Steinbeis

TRANSFER

The Steinbeis Magazine

Skills and competence, on all fronts

04|2011

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News

Editorial

Dear Readers,

2011 is drawing to a close and it's difficult to summarize, in concise terms, how it's been. We can certainly look back on a year of rapid growth, and, in many areas, companies have been working to full capacity. Raw materials and skilled workers have been in short supply and plenty of businesses have been reporting record profits.

But at the same time, 2011 has been a year of upheaval, uncertainty and crisis. The fast-moving, volatile working environment has made doing business difficult. This has been particularly noticeable in strong industrial regions such as the Heilbronn-Franken area of Germany, which is home to more international leaders and hidden champions than most areas. When industry is driven by innovation, medium-sized entrepreneurialism and a focus on global markets, one boom year won't put a shine on the prospect of uncertainty in rapidly changing surroundings. Businesses are not just busy coping with the boom, they're looking intensively at improving performance and remaining agile, just to keep pace with rising demands. Companies are occupied with business issues like the flexibility and transparency of management, processes and systems, and how to manage global commerce, risk, compliance, sustainability, and, last but not least (especially given the debt crisis), liquidity and finances.

Support comes in the form of knowledge transfer through universities and networks – and by comparing notes with other companies. At the Heilbronn-based Steinbeis Business Administration and Management Center, we bring together a variety of skills to provide companies with the support they need: consulting, conventions, studies and advisory services.

For example, we provide training and continuing professional development services in the form of seminars and degrees, in areas such as financial control, accounting and business administration. At the Heilbronn Graduate College, in addition to helping transfer existing know-how into business, we also carry out applied research to provide companies with fresh impetus through new business insights.

A further area of focus in our transfer work lies in the sharing of experiences within close-knit regional networks, with respect to management accounting, strategy, marketing and sales. The potential to transfer knowledge through talks, workshops and project work facilitates discourse, the search for relevant reference projects and methodological developments. For example, over 330 members from various work backgrounds, dealing with a variety of key topics are working together in dialog sessions about management accounting. Steinbeis is represented in the region by another 26 enterprises, and staff at these organizations make important contributions to knowledge transfer into industry within their specialist areas. A number of other Steinbeis projects are outlined in this latest edition of TRANSFER.

I hope it provides you with many new ideas and you enjoy reading it!

Prof. Dr. Ralf Dillerup

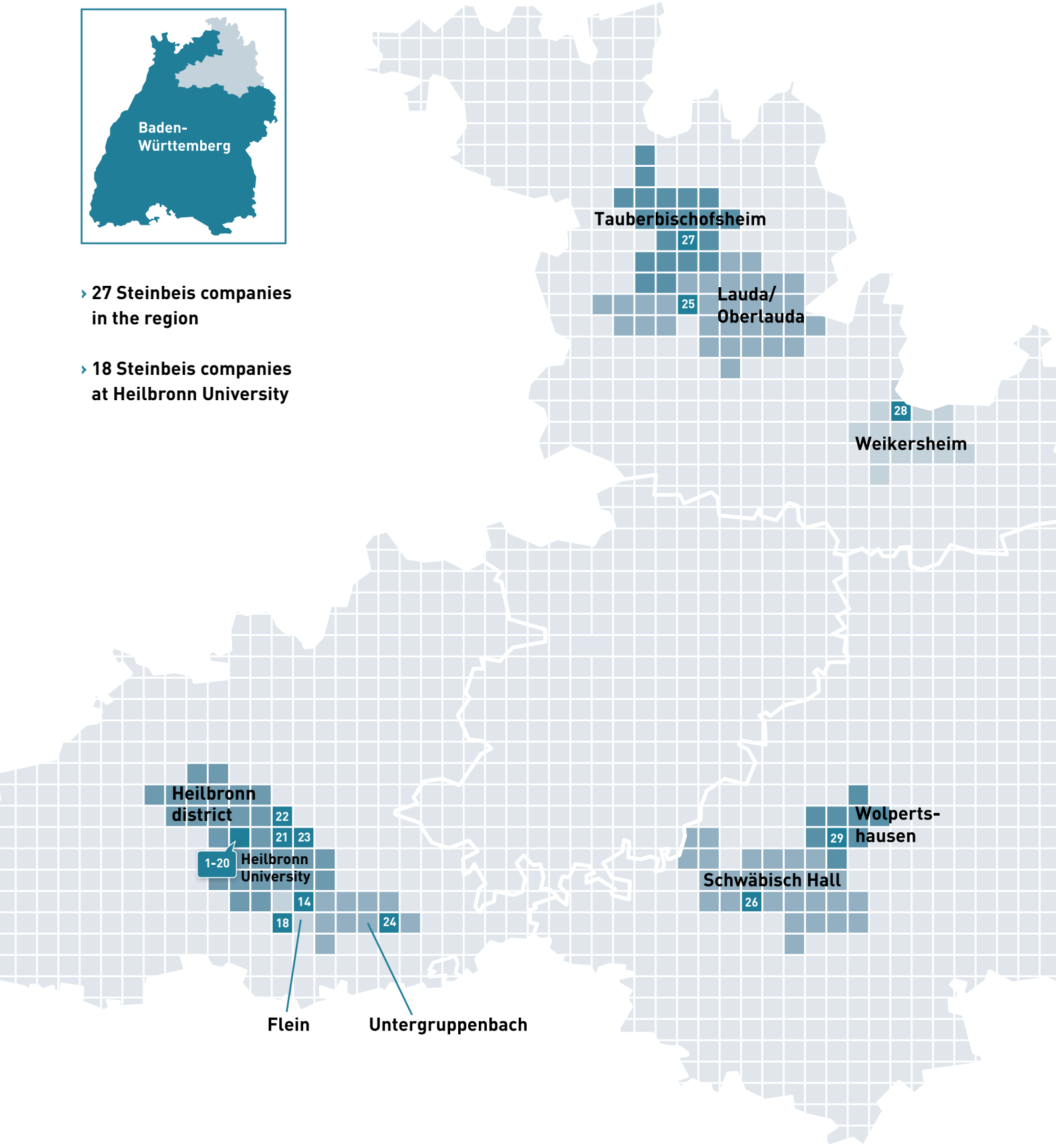
Prof. Dr. Ralf Dillerup is Institute Director and a managing partner of zfbu GmbH. zfbu is a joint-venture between Steinbeis University Berlin and professors at Heilbronn University. It offers consulting services, know-how transfer and applied research. For more information on Steinbeis activities in the Heilbronn-Franken region turn to page 4 (Steinbeis on a local level).

