Brandenburg area. The project was carried out in collaboration with the Steinbeis Consulting Center for Health Management. It was designed to answer questions asked by many businesses: how do we keep our employees physically and mentally active? And how do we keep them healthy and motivated?

The most important aim of the project was to limit work- and age-related health risk factors from daily work life, and reduce the costs of work absences caused by poor health and accidents. An employee's capacity to work should be secured for the long term. This can be achieved through preventative measures such as back stabilizing exercises, movement analysis and coaching, workshops for stress prevention and other similar activities.

The Steinbeis team established six steps in their introduction of behavioral training (preventative behavior):

1. An informational kick-off event for everyone involved
2. Movement analysis conducted by trained experts
3. Evaluation of the movement analysis based on standards in sports science
4. Development of action plans for improving back health
5. Interactive instruction of employees with movement coaching for preventative actions that improve back health
6. Additional work for senior management (run in parallel): workshop for stress prevention, sensitization to occupational safety and health protection

After the kick-off event, the team started by analyzing the movement patterns in the administrative departments of the participating companies. This analysis included recording the sitting position of each employee, in addition to the positioning of the feet and back. Employees were interviewed with questions like: "which muscle groups do you use most?" or "what types of tasks does your job require, and how do you carry yourself at work?" In the end, they were given helpful hints regarding movement in the workplace. The goal was to teach employees how to incorporate the right kind of healthy movement at work because healthy daily workflows contribute to balanced physical and mental activity. The results of the consultation were presented to each employee in the form of a coaching sheet on "dynamic sitting," which is tailored to the needs of each participant.

After the movement analyses was successfully underway, the Berlin-based health experts turned their sights on stress and stress management. During a stress workshop that lasted several hours, the experts helped managers investigate the term "stress" and address its causes and effects. This was followed by a consultation on how to best manage high stress levels. High work performance is in demand more than ever before, and most people react negatively to long working hours, a hectic work environment, jumping back and forth between various tasks, and attempts at completing as many tasks as possible. The employees learned how to deal with, reduce, or even eliminate stress in the workplace. Afterward, they discussed a bonus or award system backed by external supporters.

The success of actions taken to contribute to workplace health promotion is not achieved after a metaphorical sprint. Marathon thinking is required to see these measures truly work. Persistence is required to solve problems that have developed over many years. A series of carefully considered and coordinated steps must be taken, and the ultimate success of taking those steps is not always predictable. But companies are sure to reach the conclusion that it pays over the medium term to actively invest in their employees' capacity to work, rather than carry the high costs of diminished performance and workplace absence.

The Steinbeis Consulting Center for Health Management carries out qualified analyses and develops customized solutions for workplace health management. The center views itself as the link between occupational and health protection and company health management.

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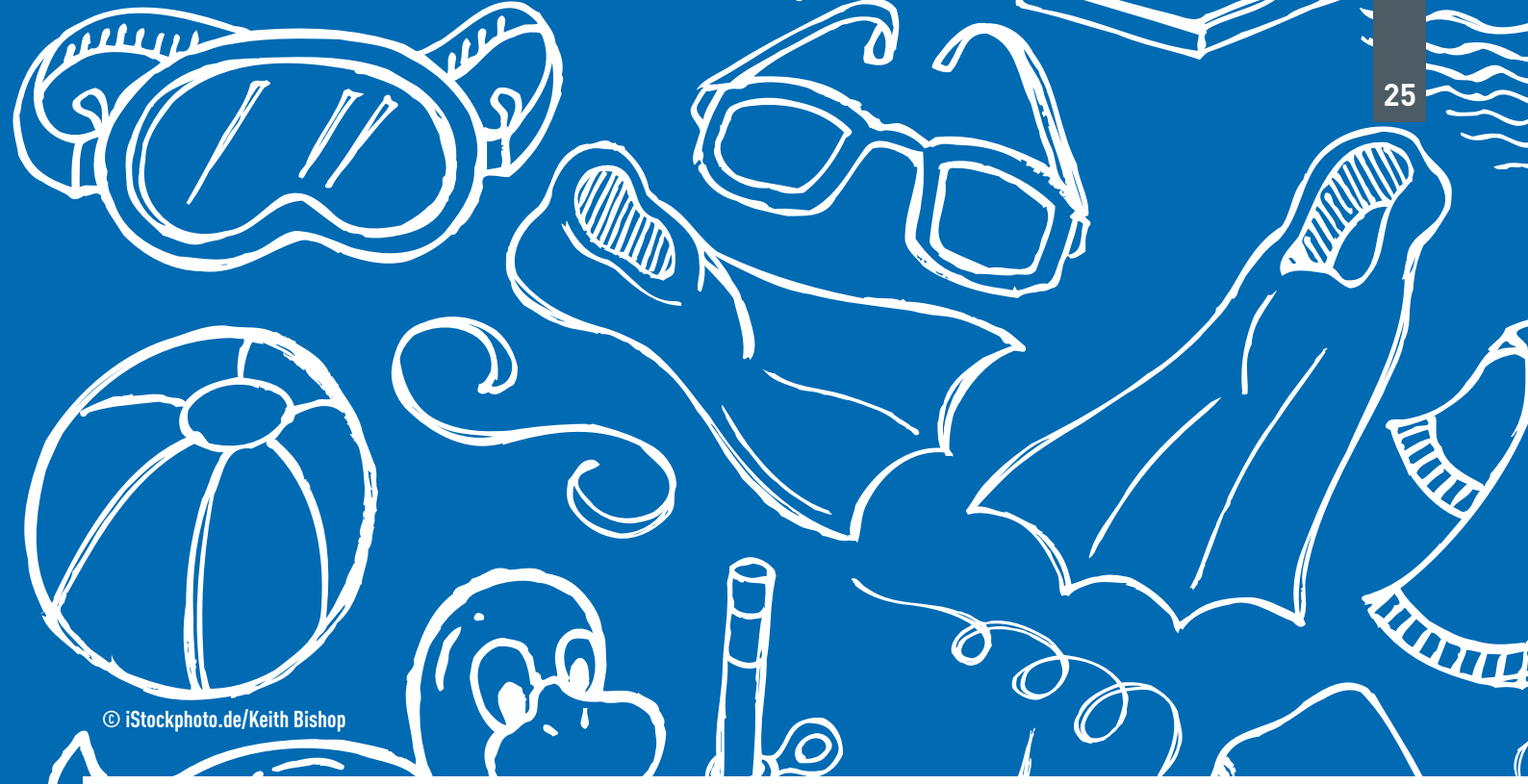

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Hats off, diving goggles on!

SHB student establishes strategic marketing measures

In a survey asking what balloons and IT consulting have in common, the answer might be: nothing. Katharina Rochau, a master's student enrolled in a program for General Management at the School of International Business and Entrepreneurship (SIBE) at Steinbeis University Berlin, didn't think that answer was good enough. As part of her project competence degree, she headed the development of new marketing measures for her employer, IT.TEM GmbH, an IT consulting firm in Stuttgart. Among other things, she organized the customer event called "summertime."

Katharina Rochau's project aims to establish strategic and operative marketing measures at IT.TEM. Although at first glance it may sound a bit rigid, in reality, the project event looked more like this: more than one hundred guests wandering around 300 sqm of office space in the highest building in Stuttgart while drinking cocktails, enjoying finger food and making new contacts. That's the idea behind the "summertime" event. It is all about cultivating existing contacts and establishing new ones.

IT.TEM invests a lot in finding and supporting new recruits. It is a partner of the "Fair Company" initiative which, among other things, tries to ensure that junior staff members are given suitable and fair entry options for new careers. During their work with junior staff support measures, a collaboration with SIBE was born, as well as a project to establish strategic and operative marketing measures at IT.TEM GmbH.

During the course of her studies, Katharina Rochau's job is to set up these new activities, in addition to analyzing and testing existing marketing strategies. She is also responsible for the development of tools which support and simplify the integration of these measures into strategic planning and operational implementation, while making results measurable. The aim is to use fixed criteria to analyze, develop, implement and measure the results of marketing activities.

The first marketing action used to test these tools was the "summertime" event. Here SIBE transfer thinking took center stage. It was a great opportunity for Katharina Rochau to implement the many theoretical aspects and tools learned in the seminars of her study program. "summertime" is an event designed to support the process of positioning IT.TEM. This support comes from developing and implementing tools that help identify a suitable target group for the event, accurately planning the time and resources needed for preparation, defining the purpose and aims of "summertime 2012," and ascertaining the overall success of the evening, making "summertime" an all round successful affair. Katharina Rochau's biggest challenge was identifying the right target group. Once that was achieved, the invitations could be sent out. The theme of the evening was "Dive into summer with us!" – and what is a better way to send out invitations than to include a pair of diving goggles.

"summertime 2012" was a great success: through targeted marketing, Katharina Rochau was able to increase attendance numbers for the event 3-fold in comparison to the previous year!

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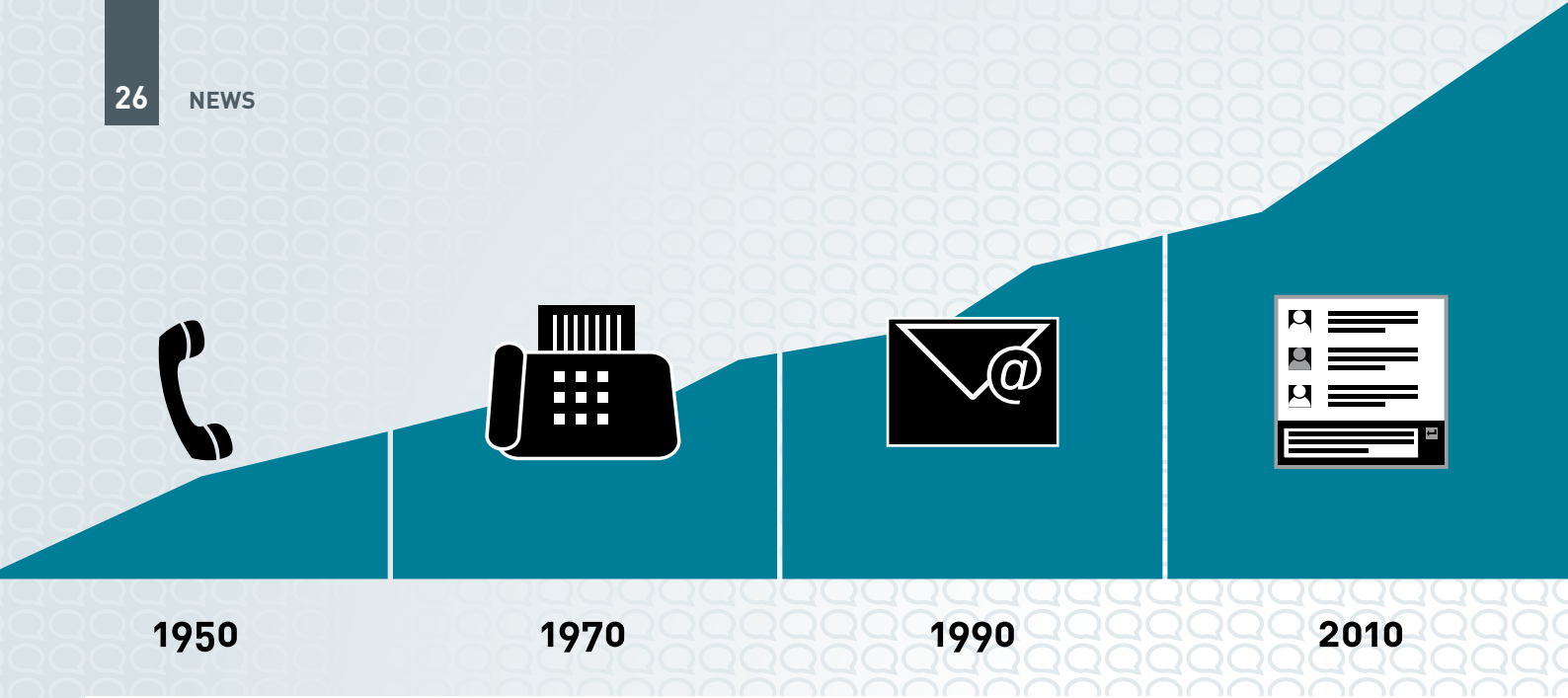