„Companies benefit by exchanging expertise with universities and through networks which allow companies to share experience.“

Prof. Dr. Ralf Dillerup

› 27 Steinbeis companies in the region

› 18 Steinbeis companies at Heilbronn University



Knowledge and technology transfer in the Heilbronn-Franken region

Steinbeis on a local level

Heilbronn-Franken isn't just the largest of the German state of Baden-Württemberg's 12 official regions by area, it's also remarkably dynamic compared to other regions in the state and in the country as a whole. Its economic structure spans agriculture, power plants on the river Neckar, the woodworking and wood processing industry, automotive construction, mechanical and electrical engineering, logistics, modern financial services providers, IT and software development. The region benefits from a healthy mix of industries and a strong foundation of dynamic SMEs. To ensure that things stay this way, the Heilbronn-Franken region is committed to innovation, research and development, and to fostering knowledge transfer between academia and business. The Steinbeis companies in the region, which between them offer a broad portfolio of services, make a major contribution to this. Both SMEs and large enterprises benefit from sophisticated Steinbeis solutions that address challenges in all areas of management and technology, are delivered quickly, and that are specially tailored to their needs.

Steinbeis has been actively promoting practice-oriented knowledge and technology transfer in Heilbronn-Franken since the early days of the Steinbeis Foundation in the late 1960s. To facilitate this, Steinbeis works closely with Heilbronn University, one of the leading universities of applied sciences in Baden-Württemberg. Founded in 1961 as an engineering college, its focus today is on technology, business and IT.

Heilbronn University sees itself as a high-performance center for students, business and society, with a special responsibility for the Heilbronn-Franken region. Across its three locations in Heilbronn, Künzelsau and Schwäbisch Hall, the university offers a total of 45 bachelor's and master's degree programs, all with a practical and international orientation. Heilbronn University places a particular focus on research, language teaching, close cooperation with companies in the region, and maintaining a strong network of international partner universities.

By training and educating the skilled employees and managers of the future, and by sharing its expertise and findings through Steinbeis, Heilbronn University promotes innovation in business and society both in the local region and beyond. The university's long-standing cooperation with Steinbeis intensified in November 2010 with the signing of a new partnership agreement. Steinbeis will continue to support the university in promoting knowledge transfer between academia and business.

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A discussion with Professor Dr.-Ing. Wolfgang Wehl

"United we are strong"

Professor Wehl, as director of the Steinbeis Transfer Center for Technical Consulting at Heilbronn University of Applied Sciences, you now head up one of the longest standing and still most successful enterprises in the Steinbeis Network. In a strongly growing area like Heilbronn-Franken, it's particularly important to bolster market knowledge and technology transfer through consulting and applied R&D. What do you see as the key areas of focus for the work of your Steinbeis transfer center?

The Steinbeis Transfer Center of Technical Consulting at Heilbronn University of Applied Sciences thrives on skills excellence and the strong ties between its employees and industry. The transfer center currently has 16 project managers from all three technical departments at Heilbronn University of Applied Sciences, from both the Heilbronn and Künzelsau campuses. Most projects are acquired directly by project managers. Clients based in the region not only benefit from the geographical proximity of our center but also from our STC's excellent laboratory equipment. Some of the project managers offer a variety of USPs, so they've been involved in several projects overseas. We've already had invoices go out to Argentina, England, Japan, Singapore and Spain. Topics we've been working on for many years include the testing of combustion engines, flow engineering, microdispensing technology and investigations into the haptic behaviour and design of automobile control elements.

In my role as head of the Steinbeis Transfer Center for Technical Consulting at Heilbronn University of Applied Sciences, one of my first priorities is to work closely with my second in command, Prof. Dr.-Ing. Jörg Wild, to continue the outstanding work of my predecessor and the 2010 Löhn Award winner, Prof. Dr.-Ing. Klaus Boelke. The emphasis here lies in networking project managers, managing project budgets and managing the interface with Steinbeis head office in Stuttgart. We now also want to set up an appealing and comprehensive website for our transfer center.

The old technical consulting service, or TBD, was previously set up as a more focused "consulting center" at the universities of applied sciences in Baden-Württemberg, and this formed the basis of today's Steinbeis model. There was a TBD in Heilbronn as early as 1971, and, over the years, it earned its laurels as a technology transfer services provider. You've been part of the Steinbeis Network since 1997 and took over this Steinbeis Transfer Center in 2011. What's changed since you've been here? And what social, political and economic developments have influenced work in technical consulting?

Actually, it's difficult to make comparisons with the distant past after just one month as head of a Steinbeis enterprise. But during my many years as a project manager, basically everything stayed the same. There'd be a client query, an offer was submitted, it generally gave rise to a project, and it was then seen through to fruition. It's one of the nice things about pure project management – there's almost no red tape. As director, I have the additional task of managing our Steinbeis enterprise. But the processes are much simpler than procedures at the university. Also, the feeling that always comes down from Steinbeis HQ is that "If you're fine, we're fine too!" I am now trying to pass this philosophy on to my project managers.

Your center offers services in the fields of electrical engineering, mechatronics, microsystems, mechanical engineering and production technology. Do you discern an emphasis in demand, especially among SMEs? Are there any trends?

Professor Dr.-Ing. Wolfgang Wehl

In the past, many larger companies could afford to invest in in-house skills and resources for a variety of peripheral issues. Now, nearly all companies focus on core competences. Bigger companies tend to approach us if there's a burning issue anywhere along the long path between product design and customer application, or if they know one of our project managers has the specialist knowledge they need. It's still unusual for big companies to work with individuals, so project managers can offer them advice under the Steinbeis umbrella and thus as a company. Smaller and medium-sized companies often turn to us when they want to enter a new market.

This is a particularly pertinent driver in my specialist area, microsystems, as most SMEs

have little in-house experience in the field. Once the project is live, we work in collaboration with professional microsystem manufacturers to develop the MEMS, test it, and implement it in our client's mechatronic product.

Your center at Heilbronn University of Applied Sciences has a rich and successful history. What do you see as the future goals and challenges for your center?

United we are strong. Few question the wisdom of this saying. Despite this, most of the professors working as project managers work individually on their projects. It would be good for the performance of our transfer center if we could pool the detailed specialist knowledge of several project managers when we're working on larger projects. The fact that our clients like to see this happen, and the fact that it's good for the projects, has been proven time and again. Exactly how I'm going to foster this type of collaboration more in the future, in my role as director, is something I'm still working on.

To do justice to our own ambition in the future – namely to be a professional business partner, which offers a broad technical portfolio – we intend to involve more people in project management at our transfer center, especially new colleagues. Ultimately, the system should run off its own steam, because everyone gains – the project managers, who get to contribute their specialist knowledge on live projects while learning in the process; companies, whom we help solve their problems; students involved in the projects, who can earn money in a live business context and forge contacts with industry.

It's also one of our goals to improve the image we portray to the outside world. Even if lots of engineers sweep the issue under the rug, it all revolves around communication and promotion. These days, our potential clients google their way to key experts with a couple of mouse clicks. It's such a shame – until now, the Steinbeis Transfer Center for Technical Consulting at Heilbronn University of Applied Sciences has rarely come up.

After studying mechanical engineering at the Technische Universität München, Prof. Dr.-Ing. Wolfgang Wehl specialized in ink printing technology. After completing his Ph.D. in 1984, he worked on developments in the field at Siemens for nearly ten years, originally focusing on precision engineering and later on MEMS technology. Wehl has been responsible for the field of MEMS and precision engineering production as part of the mechatronics and micro system study course at Heilbronn University of Applied Sciences since 1996. From the beginning, he has worked on a variety of projects in his specialist area. His experience within Germany is almost unique.

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Image: wikipedia.de/ Schmelzle

The Heilbronn-Franken region

The Heilbronn-Franken region lies in the north of the German state of Baden-Württemberg. The main city in the area, Heilbronn, has an especially rich and long history. This has included many innovations, fuelled by a variety of experimental "Heilbronners" – the pioneer Robert Mayer, discoverer of the principal of energy conservation; pioneers in the field of medicine, such as Georg Klett (blood transfusion) and Philipp Sicherer (anesthetics); engineers like Johann Widmann, who built the first German paper machine for continuous form.

The region still has a lively interest in product innovation. To succeed, the area requires targeted knowledge and technology transfer based on market needs. Ensuring that transfer succeeds is the task of Steinbeis enterprises in the region.