The future of collaboration in business

SHB alumnus founds real-time communications service

How can a social network be worth 100 billion US dollars only ten years after it was established? And how did it connect up nearly 1 billion people in such a relatively short time? What is it that captivates several hundred million users of a microblogging service, and motivates them to send several thousand quick texts per second? The people behind Facebook and Twitter recognized the world of possibilities opened up by real-time communications in private life. For Lukas Pfeiffer, the fact that these real-time communications can also be the future of business collaboration is a certainty. As an alumnus of the Steinbeis School of Management and Innovation at Steinbeis University Berlin, he was quick to start looking into these possibilities. During his studies as a Bachelor of Business Administration, he investigated how microblogs can be integrated into the internal business communications of a company. What started out as a student project has now grown into his own business.

History shows: A new widespread form of collaboration is generally adopted in business every 20 years. After the telephone, fax machines and email, a new mode of communication is taking center stage: real-time communication. This adoption in business is often referred to as "Enterprise Adoption."

Another thing businesses and organizations want to do is share information on topical issues among colleagues without distractions like games and videos. Whereas, previously, co-workers constantly sent each other e-mails, now they exchange information through real-time communication. To work, communication must be easy or intuitive to use, and it must be fast (happen in real time). This is exactly what Lukas Pfeiffer recognized in his bachelor project as the next evolution level of business communications.

A key issue for small and large companies is how to enable several colleagues to communicate at the same time – in real time – without them constantly having to CC or BCC others. This is where "Enterprise Microblogging" comes into play. The term microblogging arose primarily through the popularity of short messaging services like Twitter. Translated into a business setting, microblogging means: short messages instead of long, rambling emails.

During his studies, Lukas Pfeiffer and his team developed a Berlin-based enterprise microblogging service called "swabr". The name is based on the German word for "Bulletin Board 2.0": Schwarzes Brett 2.0. It's similar to Facebook or Twitter, but was designed exclusively for companies. It incorporates elements of Facebook (closed network) with others from Twitter (short messages) in one, single communication platform. The service replaces group emails in corporate communication and allows businesses to use their own network for communicating. This way, companies have access to an automated, continually expanding, yet searchable, knowledge base. Each company on swabr has access to its own private network for employees with a verified e-mail address. Employees can network better with colleagues using the enterprise microblogging service, allowing them to make better use of internal company information.

And the service is really taking off: in the meantime, 3,000 companies are using swabr for internal communications, many of them through a free basic membership option. It's a great success for Lukas Pfeiffer, who was able to use the management skills he acquired during his studies in the founding of swabr GmbH.

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Project management for medium-sized enterprises

The Steinbeis Coaching Concept

Professional project management isn't a luxury for most medium-sized enterprises, it's an absolute must. Companies are taking on more and more types of projects these days: from broad-scope innovation development projects to change management while salvaging companies, and collaborative projects conducted within a company consortium. This is where the Steinbeis Consulting Center for Business Excellence comes in.

Large numbers of projects with increasing complexity mean companies can no longer do without professional project management. Each project must be planned and conducted carefully to minimize risk and maximize successful outcomes. This is the only way to ensure positive qualitative and quantitative project results such as timely deliveries and adequate project returns.

Professional project management focuses on suitable methodologies and systematic business practices rather than costly software packages. That's why the Steinbeis Consulting Center for Business Excellence has developed a coaching concept for employees working for medium-sized businesses. Proven methodologies from large companies have been scaled down and tailored to SMEs, and can now be successfully implemented in the day-to-day business operations of small companies.

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Taking the lead with coaching skills

One-on-one coaching for managers

Individual coaching sessions benefit participants in two ways. First, they receive professional guidance on how to work through personal topics and issues in a way that matches their goals and solutions. Second, they are introduced to the usefulness of coaching skills as tools and techniques for leadership. The Competence. Communication.Cultures. Steinbeis Consulting Center offers tailored coaching sessions for employees at the management and executive level.

In these customized coaching sessions, the coach creates transparency regarding how he or she supports solution-finding processes and which methodologies and techniques are best applied. This makes participants aware of their own ability to problem-solve. Not only does this broaden the participants management skills, but it underscores self-coaching capabilities which include aspects such as dealing with their own resistance, using strengths and potential, or managing the life balance.

The success of participants who make use of the coaching skills in management and executive duties was assessed by the Steinbeis Consulting Center. Based on their experience in practice, an open series of seminars has been developed to teach coaching skills to managers and executives.

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"Coaching Energy"

New ESF funding program

The Steinbeis Consulting Center for Business Coaching has been authorized by the Baden-Württemberg Ministry for Finance and Economics to carry out projects within the framework of the new ESF funding program "Coaching Energy".

The program aims to support SMEs headquartered in Baden-Württemberg with innovative company restructurings to capitalize on market opportunities related to energy, but also the introduction of measures for energy conservation, the use of renewable energy, or both.

The following coaching is eligible to funding:

- Electric mobility
- Renewable energies and energy efficiency
- Reduction of energy consumption

Depending on the coaching needed, funding is provided for up to 15 days at € 400 per day.

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Achieve more with less

Steinbeis Seminar: "Development with Horsepower"

'And now to the horses! Pick the one that you want to work with.' This was the task Isabelle Chappius was faced with at a riding school in the Baden-Württemberg town of Sindolsheim after the first hour of the two day-long intensive seminar entitled 'Development with Horsepower'. The seminar is offered through the Steinbeis Consulting Centre for Human Resources and Personality Development in collaboration with the Steinbeis Consulting Centre for Coaching. Three experts from the areas of personality development and coaching, as well as a professional in Equine Management competently guide and coach participants through the seminar with the goal of helping managers improve their effectiveness. Isabelle Chapuis tells us about her experience with the quadrupeds.

'Come on, you can do it – just go under the ropes!' I tell myself on my way into the paddock. 'After all you are here to learn more about your leadership skills.' Of course, I immediately loose courage when I think about the confined space and the wild steeds stamping around in it. Keeping at a safe distance, I sneak my way around the first one and stop at a mare with a beautiful, shiny coat. 'Hello there. How would you like to be my partner?' I ask bravely. It jerks its head and trots to the opposite side of the paddock. Not exactly love at first sight. I keep my eyes open and eventually move closer to another, rather unimposing horse. The same opening line seems to work this time – it stays still and even lets me brush it down.

The seminar promises to help strengthen my professional skills as a manager in a unique way: not in a classroom but in a paddock. As participants, we are not required to ride the horses; rather, we guide them with a lead rope and complete simple tasks together. While it might

on command. 'Nothing can go wrong here,' I rejoice. My horse, however, does not seem to get it. I just about have to drag it around the practice posts. It's clear that too much energy goes to waste through my personal management style – a sobering truth I have to come to grips with. The trainers and fellow participants watch your every move as you perform the tasks and give you direct feedback. It's amazing how many different techniques emerge from this single exercise: one person pushes, the other pulls, the third leads his horse around so tensely that it ends up stepping on his feet. As an observer, you can sympathise with the horses' reactions: after all, who wants the boss breathing down their neck all the time, never granting an inch of freedom? On the other hand, without directions from a superior, there is always the risk that the 'follower' might pursue his or her own interests.

Through the brief, theoretical input from our trainers, we learn that horses are like humans – only better; that's what makes them such great practice for anyone with leadership responsibilities. Generally speaking, they are willing and happy to follow and work. They do not judge, tend to forgive easily, and always react immediately. And most importantly, the herd wants a leader to depend on – someone who knows what to do in dangerous or difficult situations.

After countless activities, we learn to instil the horses with enough motivation and security that they follow us trustingly. Towards the end, we witness a situation that makes an impression on us all – a mare is led from one group of horses into another paddock where there is a second group of horses. It is extremely fascinating: the lead gelding is excited about the new member, but the other mares try to ostracize the new recruit from the group. I instantly know I will think back to their intense reactions the next time we have a change of personnel. The horses make it clear that changes in growing team structures must be managed prudently.

I return home inspired, leaving my fear of horses behind in Sindolsheim. My hands-on training with the animals has taught me a valuable lesson about my interactions with humans. Thanks to a little horseplay, I have learned to embrace my role as manager with more awareness, clarity and conviction.

sound like child's play, for me it is a real challenge. Until now horses only had two qualities: huge and unpredictable.

As we lead the horses to a riding corral, we already notice that things aren't as we expected. The horses either cut us off, stay standing or roll their eyes imperviously whilst digging into the muddy grass. We discover that a true social fabric exists within the group of horses, that there is a clear hierarchy and that each horse has its own personality. As long as you know their peculiarities and respect them, they cooperate. The gelding has to remain at the head of the group, followed by its partner. An intelligent but somewhat neurotically-minded mare follows steadily behind the rest. 'Aha!' I think to myself, 'You guys are just as human as we are!'

In the riding corral we're shown a few simple exercises such as leading the horse around obstacles as well as teaching it to stop or start to walk

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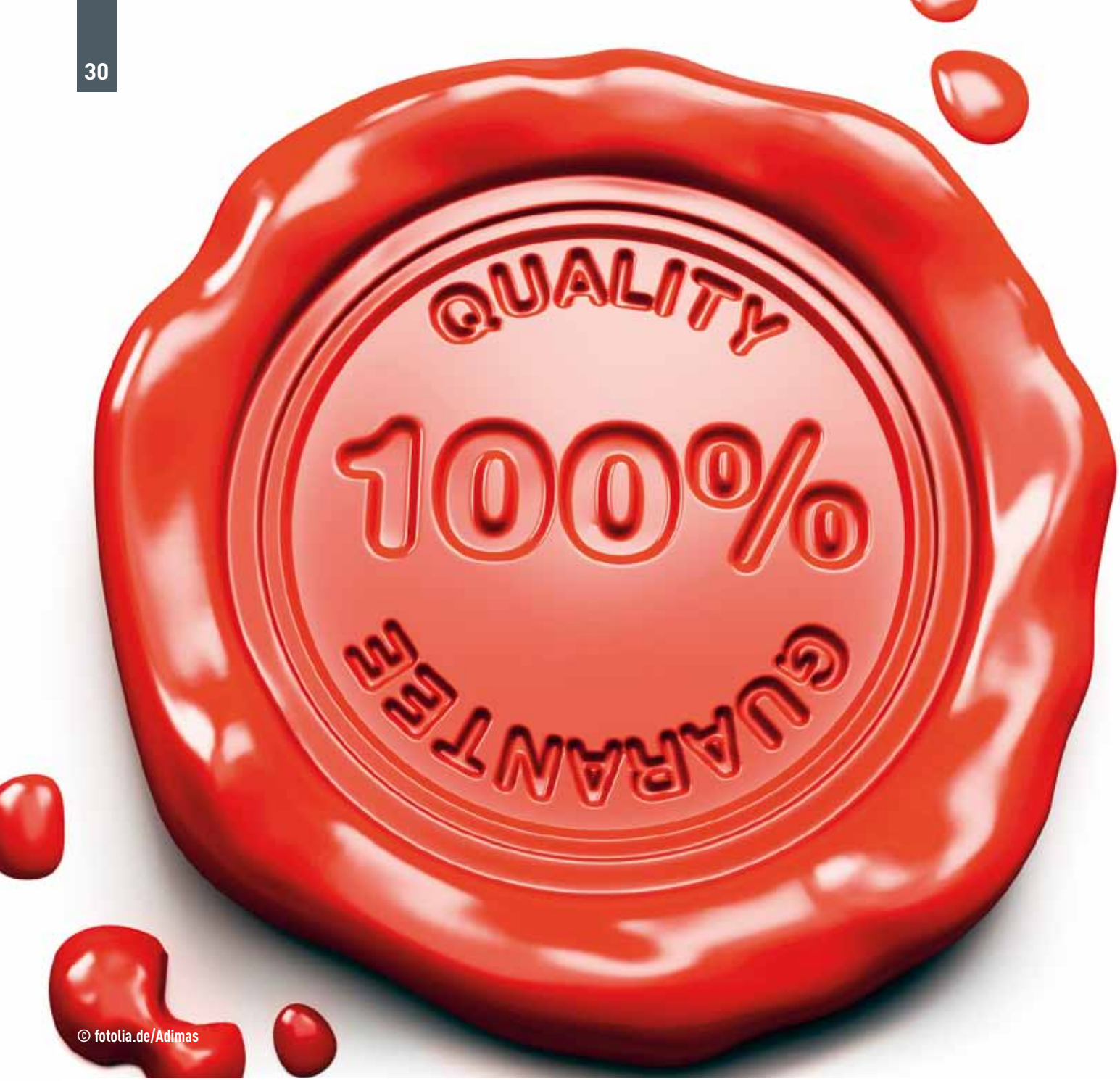

Making HR-Shared Service Centers more effective

Research carried out by Steinbeis University Berlin

A number of "DAX" companies (businesses listed on the German stock exchange), but also medium-sized enterprises, have established HR Shared Service Centers in recent years. These departments perform no strategic role. Instead they provide personnel services that support the business's core competences. Recently, as well as achieving their original aim of cutting costs (through efficiency improvements), these centers have raised service quality (through effectiveness improvements). As part of his Ph.D. at Steinbeis University Berlin, Stefan Röder examined the origins of service quality judgments, taking a customer perspective in this specific area of in-house client-supplier relationships. Simultaneously, he attempted to pinpoint effects on downstream activities.

Shared service models take a different approach to the performance and provision of selected services which may support the business but do not add value – in this instance: HR activities (e.g., payroll accounting). They are independent of senior managers and, in some cases, they are market-based and competitive. Geared to long-term needs, they are a kind of hybrid department, positioned on a continuum between the market and business hierarchies. They are set up specifically to operate as an organizational unit tasked with delivering certain services. Typically, they are then called the human resource shared service center, or HRSSC. By their very nature, these centers compete with external service providers, albeit according to corporate objectives. They deliver previously transferred HR services – just like (external) service providers, based on previously arranged delivery agreements – to clients within the business, but sometimes also to external clients.

An analysis of reference literature showed clearly that, compared to customer-and-client relationships outside the company, internal customer-and-client relationships have been generally ignored in scientific research until now. This is particularly true for customer-and-client relationships between HRSSCs and in-house clients. As a result, Stefan Röder first focused his analysis on identifying individual models for a) the "client-side-perceived perception of HRSSC service quality" and b) how such a construct affects downstream factors on a psychological and behavioral level. The second emphasis of his study lay in the theoretical merging of these two partial models into an integrated "origin and outcome" model. So ultimately, the aim of his work was to examine causes and effects to derive practical recommendations for planning (service) quality management.

Röder examined the literature on a selection of topics, including "information economics", behavioral research and acceptance models. Drawing on theories developed by Christian Grönroos, Röder split client-side, subjective, general quality perceptions into two "quality dimensions": potential and process quality. Based on the theories contained in the literature, this meant there should be three key factors within the "potential" dimension (technical/organizational performance potential, personnel performance potential, information-based performance potential), and two key factors within the "process" dimension (interaction, delivery of customer benefit). For the first time, this established the concept of a third-order construct within companies: client-side-perceived perception of HRSSC service quality. Choosing to develop a factor-based concept overhauls the approach on a contextual level – for clients making use of HR shared services this is of particular interest in terms of the individual benefit it creates.

Taking the success chain of the marketing expert Prof. Manfred Bruhn as a basis, plus a variety of (partly) structured interviews, it was possible to identify three key influencers that are perceived by clients with respect to HRSSC service quality: customer satisfaction, customer confidence and "customer behavior intentions". One new development was that, as part of Röder's study, not only were direct cause-and-effect relationships examined within the in-house context, but also indirect ones, and, for the first time, non-linear relationships. Using Bruhn's internal success chain made it possible to link multi-dimensional and multi-factorial causal models to an effect model consisting of the three causal constructs. The fundamentals underlying this integrated service quality model for HRSSC are transferable to other shared services (e.g., shared IT services) although adaptations would need making to suit the context. To check the integrated service quality model empirically, i.e., in quantitative terms, Stefan Röder conducted an international online survey among clients of an HRSSC who work for a German IT company. A questionnaire was completed by 763 clients, consisting of managers and other employees. The results showed that the measurement model and the structural model itself meet pertinent validity and reliability criteria. All hypothesized direct and indirect correlations were confirmed.

To explore a priori (assumed, possible, perhaps unknown) non-linearities between the model constructs, a technique called universal structural modeling (USM) was used for the first time in an in-house context. This was carried out using a software application called NEUSREL. The advantage with USM (and NEUSREL) is that users need no previous knowledge of existing causal relationships. Almost any kind of non-linearity can be uncovered, as well as overall effects and interaction effects. For the first time, an interaction effect was successfully proven (empirically) between the quality factors "technical/organizational performance potential" and "personnel performance potential."

There is tremendous capacity to transfer these findings to business practice, as understanding the interdependencies now makes it possible to base HRSSC technology and employee decisions on even more solid evidence than was previously possible. The results of the study have been discussed in detail in several workshops involving companies who either want to introduce HRSSC or who have already done so. Within the business context, this provides a variety of pointers for designing HRSSC quality management systems. Also, NEUSREL makes it possible to calculate total "average simulated effect values", unveiling quality criteria with the strongest influence on causal model factors. This means that HRSSC managers will now be able to plan resource allocation more accurately. This could, for example, improve customer confidence and thus, as desired, influence "customer behavior intentions".

By developing a concept for an integrated service quality model in HRSSC, and then translating it into actions and validating his findings quantitatively using empirical methods, Stefan Röder partially closed the gaps in previous research. A starting point for further research could be to investigate further causal constructs, to test the model in other areas of industry, or to question the hitherto postulated unidirectional nature of impacts.

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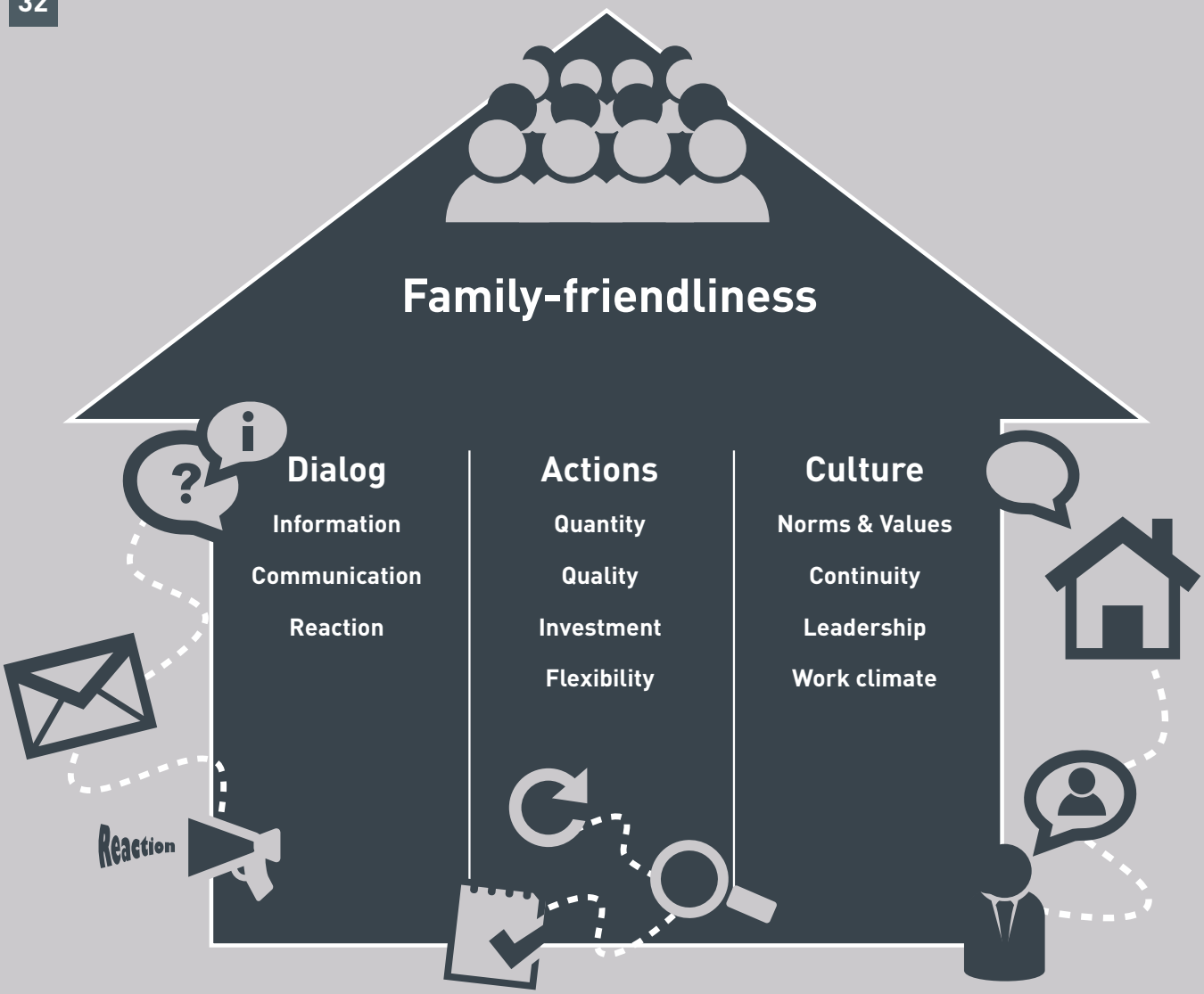