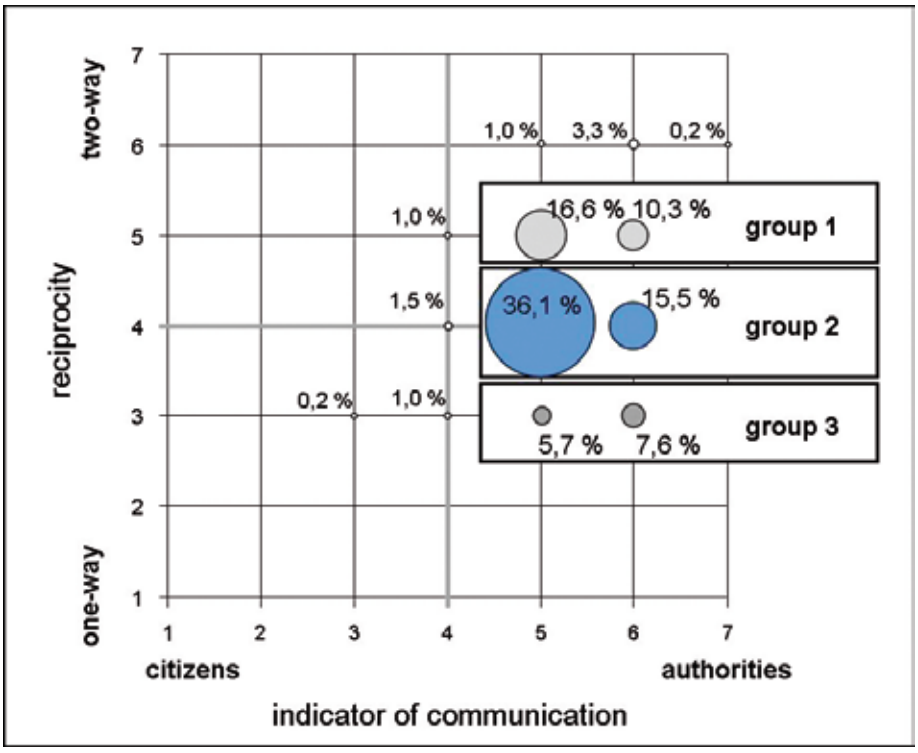
Steinbeis has been working with Heilbronn University of Applied Sciences for many years to ensure this transfer happens. A "Technical Consulting Service" was founded as early as 1971 at the former Heilbronn technical college under the auspices of the Steinbeis Foundation. This work was intensified with the founding of ZfBU GmbH, the center for business administration and management, in November 2010. A number of other Steinbeis experts also work at centers outside the university.

Results of a representative survey carried out by Steinbeis University Berlin

How do Municipalities Communicate with Residents?

Demographic change is increasingly having a tangible impact on local communities. An aging as well as shrinking population is creating a number of consequences. Therefore municipalities do not only have to compete for investors, tourists, and buying power, but also increasingly for more inhabitants. Given these developments, it is ever more important to understand how municipalities communicate with their residents. Steinbeis experts at the SVI Chair for Marketing and Direct Marketing at Steinbeis University Berlin (SHB) have been examining how municipalities communicate.

Although each action by the municipality involves communicating at some level, events in Germany such as the mass panic that occurred during the Love Parade in Duisburg in 2011 or the mass demonstrations against the railway project Stuttgart 21 indicate that historically-dominant oral communication is becoming less important. The role of communication as a control mechanism in local communities is in need for reform. Due to the demographic and social changes local government communication needs to adapt to new demands.



How dialog-oriented is communication in local communities?
The diagram visualizes how dialog-oriented the communication in local communities is, using two constituent variables (initiation of communication and reciprocity).

Against this backdrop, the SVI Chair for Marketing and Direct Marketing at Steinbeis University Berlin (SHB) has launched the research project "Communication with Citizens in Local Communities", that is scheduled to last several years. Following a number of qualitative studies in the summer of 2011, a representative survey was carried out in German municipalities with more than 5,000 inhabitants. Central aspects emerging in the first results are the value placed on voluntary communication with citizens, the willingness of authorities to enter into dialogue, and the relevance and frequency of use of a variety of forms of communication. The data for the survey was based on a sample of 523 officials responsible for communication, in most cases the mayors themselves. The sample covered cities and villages in all German states, except the three city-states of Berlin, Hamburg and Bremen. The survey is the largest empirical study to date on the communication habits of municipalities in Germany.

The study focuses on understanding voluntary communication, regarding which municipalities have many liberties in comparison to the legally regulated mandatory communication. In detail, voluntary communication has been divided into four main areas: information for citizens, communication with regards to identification, change communication, and crisis communication.

The survey results underscore the importance placed on voluntary communication. On average, respondents categorized 55.8% of all communication with citizens undertaken by local communities as voluntary. In municipalities with more than 10,000 inhabitants, this share increases to 58.3% and in municipalities with less than 10,000 inhab-

itants it decreases to 52.7%. According to the respondents, the majority of municipal communication with citizens is thus voluntary. On a scale from 1 (not at all important) to 7 (very important), respondents' average rating of the importance of voluntary communication was 5.9. When asked to consider how important voluntary communication was two years ago, the average rating was 5.2, which shows the rising importance of this type of communication. The respondents believed that this trend would continue over the next two years. From the perspective of the municipalities spontaneous communications directed at citizens are highly important. Apparently municipalities have recognized the importance of communication with citizens for successful cooperation and effective implementation of policies.