Dimensions and sub-dimensions of the concept of family-friendliness

Family-friendliness pays

Foundation chair at SHB examines the compatibility of career and family in Austria

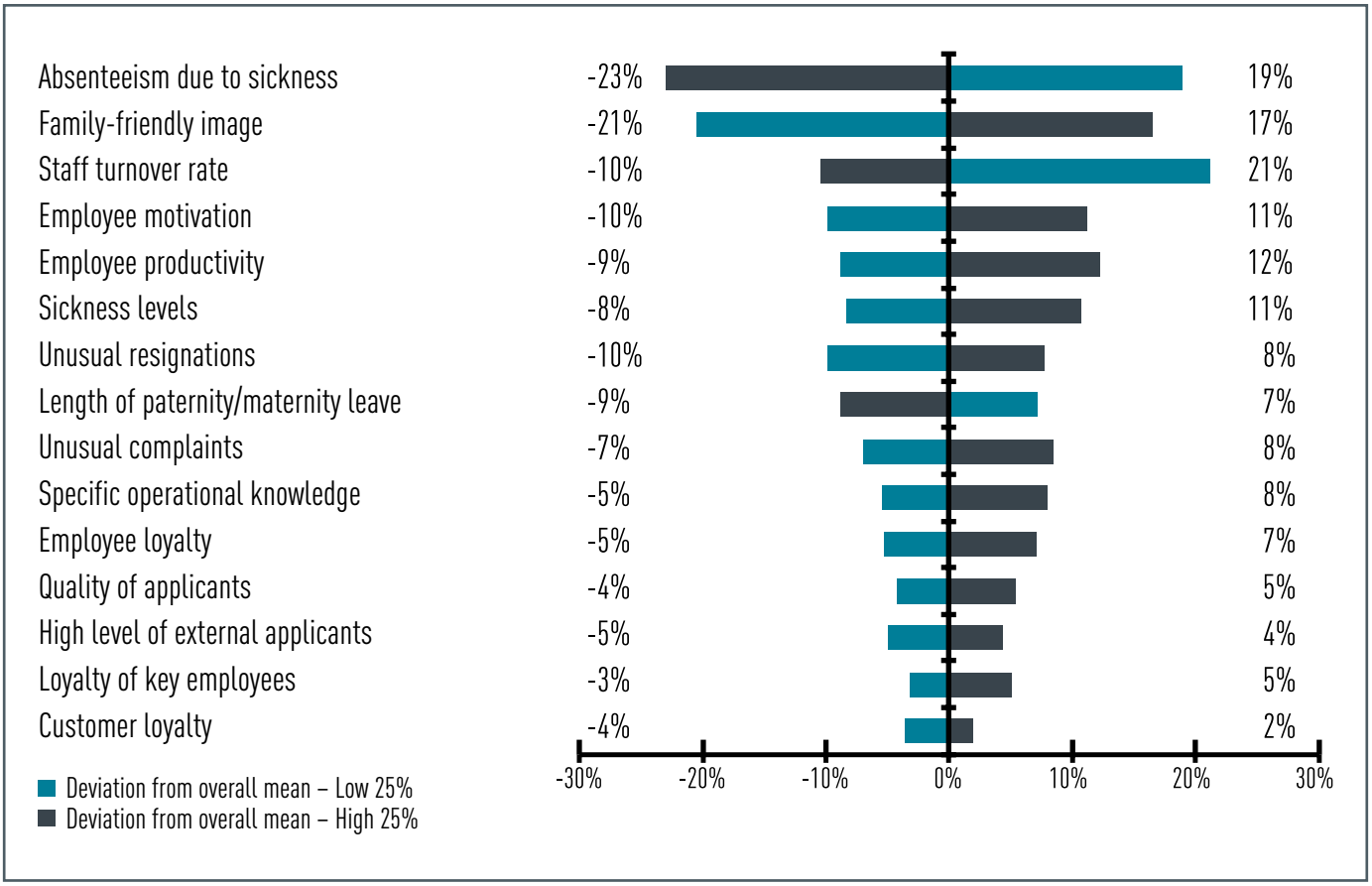
Changes in demographics and labor market policy have brought the issue of work-family balance to the forefront of politics, science and business. Demographic change is resulting in a continual decline in the number of people available to work and, as a result, a deficit in qualified staff. As a result, more and more companies face the challenge of retaining workers in the long term while at the same time acquiring new ones. Companies are primarily turning to people who, for various reasons, are either unemployed or are working less than they would like to. This includes people with family obligations. Of course, HR policies that place an emphasis on families can by no means be taken for granted in business as a means of helping employees reconcile their work and family life. To gauge the situation in Austria, the Steinbeis Research Center for Family-Friendly Employee Policy (FFP) at the SVI Endowed Chair of Marketing and Dialog Marketing at Steinbeis University Berlin carried out a representative business survey. The study was conducted on behalf of the Austrian Federal Ministry of Economy, Family and Youth.

"The survey had two aims," says Prof. Dr. Dr. Helmut Schneider, director of the FFP and professor of the foundation chair. "First, we investigated the current state of family-friendliness among Austrian businesses. Based on this information, we examined the commercial impacts of family-friendly business policies". A representative sample of 411 HR managers from businesses of all sizes and fields were surveyed at the beginning of the year.

With the help of the Austrian Career and Family Index (Berufundfamilie-Index Österreich), the researchers were able to measure family-friendliness. The index, a measurement tool already used successfully in Germany and Switzerland, consists of 21 questions on a 7-point scale. It factors in not only family-friendly business practices, but also business information and communications processes, as well as company culture. For each business, answers were aggregated into a business-specific value ranging from 0 (not family-friendly) to 100 (very family-friendly).

The results reveal an average index value of 66.7 points among Austrian businesses – a relatively positive score. Despite that, striking differences exist from business to business. Businesses classified as "very family-friendly" (the 25% with the highest index values, coined "High 25%") received, on average, scores of 86. This contrasts with less family-friendly businesses (the 25% with the lowest index values, coined "Low 25%"), which came out with an average score of 44.1.

For example, less family-friendly businesses report 19% more sick days than the average business, whereas very family-friendly businesses report 23% fewer sick days. The gap is similar with staff turnover rates and the length of maternity/paternity leave. Overall, very family-friendly businesses fare between 2 and 23% better than the average. Less family-friendly businesses, however, perform between 3% and 21% percent worse in these areas.



Impact of business family-friendliness on commercial target systems. Sample of findings: The High 25% have roughly 23% fewer sick days per employee than the average. The Low 25% have 19% more sick days per employee than the average.

Using the Career and Family Index, the research team also analyzed the effects of family-friendliness on commercial issues. This was based on the hypothesis that family-friendliness could have an impact on internal business processes which in turn may have certain implications on a business in general. These effects can be captured in a target system, broken down into 11 target areas with an impact on employees. Within these 11 target areas, a total of 19 variables were tested to measure the extent to which targets were achieved.

The study confirms that family-friendliness is worthwhile for businesses. For 15 of the 19 tested variables, there was a statistically significant positive impact of family-friendliness, strongly suggesting that family-friendly employee policies work across the board. High levels of family-friendliness in a business serve not only to reduce employee turnover rates and the level of absenteeism due to sickness, they also improve the family-friendly image of a business, raise employee motivation and make employees more loyal to the business.

The website of the Career and Family Index is available as a tool for all Austrian businesses to determine their respective level of family-friendliness as well as their ranking among other businesses included in the study.

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Nice welding, laser!

Steinbeis and Stadtmüller develop innovative laser welding process

In many fields of manufacturing, the number of models and variants is expanding continuously. It is only partly right to surmise that this is due to poor coordination and shortfalls in companies' R&D management processes. "If you study the issue in detail," explains Professor Dr.-Ing. Herbert Emmerich, director of the Pforzheim-based Steinbeis Transfer Center for Production and Organization, "changes in geometry and design are necessary simply due to physical properties and efficiency requirements, especially for market leaders. Companies may want to push the technical systems used in specific applications to the limit in terms of technical or economic feasibility, but this is often not achievable with 'standard components'", he continues. Emmerich's transfer center is working for and with the Osterburken-based company Stadtmüller on a process which makes it possible to produce protective grids and engine suspensions, even in small batches, that are not only economically viable but, more than anything else, in real demand. The two project partners have been working together successfully for some time. In 2010, they won the Steinbeis Foundation Löhn Award for a new laser welding technique for rotationally symmetric components.

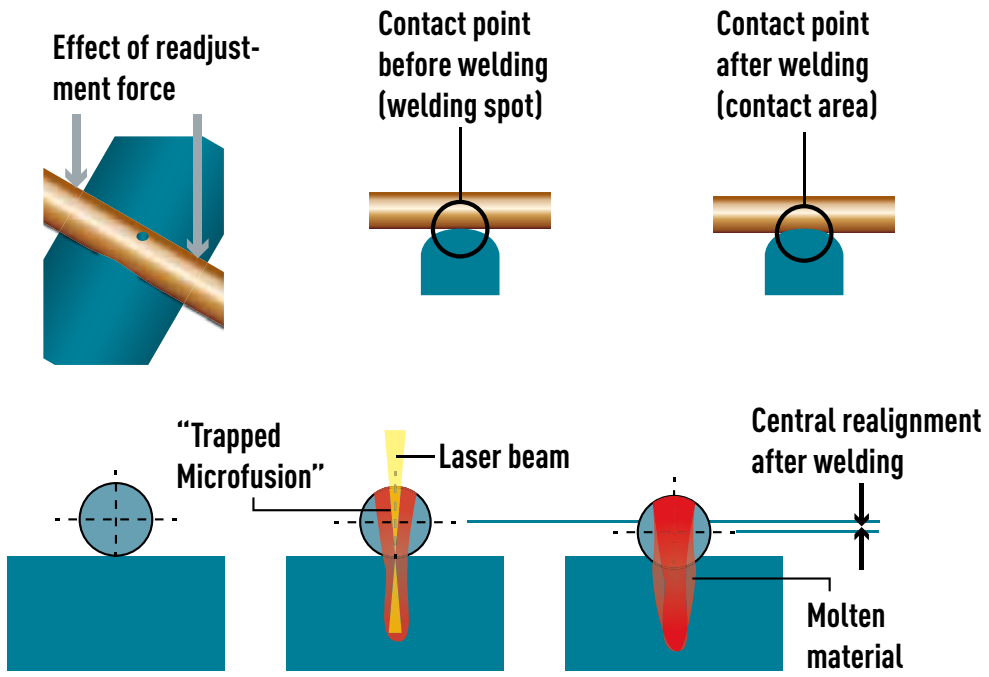
Ventilation and air-conditioning systems create high operating costs, so a key requirement placed on systems is to optimize performance and reduce noise emissions. But at the same time, the types of subsystems required lead to a sharp rise in the number of models and variants. This is because, typically, assemblies are unique to specific applications. Take adjoining protective grids, where design and geometry are central to the energy efficiency and performance of the overall systems. With previous production and assembly technology, it was not possible to produce small batches of grids in economically viable quantities because of the huge effort involved just to construct assemblies for each model.