Given the significance of voluntary communication, dialogue-based approaches are becoming increasingly important to local municipalities. The survey looked at two key aspects of dialogue-based communication with citizens: the initiator of communication (citizens or the municipality) and the degree of interaction (ranging from entirely one-way to full two-way communication). Communications that were largely instigated by citizens do not appear to exist in local communities, who clearly consider citizens to be primarily on the receiving end of communication and not communicators themselves. With respect to the degree of interaction in communication, there are differences among municipalities. More than half of all municipalities (Group 3 in the diagram) are in an intermediate position regarding interaction (score: 4). For about one quarter of the municipalities (group 1), communication with citizens is principally focused on two-way interaction. Communication was reported as primarily one-way (group 2) in just 15% of municipalities. These results indicate that in general, there is only a limited focus on dialogue in municipal communication with citizens. This is especially reflected in responses regarding the extent to which the communication process between citizens and the municipalities is initiated (or can be initiated) by citizens. Regarding the direction of communication few municipalities that employ two-way communication could be found. The overall picture for all municipalities surveyed is however rather traditional: communication is initiated by the municipality, reducing citizens to recipients of communication content.

Besides asking about the general tendency to enter into dialogue when communicating with citizens, the survey investigated the significance and the intensity of use of specific communication instruments as part of voluntary communications. With the exception of communication through classic advertising media, all forms of communication were considered important. Respondents lent the greatest importance to one-to-one communication with citizens, with or without the use of media. PR and electronic communication were also considered important. Communicating with citizens through local channels, such as clubs and societies, seems to be less relevant.

The use of different communication instruments in principle corresponds to their significance, although the intensity with which they are used was always lower than their estimated importance, with the exception of non-electronic communications. This indicates that apart from non-electronic communications, the intensity of use of different types of communication will rise in the future. It can safely be assumed that the use of non-electronic information material will decline and largely superseded by electronic information material.

The results show that voluntary communication with citizens is highly important – not just in theory, but also from an empirical standpoint. More than half of all communication with citizens is voluntary and its already perceived importance will increase in the next two years.

Further information (in German only)

A detailed analysis of the research findings can be found in the following working papers, which can be ordered from the endowed chair for a fee of € 5 plus mailing costs:

- **Schlicht, Julia/Windhaus, Sebastian:** Citizen communication in local communities: an outline of an interdisciplinary field of research – Working paper No. 3 of the SVI Endowed Chair for Marketing and Direct Marketing, Berlin, 2010.
- **Schlicht, Julia:** Findings of a qualitative study into the production side of citizen communication in local communities – Working paper No. 4 of the SVI Endowed Chair for Marketing and Direct Marketing, Berlin, 2011.
- **Windhaus, Sebastian:** A map of citizen communication in local communities: an empirical stocktaking exercise in Germany – Working paper No. 5 of the SVI Endowed Chair for Marketing and Direct Marketing, Berlin, early 2012.

The analysis of communication's dialogue-orientation however clearly shows that the majority of German municipalities have a lot of potential to improve regarding their communication with citizens. The indications are that they could improve by understanding the relevance of different forms of communication. More personal communication and greater use of mass electronic media, both of which facilitate dialogue, are relevant in this respect.

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Mud problem solved

A new dry processing system for glass-fiber pipes

Glass-fiber reinforced plastic pipes (GRP pipes) are used in many areas, especially if they involve water, waste water and process piping systems in the chemicals industry. Until now, most milling or cutting of pipes has been carried out under wet conditions, by adding water to keep tools cool and "absorb" GRP dust. But this produces huge volumes of "GRP mud" which has to be disposed of as special waste. To avoid this, experts at a company from Saxony joined forces with ALP, the Steinbeis Innovation Center for Automation in lightweight construction processes (ALP), as well as Chemnitz University of Technology. It was all part of an AiF-backed project to develop a dry processing system for GRP pipes.

GRP pipes are used for water, waste water and process piping systems in the chemicals industry. They are now used all over the world, mainly due to their excellent technical properties, corrosion resistance, the low specific weight and durability. They can be made with winding processes as well as centrifugal casting. One part of the pipe is slotted into place using special GRP couplings called "REKAs." These couplings are made by cutting GRP connection pipes (larger diameters) into smaller sections and adding grooves and phases. The grooves are to hold rubber sealing rings. The cutting of the pipe and milling of the grooves takes place in one process with a multi-component set of tools on a machine which was specially designed for the process. Currently, processing involves adding water, but this results in significant volumes of GRP mud due to the size of the pipe – which can measure up to 4,000 mm in diameter. Gathering and disposing of the mud can be highly problematic. Precipitation and dehumidification is needed to dispose of the waste professionally. During the process, machines and the workplace can become heavily soiled, resulting in more severe wear and higher maintenance costs.

To avoid using water during the milling and cutting of the pipes, the team designed a fundamentally different process. Now, dust is no longer "absorbed" by water and flushed away. Instead it is removed the moment it is produced with a carefully directed jet of air. This also helps cool down the tools. The waste air containing dust particles is then cleaned by a filtering system and the dust is collated into a flour-like substance in suitable transportation containers. It can subsequently be disposed of without further treatment. Alternatively it can be reused as an aggregate in industrial processes.

A demonstration system for dry processing GRP pipes

The new process was only possible thanks to special development work to adapt the machines and tool components. By pooling skills in the field of special machinery construction, tooling technology, ventilation systems and GRP technology, it was possible to design a system that goes way beyond the capabilities of existing machinery, not just for removing dust. The development of special diamond-coated tools and improvements in the kinematics of the tool drive made it possible to process pipe connectors measuring 300 mm in less than three minutes. Comparable systems already in operation need seven or eight minutes for the same task.