As part of a scheme introduced by the Federal Ministry of Education and Research (BMBF) called "KMU-Innovativ: Production Research," the Steinbeis experts joined forces with Stadtmüller and took on the challenge of reducing the number of steps previously needed to produce a protection grid (five separate stages) into just one procedure. They were able to drastically cut the modeling-related cost of fittings and tooling, as well as improve the overall throughput for each individual production batch. According to the team's analysis, it would be possible to integrate all connections into a single assembly, just by using a new kind of laser welding process. A fundamental concept was born for a special type of laser welding. In the meantime, this process has been patented.

When rotationally symmetric components need connecting to one another, there is only one point of contact. Until now, it has not been possible to laser-weld this point of contact, as the contact area on the mating parts needed to be flat and free of gaps. The newly developed process involves partially fusing an abutting protective ring above the assembly with a fine laser beam. This creates a tiny melt area inside the adjoining protective ring, which is cylindrical in shape and is centered exactly around the contact point of the two mating parts. By intensifying the power of the laser beam, the material on the lower component is also fused into the weld; and by squeezing the two mating parts together through exterior force, the size of the joint cross-section increases, improving the hold and resilience of the new join. Simultaneously, the mating parts move relative to each other along a central axis.

based on actual assemblies, their positions will deviate. Because of this, a camera was mounted on the scanner monitoring system to compare virtual position data with real data and make automatic adjustments. Finally, by working with component suppliers, specialist machine makers and control engineers, a production cell was constructed for use in serial production and this has now entered into operation.

Apart from drastically reducing throughput times, not only is it now possible to make smaller batches, economically, and for a broader variety of models and variants, the new protective grid production procedure offers quality advantages. Compared to conventional solutions, less heat is now needed during welding so part dimensions are now extremely accurate, meaning it is no longer necessary to make additional adjustments.



The basic principle underlying the special laser welding process

The project team used a laser scanner which was moved into place by an industrial robot positioned over the protective grid being welded. The laser beam can be redirected and focused precisely on the point being welded thanks to small motors which reposition mirrors inside the scanner unit. This cuts the welding time per connection point to approximately 200 ms – a significant saving given that protective grids have up to 500 points of contact between the touching protection rings and individual diagonals. To reduce tooling and programming times, it was necessary to program a CAD-CAM link to generate sequence programs for the production cells operating with the robots. As there was no off-the-shelf solution for such a complex application, the project team developed a user-friendly offline programming and simulation environment. This covered the industrial robot, the laser scanner, the laser itself, a series of basic mechanical fixtures and the safety system. An interactive process draws on protective grid CAD data to generate an executable sequence program for the production cell. In the virtual world, sequence programs tend to be based on hypothetical or ideal CAD data, so compared to the positions of settings in the real world, which are

The Stadtmüller engineers can now respond to their ventilation and air-conditioning clients' needs with customized solutions that are economically viable. They have at their disposal the ideal answer to customer demands for highly efficient, application-specific ventilation systems.

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Naturally natural!

Gentle extraction of natural aroma profiles

Companies in the food industry are continually opting to use natural aromas in their products. But all-natural isn't always natural! According to lawmakers, companies claiming to use "natural aromas" need only use ingredients that have been produced from plant- or animal-based raw materials. What's more, only a few foods containing "natural" aroma additives provide the full olfactory and gustatory aroma profile that the actual fruit or plant provides. Together with partners from research and industry, the Steinbeis Innovation Center for System Solutions in Metrology and Automation Technology has developed a process for gently extracting natural aroma profiles.

The technological "trick" lies in coaxing the natural aroma from plants and fruits during their natural lifecycle, without damaging or killing the plant so that it can be used for further processing.

Within the scope of the cooperative ZIM project, funded by the German Ministry for Economics and Technology, the Steinbeis Innovation Center has taken on the development of a suitable MSR concept and an automated metrological technique to control the extraction cycles. This processing means that plants and fruits can be used further after extraction, and that the extraction of natural aroma profiles becomes more interesting for companies in terms of economic factors.

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Steinbeis in Lithuania

Support with research management

Under the banner "You research, we'll take care of the rest", the Steinbeis Research Center for Technology Management North East has been assisting academic and research institutions with support and consulting on project development, applications, management, public relations and technology transfer, primarily in the region of the Baltic Sea, for almost ten years. These services are now also being offered directly in Lithuania.

The project manager, who lives in the Lithuanian capital of Vilnius, ensures that the increasing demand for research management support in the region is met, and that further projects related to the expansion of the EU-Baltic strategy can be tackled.

Frank Graage, head of the Steinbeis Research Center for Technology Management North East, has been active in the Baltic Sea region since the very beginning. Collaboration with the Scandinavian countries, the Baltic region, Poland and Germany has intensified since the EU expansion in 2004. As a result, European research and development cooperation is in greater demand than ever before.

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Laying the foundation

SHB graduate program establishes a basis for management Careers

Management track instead of a specialist career – Marco Henry V. Neumueller knew this was the right way for him early on. Even during his studies in electric/information technology and law, he was drawn in by anything that would broaden his horizons. Right after finishing his degree, he began pursuing his path to management with a project competence degree at the Steinbeis University Berlin School of Management and Technology. The Master of Business Engineering (MBE) is a unique degree program combining theory and practice.

The transition from a master's program to a permanent job position wasn't a problem for Marco Neumueller. Just after completing his degree, he received an offer from a control and automation technology company to head up its development and expansion activities worldwide. The position required, among other things, evaluating marketing opportunities and sales markets, business analysis of clients and competitors, initiating future business deals and follow-up transactions, and presenting new business plan proposals. He would also be responsible for building up internal business networks to ensure success in the long-term. Neumueller was up to the task since he had already acquired the relevant knowledge necessary for such exciting assignments during his Steinbeis degree program and required company project.

In Neumueller's everyday working life, a high level of stress resistance and the capacity for problem-solving are essential requirements for success. The MBE program prepares students to cope with such environments. The courses are firmly organized and students work through a cumulative curriculum During the program, students must complete different case studies under intense time pressure. These studies prompt students to deal with problems independently. And Marco Neumueller realized quickly that putting a presentation together the night before wasn't quite as unusual as he had thought during his undergraduate studies.

Teamwork plays a huge role for Marco Neumueller today. Winking, he explains why the MBE was also beneficial in this area: "Case studies always had to be solved in groups. If you had the urge to put together your own team, the response was always the same: in the real world, you can't always pick the people you want to work with." This helps tremendously by developing students' soft skills which will allow them to solve problems successfully in a team in their professional endeavors.

Students of the MBE program also acquire soft skills necessary for interactions with people from different cultures during their study time abroad. Trips to the US, Sweden, Japan and South Korea assist them in learning to communicate and work together with people from various cultural backgrounds. Communication skills and presentation techniques even play a huge role in working with colleagues and clients within their home country: The MBE program also allows students to fine-tune this ability. Case study results have to be presented, for example; whether it's in front of instructors with simulated case studies or in front of directors with real cases in other countries – success rates are enormous.

The demands placed on the managers of tomorrow are constantly changing. They will have to find their way in a tense environment consisting of flexible organizational structures, fickle work relationships and self-determined co-workers. The significance of management as an integrative figure and team builder in a global context will grow in the future – Marco Neumueller is sure of that. His advice? A Master's program can be a building block for picking up the necessary skills.

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Festo Didactic GmbH & Co. KG (Denkendorf)

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More efficiency through cloud computing

Process management in collaborative networks

As part on an EU-funded project called GloNet, a network of small and medium-sized companies from the solar industry is working together to improve performance using cloud computing services for global business processes. The task set for the Steinbeis Transfer Center for Management – Innovation – Technology (MIT) was to define standardized business processes for networks of companies – processes that are designed to tackle customer-specific products and services.

Collaborative networks can be managed successfully as a coordinated function through global process management. Within the framework of the EU project "GloNet – Glocal enterprise network focusing on customer-centric collaboration" (cf. Kölmel, Bernhard [2011]: GloNet – STREP-Proposal ICT Call 7), business processes are controlled through cloud solutions and executed within a network of small and medium-sized companies for the planning, implementation and operation of customer-specific solar parks.

In manufacturing, there is a growing trend toward customized products, even toward single item manufacturing. This trend defines the term as "mass customization," a design process which includes the customer, one where products and services are developed precisely in line with the customer's specific needs. This presents various challenges for the manufacturing environment. Either a complicated technical infrastructure is needed or relatively high production requirements exist, as is the case for traditionally complex products such as customized kitchens:

- The production of these products requires skills and resources, which an individual company may not have access to. The solution: collaborative networks between companies.
- Most companies operate within a limited solutions framework which is guided by firm, if flexible, quickly reacting processes. These process benefit to a great extent from ICT support.

- A complex product intended for multiple suppliers requires a high degree of customization benefits from respective services, which are more difficult to plan and implement than for standardized mass production products.
- For customization, recipients of customized goods must define their precise needs and desires as fixed product specifications. This way, customers are included in the development of individual solutions.

Harmonizing the degree of customization offered by the manufacturer with the demands made by the customer is a decisive factor in the ultimate success of the project. Small and medium-sized European companies clearly benefit from receiving suitable ICT support environments for customized mass production, putting them ahead of competitors that focus on providing standard mass produced products. A collaborative network is needed for this to work.

This is where the EU project GloNet comes in. Its goal is to develop an innovative, dynamic software solution for the exchange of knowledge and information between project partners. This service should be provided through cloud computing services and a workflow should be established to automatically monitor implementation of the solution.