The AiF and ZIM-sponsored project involved collaboration between Huster Sondermaschinen, DIT Diamanttechnik, ULT and the Steinbeis Innovation Center ALP as well as the professorship for lightweight construction processes at Chemnitz University of Technology, GRP Technique & Service and the engineering consultant Bernd Müller.

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Impressions

The 2011 Steinbeis Day

More than 50 Steinbeis enterprises showcased the skills and services of the Steinbeis Network to over 550 enthralled visitors at this year's Steinbeis Day. It was an excellent opportunity for visitors to exchange views, discuss product concepts, examine the latest developments, discover research findings at first hand, and to ask experts for advice on specific problems.

In the morning, as is tradition, the day was opened with the bestowal of the Prof. Adalbert Seifriz Prize. The Baden-Württemberg Trades Association and the German Confederation of Skilled Crafts award this prize every year in cooperation with the German business magazine, handwerk, the Signal Iduna insurance and finance company, the Crafts Association of Technology Transfer, the Baden-Württemberg Ministry of Finance and Economy, and Steinbeis. The prize is awarded for successful projects involving collaboration between skilled craft companies and the world of science and academia.

On this year's Steinbeis Day agenda was also an exhibition of particular interest to design experts and art lovers. The exhibition was opened in the afternoon as part of the overall event in the Steinbeis headquarters. Its title: "Steinbeis – A Satellite for Technology." The featured artist is Professor Alfred Lutz, who can also be credited with thinking up and designing the current Steinbeis logo and a variety of other key Steinbeis publications. Alfred Lutz is a former director of the Design College in Schwäbisch Gmünd and has won a string of awards. The exhibition runs until the end of February.

The 2012 Steinbeis Day is scheduled to take place on Friday, September 28, in Stuttgart's Haus der Wirtschaft (House of Commerce).

Further highlights of the 2011 Steinbeis Day can be found at **wwww.steinbeis-tag.de**

Short presentations outlining latest projects

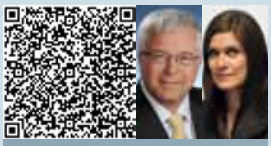
Exclusive highlights

During the whole afternoon, Steinbeis enterprises provided insights into the latest projects and developments as part of a series of short presentations. Recordings from all speeches can be found by going to www.steinbeis-tag.de, or scanning in the QR codes below.

Valerie Bahr
Joint research with European partners

Ralf Lauterwasser
Every company can be a beacon of light – Strategic Company Agenda

Luis de la Peña
Joachim Elsässer
Steinbeis Mexico



Prof. Dr. Rainer Gerten
Desislava Velikova
Clustering innovation and entrepreneurship centers in the Danube region

Prof. Dr.
Dietrich Haarer
Refrigeration monitoring in the food and drinks industry using TTI labels

Silvia Maier
Tomorrow's knowledge based on today's patents

Alexander Frank
Experience lean – see lean

Dr.-Ing.
Robert Himmler
Energy-efficient planning and building outside Germany

Alexandra Beisch
Recruitment through recommendations and networking

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"... visibly clearer" – The development of a new service concept

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Gerhard Fessler
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Prof. Dr. Jörg Friedrich
Beyond Excel: Collaborative project management

Ulrike Niethammer
How can we leverage current challenges to shape the success of future work?

Dr. Christian Grün
BaseX – The new XML database

Prof. Dr. Erich Ortner
Education with a future: the new impetus for degrees in application computing

Reiner Lohse
Innovation management as an instrument of regional economic development

Carsten Wortmann
Successful market entry for German SMEs in the P.R. China

Rewarding transfer project excellence

The 2011 Löhn Award

A series of presentations on successful projects was followed by the awards ceremony on the evening of the Steinbeis Day. Five hundred invitation-only guests attended the gala evening at the Liederhalle Congress Center in Stuttgart to watch the bestowal of the 2011 Löhn Award, the Steinbeis Foundation's transfer prize.

The eighth bestowal of the Steinbeis Foundation's Löhn Award took place this year. The award recognizes excellence in competitive knowledge and technology transfer, especially projects deemed to have helped successfully share know-how and technical solutions. The award is bestowed once a year to Steinbeis enterprises and their project partners. The success of projects is measured by the quality of the transfer process and discernible transfer potential. This is generally reflected in the economic benefit, not only to the know-how sharer (the Steinbeis enterprise) but also the know-how recipient (the client). Special prizes are also awarded for projects, services and achievements worthy of particular praise. The Löhn Award is the transfer prize of the Steinbeis Foundation, which was first introduced and bestowed in 2004, in honor of the lifetime achievements of Prof. Dr. Dr. h. c. mult. Johann Löhn, former Chairman of the Steinbeis Foundation Board. The prize money for the award is € 60,000 to go towards future innovation projects and transfer activities.