The industry-relevant use case for the GloNet project is found in the construction of solar parks. Infranet Partners is a network of small and medium-sized companies that focuses on the production and provision of highly advanced control technologies. The network was founded in 1999 and now includes nearly 20 partners. In the field of photovoltaics, products produced by partners of the network are used across the globe for the monitoring and control of solar park facilities and the processes these units carry out.

To improve customer satisfaction, particularly with respect to quality and speed in implementing customer projects, Infranet Partners tries to strengthen its role as a collaborative network. For example, customer service is offered by a single organization and the product palette is bundled under the single brand of Infranet Partners.

GloNet serves as a cloud-based approach to development and support environments. This way, support services can be expanded dynamically, without affecting the processes of various users. To do this, two workspaces are defined in GloNet: the collaborative solutions space in which customers, manufacturers and delivery service providers can collectively develop a product, and the service space, an area in which customers have access to services throughout the entire product lifecycle.

After the first year of the 3-year project, the foundations were laid for the collaborative solutions space by defining the business processes and scenarios that run between the partners of the collaborative network: the customers, product developers, manufacturers and product service partners. These business processes and scenarios are now supported by IT-based cloud services for companies using an open platform.

As an expert in the field of process management, the Steinbeis Transfer Center for MIT was heavily involved in defining the networked processes and their dependencies within the globally operating network of companies. The business scenarios derived from this work formed the basis for the development and implementation of the required software solutions. Over the further course of the GloNet project, the Steinbeis Transfer Center for Management – Innovation – Technology will take on the task of transferring project results within the business network.

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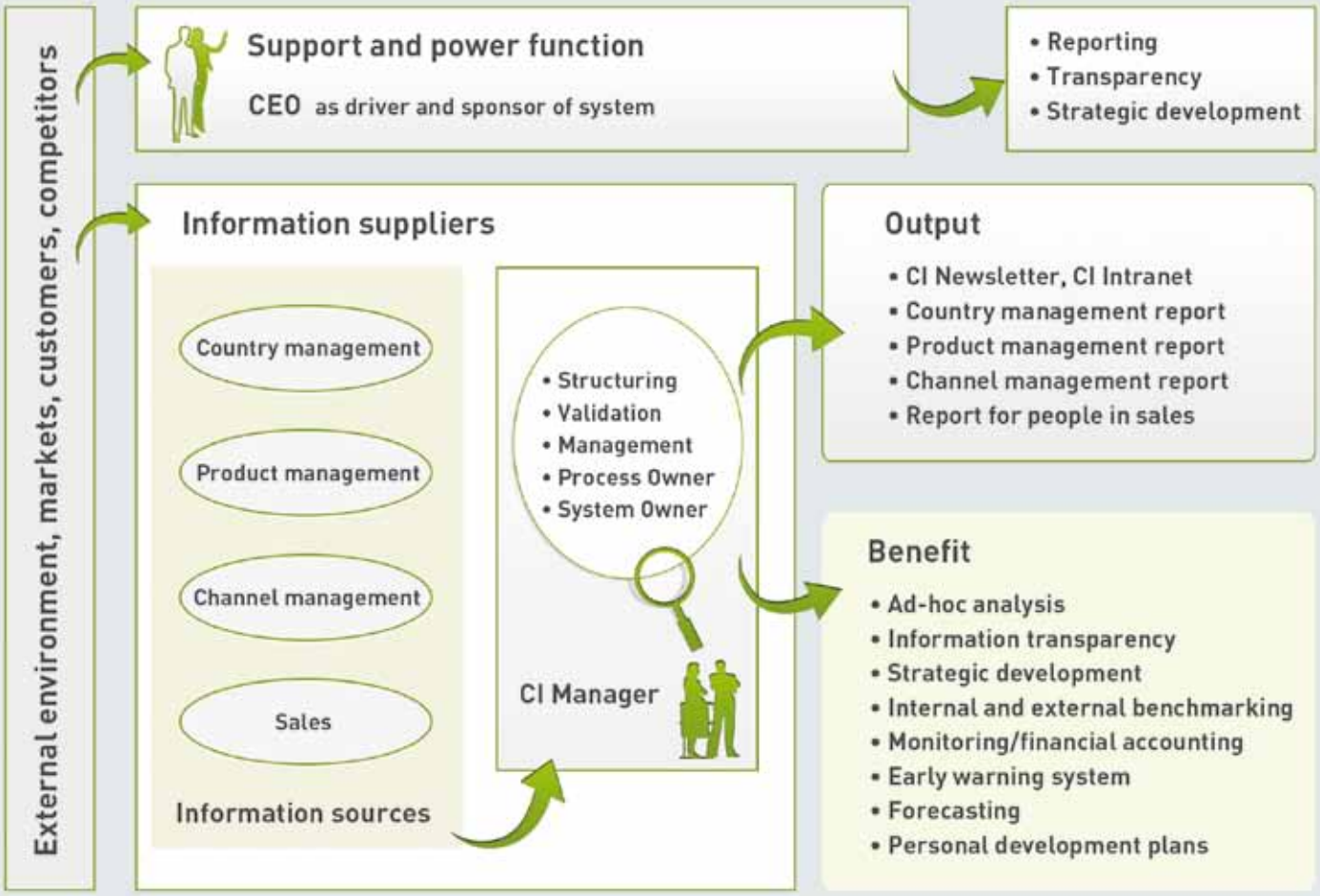

Competitive intelligence in companies

Keeping an eye on the market

Steinbeis CI system helps companies analyze competitors

Globalization and the accelerating nature of markets are a major challenge for international businesses. Firms need market information that not only highlights fundamental issues but is also highly specific to individual sectors. Heterogeneous, up-to-date information has to be merged to establish a solid basis for business strategy planning. This allows the unique positioning of the company based on its competitive advantages. Competitive intelligence (CI) provides a framework for gathering knowledge in the company in a transparent and up-to-the-minute system. The Steinbeis Transfer Center of Business Development, which is based at Pforzheim University, helps companies with the introduction of CI systems.

In many companies, staff members already have an intrinsic knowledge of markets and competitors; country managers have a good feel for their markets; salespeople know a good deal about competitors and their products. The picture is similar for product managers, who often monitor competitive products and marketing activities. To share knowledge, companies hold sales meetings, and materials (such as trade show catalogs and speeches made by competitors at conventions) are kept and evaluated in different parts of the company. But information tends to be held in different places and is disorganized, making it difficult to share knowledge and keep an overview of all markets and competitive activities. This is made worse by departments within companies having different motivations for analyzing markets and competitors.

Given the fact that there are no standard information sources, and sometimes studies are missing, it often makes sense to gather information at the local level and consider competitive observation options via the inter-

net. CI systems can gather information directly or transfer it to a CI manager who is responsible for organizing and validating data. Also, competitors' websites can be monitored for changes, providing information that also goes into the system. The company itself can also be monitored by systems to compare performance to the rest of the market. This addresses an important role played by a CI system: namely, that it should gather competitive intelligence information that can be used in a situational analysis. A proper CI system also evaluates, consolidates and distributes information, sometimes automatically with standard reports. Reports and dynamic analytical tools provide a good basis for regular market and competition analyses, which can feed into management decision-making. Of course, keeping such a system alive is only really possible if the upper echelons of management not only drive the system but also use it.

ESBE, a Swedish manufacturer of valves and actuators used in heating and cooling systems, decided that whenever it carries out a competitor analysis from now on it wants to use a software-based system solution. The Steinbeis Transfer Center supported ESBE with its CI solution "Management Monitor".

ESBE operates in a number of countries and had three goals for its new system: it should map complex business structures; it should be possible for people working in different departments to gather data; the system should draw on uniform data but also allow users to view data in different ways, by means of role-based access control.

One of the particular challenges with competitor analysis is that the information users need is often not freely available, or it cannot be compared, or to a certain extent, data has to be deduced or estimated from hypothetical scenarios. Simple requirements such as availability, completeness, certainty – or users' desire for the detailed facts they need to make decisions – are partially contradictory. Given this known state of affairs, the Steinbeis experts worked up the ideal approach together with ESBE:

- The sights were set high – this decision made it easier to take the goals of different departments into account and, from the outset, made it possible to define a clear and coherent plan to develop the system in several stages.

- Simultaneously, ESBE accepted that supplying data of a satisfactory quality across markets at different levels of maturity and customer penetration would sometimes take more time and involve several iterations or supplementary rounds of data validation.

- A prerequisite for good information is an expert understanding of markets, so the priority should be to provide resources from within the company at a local level. The tools used to gather information should be standardized. The task of gathering data, quality assurance, validation, managing supplementary ad hoc research and systematically analyzing secondary sources should be given to a competitor analysis specialist. Only once data has been screened and checked for relevance and quality would information be released to users.

ESBE is already enjoying the advantages of the new CI tool with its current strategic project. An analytical tool provides drill-down options and standard reports, making it easier to deal with the complexity of the data. It is also easier to recognize and present complicated correlations, strengths, weaknesses, opportunities and threats. Also, competitor information has gained significantly in terms of credibility, directing more focus on market-based thinking. Systematically capturing and storing information is good for continuous improvement processes. The new system is ideally suited to the matrix organization of ESBE sales, which has regions and support functions spanning different sales areas, each of which reports to global sales management. Users now look at the same data from different angles, stimulating more detailed discussion into different courses of action. Ultimately, this is expected to improve strategic decision-making and acceptance.

Steinbeis Transfer Center
Business Development, Pforzheim University

Portfolio of services and target groups

- Targeted at students, teachers and people interested in education: professional orientation, economics and entrepreneurial spirit covered in schools and educational institutions through consulting, management games (business simulations) and e-learning modules
- Targeted at women in management positions: Internet portals and e-learning modules
- Targeted at SMEs and large companies: consulting and implementation strategies for marketing intelligence solutions, marketing communications and online marketing

Key areas

- Schools and business
- Entrepreneurship education
- Professional orientation in schools and educational institutions
- Women in management
- Marketing intelligence
- Online marketing
- Marketing communications

Reference projects

- The national business management competition on youth start-ups „Jugend gründet", the "Role models - Strengths - Skills - Career orientation in selective secondary schools" project
- Spitzenfrauen-bw.de portal for women in management in Baden-Württemberg
- MANAGEMENT MONITOR Business Intelligence Software

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Karsten Pillukeit
ESBE AB (Sweden)

New centers in the Steinbeis Network

The Steinbeis Network comprises around 900 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 April 2012:

Herrenberg

1. SIBE China Center (SCC)

Manager: Yan Janet Qin, MBA | E-mail: su1606@stw.de

Range of services

- Strategy consulting and business startup/development for German SMEs in China, acquiring Chinese investors and partners
- Executive search, recruitment of skilled employees and technical managers in China and Hong Kong
- Training and continuing professional development in international business and entrepreneurship in China and Hong Kong
- Technology transfer and management of a German-Chinese technology park

Regensdorf

Building Technology and Properties of concrete

Manager: Prof. Dr.-Ing. Stefan Linsel | E-mail: su1609@stw.de

Range of services

- Consulting on the properties of concrete in civil engineering, special heavy construction, structural and traffic infrastructure engineering (concrete design, concrete planning, consulting, calculations, ideas for monitoring concrete)
- Preparation of condition and damage analysis for concrete, reinforced concrete and prestressed concrete construction
- Preparation of redevelopment plans in concrete, reinforced concrete and prestressed concrete construction
- Expert reports
- Structural engineering measurements (concrete reinforcement prospecting, condition of concrete reinforcements and concrete, detection of harmful substances)
- Extrapolation of an optimal redevelopment schedule and alternatives based on economic factors
- Consulting on energy efficiency in structural and industrial engineering
- Issuing of energy performance certificates for buildings
- Planning services
- Damage analysis in traffic infrastructure engineering (e.g., paving/road surfacing)
- Training services
- Results-oriented moderation
- Personal development

Berlin

EUH

Manager: Pract. med., Dipl.-Ing. (ETH) Urs Rentsch
E-mail: su1610@stw.de

Range of services

- Setup and running of the European Union of Homeopathy (EUH)
- Three-year project competence degree program ending with a Bachelor of Science (B.Sc)
- Field: Complementary Medicine and Management
- Area of Specialisation: Homeopathy

Heidenheim

Non-Destructive Testing and Metrology

Manager: Prof. Dr.-Ing. Nico Blessing | E-mail: su1611@stw.de

Range of services

- Execution of measurement and testing tasks (especially industrial computed tomography)
- Assistance to companies introducing measurement and testing systems
- Collaborative research with and for industrial companies
- Application of research results for industrial purposes

Chemnitz

FiberCrete (FC)

Manager: Dr.-Ing. Sandra Gelbrich | E-mail: su1612@stw.de

Range of services

- Materials development (fiber-reinforced plastics, light concrete, fiber-reinforced concrete, natural fiber-based composites)
- Construction, dimensioning, and analysis of structures made of fiber-based composites for application in civil engineering
- Technology development for the manufacture of components made of fiber-based composites
- Materials inspection: fiber-reinforced plastics, light concrete, fiber-reinforced concrete, natural fiber-based composites (for both materials and structures)

Falkensee

Innovative Drug Design
Manager: Dipl.-Ing. cand. Timon Graf | E-mail: su1613@stw.de

Range of services
- Development of new activating agents through virtual screening
- Production of stable, shRNA knockdown cell lines through lentiviral transduction
- Implementation of automated high-throughput RNAi and compound screening

Vechta

Communication, Safety & Security – Northwest
Manager: Stephan Schlentrich | E-mail: su1615@stw.de

Range of services
- Preparation of risk analysis, concepts, and assessments
- Crisis communication in sales ordering
- Establishing contacts for company collaborations, contacts to research and development centers/facilities, information for industry
- Consulting
- Hosting of seminars and workshops

Heidenheim

Gear and Drive Technology
Manager: Prof. Dr.-Ing. Ulrich Schrade
E-mail: su1616@stw.de

Range of services
- Part evaluation, mainly transmissions
- Reports of damage to transmissions, especially gears
- Installation and recalculation of gears
- Optimization of gears with respect to noise and load-bearing capacity

Ulm

Biophotonics and Bioanalytics
Manager: Prof. Dr. Martin Heßling | E-mail: su1617@stw.de

Range of services
- Development of bioanalytical systems and optical instruments
- Studies, reports, and consulting in the area of biophotonics, bio- and medical technology
- Delivery of biotechnical and microbiological services
- Biotechnological laboratory services (S1-level training facility) equipped with a regulated bioreactor
- Presentations and continuing professional development seminars

Aalen

Measurement Systems, Sensor Technology and Signal Processing
Manager: Prof. Dr.-Ing. Peter Zipfl | E-mail: su1618@stw.de

Range of services
- Consultation
- Development of analog and digital electronics
- Drafting of measurement conventions and tools
- Performance and assessment of measurement test series

Neu-Ulm

Fabrikplanung
Manager: Dipl.-Ing. (FH) Roland Frank | E-mail: su1619@stw.de

Range of services
- New construction planning
- Redesigning and expansion planning
- Factory optimization
- Permanent factory planning
- Fire protection planning

Herrenberg

Development & Innovation Brazil
Manager: Peter Dostler, MBA | E-mail: su1620@stw.de

Range of services
- Market investigation and market entry consultation
- Consultation
- PPP projects
- Management of joint projects
- Training and continuing professional development

Mönchengladbach

SIZ@MG
Manager: Dipl.-Math. Harald Grobusch
E-mail: su1621@stw.de

Range of services
- Training and continuing professional development (CPD)
- Network management
- Consulting
- Expert reports

Lohne

Adolf-Kolping-Schule
Manager: Dipl.-Ing. (FH) Hubert Bertke
E-mail: su1622@stw.de

Range of services
- Further education and training incl. consultation and technical laboratory services

Laichingen

4 Innovative Energy Systems
Manager: Dipl.-Ing. Heinz Pöhler | E-mail: su1624@stw.de

Range of services
- Consulting in Design and Financing of renewable energy systems
- Consulting and expertice of energy saving measures in industrial applications
- Project management & Know-How Transfer
- Approval certificate
- Quality Assessment

Friedrichshafen

Burnout and Stress Prevention
Manager: Dipl.-Wirt.-Ing. (BA) Vivien Kienzle, MBE, HPA
E-mail: su1625@stw.de

Range of services
- Workshops and seminars about burnout and stress prevention
- Personal coaching
- Company consultation in the areas of human resources and organizational development

Bollschweil

Synergy of the Poles
Manager: Dipl.-Ing. (FH) Claudia Koch | E-mail: su1626@stw.de

Range of services
- Individual and group consultation
- Individual support
- Seminars
- Presentations

Gräfelfing

Innovation & Business Creation
Manager: Dr. Bernward Jopen | E-mail: su1628@stw.de

Range of services
- Entrepreneurship Education
- Startup management
- Business training
- Transition management for prisoners

Aalen

Center for Good Hearing
Manager: Philipp Heller, B.Sc. | E-mail: su1629@stw.de

Range of services
- Applied research and development
- Hearing screenings (audiometry, tympanometry, OAEs, BERA, CERA, stapedial reflex measurements, among others)
- Customization of hearing aids
- Verification of acoustic systems
- Manufacture of otoplastics
- Hearing protection
- Good hearing consultation

Saarbrücken

caMPlusQ
Manager: Prof. Dr.-Ing. Dirk Bähre
E-mail: su1630@stw.de, su1631@stw.de

Range of services
- Characterization of materials and material structures within all magnitude scale orders
- Making structures and material surfaces functional through meso-, micro- and nano-structurization
- Application-specific generation of surface structures and case depth properties
- Development of customized materials and functional materials for electrical, mechanical, chemical and tribological applications
- Development of innovative technologies and processing methods; shaping, inspection and generation of material properties
- Implementation of safe technologies in manufacturing; process chain design, quality assurance, control and documentation systems; resource and energy-efficient production
- Process evaluation, methods development and the further development of production systems
- caMPlusQ offers a broad spectrum of services, industrial research projects, long-term research collaboration and partnerships

Stuttgart

Steinbeis-Haus Karlsruhe
Manager: Prof. Dr. Dr. h.c. mult. Johann Löhn
E-mail: su1632@stw.de

Range of services

The company's main objective is the construction of the "Steinbeis House Karlsruhe" building on the University of Karlsruhe campus. It also assumes responsibility for building utilization, especially rentals and administrative affairs, and other uses.

Ulm

Interdisciplinary Product Development and Simulation
Manager: Prof. Dr.-Ing. Thomas Engleder
E-mail: su1634@stw.de

Range of services

- Planning and support of product development projects
- Simulation (FEM) and method development
- Conducting of experiments
- Innovations consulting
- Consulting for the admission of mounting systems

Stuttgart

Business Start-up
Manager: Dipl.-Ing. (FH) Ralf Lauterwasser
E-mail: su1635@stw.de

Range of services

The Steinbeis Consulting Center is a project partner of the ESF Funding Program for Business Startup Certification backed by the Ministry for Finance and Industry with funding directly from the Ministry and from the European Social Fund.
Consulting of business founders who want to start a business in the German state of Baden-Württemberg via the Steinbeis Consulting Center for Business Startups. A pool of qualified and experienced consultants are available for customers.

Saarbrücken

caMPlusΩ
Manager: Dr.-Ing. Flavio Soldera | E-mail: su1636@stw.de

Range of services

- Continuing professional development in the field of materials and processes
- Extra-occupational ("on the job") 2-year degree program for a Master of Engineering in adherence with the project competence degree model
- Certification courses

Ulm

DSI – Digital Systems and Innovations
Manager: Prof. Dr. Anestis Terzis | E-mail: su1637@stw.de

Range of services

- Applied research and development
- Representation in international standards organizations
- Writing of reports, feasibility studies and development of prototypes
- Seminars
- Consulting

Pfinztal

Finances.Communications.Training
Manager: Frank Armbruster, Dipl. Päd. Dorothee Rennwanz-Etzel | E-mail: su1638@stw.de

Range of services

- Events
- Lectures and panel discussions
- Seminars, workshops and training courses
- Consultation on financial communications
- Symposia and conferences
- Company analysis
- Review of small and medium-sized businesses
- Credit mediation
- Public affairs & media relations

Wiki Best Practice Conference
User Convention

The development of the internet has drastically changed the way people gather and process information. Web 2.0 tools are becoming standard practice; some of them can even be integrated easily into a business's existing management system. Wikis, common, easy-to-use software systems on the Web, are one such tool. They allow you to publish contents which can then be used and edited by others. The Steinbeis enterprise TQU International hold a Wiki Best Practice Conference on 10 October 2012 to give businesspeople who have successfully implemented Wikis into their management systems a chance to report on the challenges and usefulness of Wikis in modern business.

Wikis are modern documentation and communication platforms and are well suited for process descriptions, document allocation and know-how exchange throughout a business. Processes and products are improved and realized through the experience, know-how and involvement of employees. In this way, quality standards can be developed on an ongoing basis. It is also easy to implement certification via Wikis.

The conference, which took place in Stuttgart's Haus der Wirtschaft (House of Commerce), focused on experience exchange, know-how transfer and insights into Wiki management systems. Through a series of lectures and panel discussions, participants gained comprehensive insight into the potential to improve management systems and processes using Wikis. Ten guest speakers from various businesses, such as TNT Post and LSG Sky Chefs, revealed how they joined forces with colleagues and used tools like Wikis and Sharepoints to implement and optimize their processes and management systems, thus raising quality.

The conference was aimed at managers, people responsible for management systems, process designers/improvers, quality managers and quality officers.

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The pull of magnets
The 3rd Ilmenau Magnet Day

All indications are that the Ilmenau Magnet Day, which took place for the third time earlier this year at Ilmenau University of Technology, and drew in more than 80 participants, has finally become something of a tradition. As in the past, Steinbeis Mechatronik, Zwick GmbH & Co. KG and TU Ilmenau were responsible for organizing the event.