This year the Löhn Award jury gave a discretionary award to two Steinbeis directors: Professor Rudolf Voit-Nitschmann, director of the Steinbeis Transfer Center for Aerodynamics, Aircraft Engineering and Lightweight Construction and manager of Steinbeis Flugzeug- und Leichtbau GmbH, and Professor Dr. Werner Bornholdt, founder of the Steinbeis Transfer Center for New Products. Both received the award for their many years of outstanding contribution to technology transfer. Three transfer prizes were also awarded to Steinbeis enterprises and their clients. The Steinbeis Transfer Center "Plastics Center" in Bretzfeld at Heilbronn University of Applied Sciences was awarded the 2011 Löhn Award alongside Sony DADC Austria and Watlow Plasmatech for the development and launch of highly dynamic variothermal injection molding for producing microfluidic components.

The Stuttgart-based enterprise STASA Steinbeis Angewandte Systemanalyse and its project partner Institut Dr. Foerster GmbH & Co. KG, received an award for the development of an automated process for detecting unexploded bombs while clearing munitions from land. The Ilmenau-based Steinbeis Transfer Center for Quality Assurance and Image Processing won a Löhn Award together with NT TOOL Corporation from Takahama City in Japan for an intuitive software package for an optical tool presetter.

A detailed introduction to the award winners and their projects can be found on the following pages.

The winners of the 2011 Löhn Awards

Invitation for submissions to the 2012 Löhn Award: www.loehn-preis.de

Steinbeis Foundation | Stuttgart | stw@stw.de

www.loehn-preis.de

New technology for manufacturing microfluidic components

Award winners: Sony DADC Austria AG, Anif (Austria); Watlow Plasmatech GmbH, Kuchl (Austria); Steinbeis Transfer Center "Plastics Center", Bretzfeld (Germany)

The use of microfluidic components in medical technology is growing dramatically. As these components are mostly disposable, there is enormous demand for a low-priced mass production process for them. One suitable method is injection molding of thermoplastic molding compounds, similar to the production of optical data storage media like CDs and DVDs, which are also microstructured plastic components. However, components manufactured for medical use have to meet extremely high standards in terms of microstructure replication and internal morphology – standards which today's injection molding processes are unable to meet.

The Steinbeis Transfer Center Plastics Center in Bretzfeld has been working on the molding of functional surface structures of macroscopic plastic components at the micrometer and nanometer level for over a decade. The team determined that the temperature of the mold wall plays a particularly important role in the production of high-quality microstructured plastic components. With this in mind, they researched a variety of systems for controlling the temperature of the mold wall in injection molding machines. These systems enable highly dynamic variothermal (HDV) injection molding of thermoplastic molding compounds, a prerequisite for microstructure replication. Together with the firm Watlow Plasmatech, a manufacturer of thermally sprayed electric layered heating elements based in Kuchl, Austria, the Steinbeis experts developed HDV temperature control modules plus systems to control and regulate them.

Sony DADC Austria, based in the town of Anif near Salzburg, is Europe's largest optical media manufacturer. With over two decades of experience in mass production of microstructured plastic components, the company is now offering its services to customers outside the entertainment industry. In a transfer project with Watlow Plasmatech and the Steinbeis Transfer Center Plastics Center, Sony DADC introduced the new HDV technique for producing microstructured medical technology components at its site in Anif. The three project partners received a 2011 Löhn Award in recognition of this outstanding transfer project.

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Intuitive software for an optical tool presetter

Award winners: NT TOOL Corporation, Takahama City (Japan); Steinbeis Transfer Center for Quality Assurance and Image Processing, Ilmenau (Germany)

The increasing number of computer-operated applications in industrial production means many employees often face the difficult task of learning to use several different software interfaces. As these interfaces can be complex or unclear, this can lead to mistakes or reduced motivation. Today's optical tool presetters (OTPs), which are used for contact-free measurement and presetting of all kinds of tools, are software-controlled. They are used in the production process, particularly by automotive manufacturers and their suppliers.

Left to right: Martin Karl, Martin Wallinger, Christian Pöschl, Prof. Dr.-Ing. August Burr, Dr.-Ing. Michael Kübler

In a transfer project with NT TOOL Corporation, based in Takahama City, Japan, the Ilmenau-based Steinbeis Transfer Center for Quality Assurance and Image Processing conceived, developed and implemented an intuitive touchscreen OTP control program. By the end of the project, which won a 2011 Löhn Award, the program was mature enough to go to market. The project's aim was to create a novel design and minimize the number of clicks required between starting and finishing a measurement.

The innovative OTP software interface is clearly structured and divided into five separate palettes, one for each of the five key steps the operator has to carry out. This means that the information for each step is only shown when it is needed, and no irrelevant information is displayed. Once the operator has made all the necessary settings for a particular work step, the software automatically opens the palette for the next work step.

The transfer project also enabled several students involved in the project to complete an internship at NT TOOL in Japan. For these students, the internship was a key milestone in their apprenticeship and a memorable personal experience. They acted as a bridge between the Steinbeis Transfer Center and NT TOOL, thereby simplifying communication.

Left to right: Prof. Dr.-Ing. habil. Gerhard Linß, Prof. Dr. Dr. h.c. mult. Johann Löhn, Shiro Naito, Steffen Lübbecke, Klaus Rennert, Yasuhiro Narusawa

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A passionate innovator

Award winner: Prof. Dr. Werner Bornholdt, founder of the Steinbeis Transfer Center for New Products in Villingen-Schwenningen and its director from 1988–2010

The 2011 Löhn Award jury has bestowed a special prize on Professor Dr. Werner Bornholdt. The professor has been a particular asset to Steinbeis due to his practice of integrating vertical projects into an all-round, holistic approach. His "business checks," featuring the Steinbeis star of competence, have become a standard tool for many consultants.