The Ilmenau Magnet Day was kicked off with an evening event the day before the official opening. Professor Eberhard Kallenbach provided a brief outline of the history of TU Ilmenau and the scientific community in the Ilmenau region. Manufacturers and users of magnetic systems were invited to attend lectures related to magnetic systems and their applications.

In particular, the newest discoveries in the field of magnetic system design were presented, ranging from multi-criteria optimization to hysteresis and eddy current models, areas of application for magnetic drive elements, new methods of condition monitoring of magnetic systems with mechanical and magnetic measurements, and current developments in magnetic materials. As such, demands resulting from increasing integration of product and production system developments in magnetic systems were central to discussion (Smart Engineering).

Left to right: Achim Stelzer-Roncoletta (the Ulm-based company Zwick GmbH & Co. KG), Jörg Rönnert (Steinbeis), Prof. Eberhard Kallenbach (Steinbeis), Dr. Tom Ströhla (TU Ilmenau)

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Solar thermal energy in heating supply

EU initiative SDHplus underway

Partners from 13 European countries met in July for the kick-off event of the EU initiative SDHplus, a program aimed at analyzing the potential to use solar thermal energy in heating supply on an international level. Working with key figures from the field, the program's aim is also to launch a pilot scheme as an application or business model. The project is being coordinated by Stuttgart's Steinbeis Research Institute of Solar and Sustainable Thermal Energy Systems (Solites).

In addition to the experts from the previous initiative, SDHtake-off, new partners from France, Croatia, Lithuania, Poland, Slovenia and Spain have joined the project team. "At the first meeting, we were already able to discuss interesting possibilities for solar thermal energy plants in these countries, and we're pleased to have such an extended circle of motivated project partners on board", says Steinbeis Project Director, Thomas Pauschinger.

In most situations, to put solar thermal energy into effective use in local and district heating, the overall setup and operating conditions have to actually allow for additional benefits and synergies. The aim of the SDHplus initiative is to analyze similar international setups and, with the involvement of relevant parties, embark on the first stages of implementation. Furthermore, in countries where the market is still new, a key concern is how to transfer know-how and prepare the market. The initiative is being sponsored by the EU's "Intelligent Energy Europe" program.

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Insights into logistics and factory planning

Logistics Day

The Steinbeis Transfer Center for Logistics and Factory Planning hosted the national "Logistics Day" in Göppingen earlier this year. Approximately 40 CEOs, logistics and productions managers from regional medium-sized companies as well as students and logistics enthusiasts followed the invitation.

At the event, STC director Dietmar Ausländer and his colleagues informed in several presentations about logistics trends and strategies, planning of factory and logistics centers as well as the path to a lean and competitive business. Moreover, practical examples gave participants a glimpse into the daily work of the logistics experts. Following a successful series of presentations, a Q&A session gave participants the opportunity to exchange ideas and ask questions.

"Logistics Day was an all-round success," Ausländer said. "We could tell by the participants' reaction that logistics is more crucial to entrepreneurial decision-making than it's ever been." The Göppingen-based Steinbeis Transfer Center develops and implements comprehensive solutions for the optimization of value-added chains, logistics systems and process environments in medium-sized businesses. With over 20 years of experience on over 500 projects in almost every sector of industry and size of company, the center has built a reputation as a source of comprehensive experience in the analysis and optimization of business logistics.

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Research Campus caMPlusQ Opens

Scientists in Saarbrücken collaborate in the fields of materials science and engineering

With roughly 300 researchers at the university and the support of three external academic research institutes, the Materials Sciences and Engineering program in Saarbrücken is considered one of the top five in the field nationwide. Scientists at the new research campus, which is abbreviated to caMPlusQ, want to further increase their networking capacity and offer local businesses intensive collaboration. Part-time training and seminars will also be on offer. Steinbeis is one of the project's partners.

"All over the world, scientists are developing tailored materials with fascinating properties. As we discovered from a study conducted by the National Academy of Science and Engineering, around 70 per cent of German exports are international successes because they tap into innovative materials," says Professor Dr. Frank Mücklich. Mücklich is Director of the Steinbeis Research Center at Saarland University called Material Engineering Center Saarland (MECS). He is also one of the research campus's directors. The researchers at the campus want to make their knowledge of enhanced materials and new technology available to international companies in the region, as well as medium-sized firms with no in-house development. The companies should also profit from the pooling of skills, the laboratory facilities and the precise analytical methods used in materials science and engineering on the university campus.

At caMPlusQ, the professors of materials sciences and engineering at Saarland University have joined forces with external research institutes, including the Leibniz Institute for New Materials (INM), the Fraunhofer Institute for Nondestructive Testing (IZFP) and the MECS Steinbeis Research Center (Material Engineering Center Saarland). The Center for Mechatronics and Automation Engineering (ZeMA) will also be involved. The campus is open to collaboration with the University of Applied Sciences (HTW) in Saarbrücken and the materials sciences program at the Technical University of Kaiserslautern.

To organize collaborative research, technology transfer and training, the scientists founded three Steinbeis centers. "These are supported by the Steinbeis Foundation through professional management and a powerful network spanning research, technology transfer, employee development and training. We see ourselves as partners of the universities and, with the help of our centers, ensure companies transfer scientific knowledge efficiently and effectively into business application. We also make sure it's legally protected in terms of confidentiality, liability and intellectual property," explained Professor Dr. Michael Auer, Chairman of the Steinbeis Foundation Board at the opening of the research campus.

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The Innovation Process of Custom Support Services. Key success factors at SMEs involved in Mechanical Engineering and Machine Construction
Holger Schaaf

2012 | Paperback, B&W | 248 pages, German
ISBN 978-3-943356-22-9

About the author
Holger Schaaf studied business administration with a focus on marketing and HR management at the Ludwigshafen University of Applied Sciences where he works as a research officer. He now heads up the Competence Center of Innovation and Market-Based Business Management. Schaaf is the cofounder of the Steinbeis Transfer Center of Innovation: Consulting + Coaching.

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Christoph Thome

2012 | Paperback, B&W | 230 pages, German
ISBN 978-3-943356-23-6

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Christoph Thome studied International Business at the University of Northumbria, Newcastle and General Management at Steinbeis University Berlin. He is project manager at the Competence Center of Innovation and Market-Based Business Management at Ludwigshafen University of Applied Sciences. He is the cofounder of the Transfer Center of Innovation: Consulting + Coaching (ICC) and lectures for a variety of universities and seminar providers.

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Oliver T. Gilbert

2012 | Paperback, B&W | 278 pages, German
ISBN 978-3-943356-24-3

About the author
Oliver T. Gilbert studied applied computer science at the vocational academy Berufsakademie Karlsruhe, now known as Baden-Württemberg Cooperative State University (DHBW). Between 2006 and 2008 he was a part-time MBA student at Pforzheim University. Between 2009 and 2011 he studied for his Ph.D. at Steinbeis University Berlin.

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A. Jovanovic, D. Balos, P. Klimek, F. A. Quintero

2012 | Paperback, B&W | 122 pages, English
ISBN 978-3-943356-18-2

About the project
This document presents the summary report of the work package on socio-economic analysis in the EU project Alfa-Bird. The work package has been coordinated by Steinbeis Advanced Risk Technologies (R-Tech), a member of EU-VRi (European Virtual Institute for Integrated Risk Management), in collaboration with the project partners IFPEN (IFP Energies Nouvelles), INERIS (Institut National de l'Environnement Industriel et des Risques) and AIRBUS. The overall coordination of the project was managed by EU-VRi.

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Gernot Barth, Bernhard Böhm (Publ.)

2012 | Paperback, color | 108 pages, German/English
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About the publishers of both publications above

PD Dr. habil. Gernot Barth has been working as a mediator and trainer of mediators since the foundation of IKOME® (the Institute of Communication and Mediation), the Steinbeis Consulting Center for Corporate Mediation and the Academy for Social Aspects and Law (Steinbeis Transfer Institute). Bernhard Böhm is a qualified attorney and has been working for more than 12 years as a mediator and expert in mediation and extrajudicial conflict management. He heads up the Steinbeis Consulting Center for Corporate Mediation alongside Dr. Gernot Barth as well the state-approved conciliation office at the consulting centers of Steinbeis Beratungszentren GmbH, a member of the Steinbeis Network.

Human Resources Development. Fundamentals, Processes, Outsourcing

Viktor Lau

2012 | Paperback, B&W | 288 pages, German
ISBN 978-3-943356-16-8

About the author

Dr. Viktor Lau was born in 1966 and has studied philosophy, history, German studies and business administration. For over 10 years, he worked as a consultant for the Steinbeis Foundation and other international consulting and further education organizations. For many years, he was also responsible for strategic human resources development in the core markets of a Top 30 company on the German stock exchange. Lau is currently head of HR development at a north German general bank.

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Robert Gohla, Jens-Jochen Roth (Lead authors)

2012 | Paperback, color | 98 pages, English
ISBN 978-3-943356-10-6

About the author

Robert Gohla is a project manager for transport and process technologies at Steinbeis-Europa-Zentrum in Karlsruhe. His co-author Jens-Jochen Roth is head of the Steinbeis Innovation Center for Logistics and Sustainability in Sinsheim.

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2012 | Hard Cover, color | 63 pages, German
ISBN 978-3-943356-09-0

About the author

The authors work in a number of positions at the School of International Business and Entrepreneurship (SIBE) at Steinbeis University Berlin which has almost 800 enrolled students on master's programs in the field of management.

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Steinbeis-Stiftung (Publ.) | Konrad Zerr

2012 | Paperback, color | 72 pages, German
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About the author

Prof. Dr. Konrad Zerr is director of the Steinbeis Consulting Center MIC (Marketing – Intelligence – Consulting) and a professor at Pforzheim University.

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Björn Rohde-Liebenau

2012 | Paperback, B&W | 108 pages, German
ISBN 978-3-943356-15-1

About the author

Björn Rohde-Liebenau has worked for over 20 years as an attorney, ombudsman, company lawyer and staff attorney for public authorities, and is recognized today as one of the highest profile international specialists in the field of whistleblowing.

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ISBN 978-3-943356-06-9

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Steinbeis-Edition (Stuttgart)
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Publication details

Transfer. The Steinbeis magazine

The magazine on tangible knowledge and technology transfer
Edition 3/2012
ISSN 1864-1768 (Print)

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Willi-Bleicher-Str. 19
70174 Stuttgart
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The author of each article is responsible for the content. The views and opinions expressed in the articles do not necessarily reflect the views and opinions of the editors.

Concept and design:
Steinbeis-Stiftung

Overall production:
Straub Druck + Medien AG, Schramberg

Photos and images:
Unless stated otherwise, photos and images were provided by Steinbeis Enterprises and project partners named in this magazine.
Title: © photocase.de/Revanche

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151295-2012-03