After completing his degree and Ph.D., Werner Bornholdt worked as a management consultant for several years. In 1984, he joined Furtwangen University in the German state of Baden-Württemberg, a university renowned for its superb dovetailing of research, teaching, practice and consulting. He lectured and carried out research in product engineering and industrial engineering at the university until 2010. His main areas of interest are project management, product marketing, strategic marketing, technology and innovation management, public speaking and sales psychology. His approach is characterized by its holistic nature: Professor Bornholdt has always firmly believed that technology (expanding the realms of the possible), marketing (meeting demand) and management (securing success) should always work hand in hand. This approach

Prof. Dr. Werner Bornholdt

made him a popular and respected professor among students.

Werner Bornholdt began his Steinbeis career in 1988 with the founding of the Steinbeis Transfer Center for New Products in Villingen-Schwenningen. The center was conceived as a service provider for technology transfer between academia and SMEs. It advises and assesses SMEs and innovations, trains entrepreneurs, business developers and investors in managing and marketing new products, acquires, evaluates and shares information, and supports technology transfer. Werner Bornholdt handed over the running of the center to his successor in 2010.

When he founded the center, Professor Bornholdt also began sharing his wide-ranging expertise by working as a teacher and lecturer at universities (including Steinbeis University Berlin), as well as seminars in industry and banking. His holistic approach made waves, and in 2006, he received the honor of being named Professor h. c. by Budapest Business School, one of the institutions where he lectured. He has captured his expertise in a number of books.

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DATA2LINE® – An automated process for detecting unexploded bombs

Award winner: Institut Dr. Foerster GmbH & Co. KG, Reutlingen; STASA Steinbeis Angewandte Systemanalyse GmbH, Stuttgart

Left to right: Dr. Philipp Liedl, Ekaterini Sdogou, Prof. Dr. Günter Haag, Thomas Himmler, Thomas Schmid

Every 30 minutes, somebody somewhere is either injured or killed by a mine or unexploded bomb. Over 60 countries continue to battle the explosive legacy of armed conflict. Even in Germany, thousands of tons of ordnance and bombs from the two world wars are discovered every year. Magnetic field measurements are an key instrument in reliably identifying metal objects, especially when it comes to removing unexploded bombs from past conflicts.

One technique for locating arsenal remnants is to take high-resolution magnetic field measurements. For every construction project in areas suspected to contain potential hazards, underground examinations must be carried out. The Dr. Foerster Institute is one of the leading companies in capturing, evaluating and analyzing magnetic field data. Its FEREX® magnetometer is recognized by countries throughout the world as an effective data capture tool. Until now, the signatures of suspicious-looking objects were highlighted manually in magnetic field data and evaluated individually. The new process, developed jointly with Steinbeis Applied Systems Analysis (STASA), has vastly improved the reliable detection of unexploded bombs and essentially made the process automatic. This reduces the risk of overlooking a perilous object. Thanks to cross-referenced geodata, it is also possible to pinpoint the exact position of an unexploded object, including its depth, orientation and angle, as well as its class and size. To make this possible, the two parties working on the project combined a variety of filtering processes with a physical dipole model. A new pattern recognition program was also specially developed to safely identify objects directly next to one another. Specialists can now use the newly developed software package, DATA2LINE®, to analyze hazards over larger areas of land much more effectively and document them more precisely. Not only is this more economical, it also reduces the risk involved in land development projects. The newly developed process will also be used in archaeological digs and is currently undergoing further development to match requirements. The success of the project earned the two project partners a 2011 Löhn Award.

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Discretionary award for Rudolf Voit-Nitschmann

Pioneer in aircraft engineering and lightweight construction

Award winner: Prof. Rudolf Voit-Nitschmann, Steinbeis Transfer Center for Aerodynamics, Aircraft Engineering and Lightweight Construction, Stuttgart; Steinbeis Flugzeug- und Leichtbau GmbH, Stuttgart

The selection committee for winners of the Löhn award honored Prof. Rudolf Voit-Nitschmann with a discretionary award in 2011 for his many years of outstanding contribution to technology transfer. Despite full-time involvement in his own projects, he has always upheld strong ties to Steinbeis. When situations required extraordinary steadfastness and reliability, he has raised the Steinbeis banner exceedingly high, despite the strong headwind. He has been and remains a loyal partner to the Steinbeis Network.

Rudolf Voit-Nitschmann studied aerospace engineering at the University of Stuttgart before working for DLR, the German research center for aeronautics and space. In 1980, Prof. Voit-Nitschmann headed a development project for a lightweight aircraft at Gyroflug GmbH. He then went on to become the company's chief engineer in 1984. Prof. Voit-Nitschmann was the first to register an engine-powered plane with a fiber composite construction under FAR 23, both with the Federal Aviation Office in Germany (LBA) and the Federal Aviation Administration (FAA) in the United States.

After having served as a managing director at Grob Luft- und Raumfahrt GmbH, he went to Dornier Luft- und Raumfahrt GmbH in Friedrichshafen, Germany, where, among other duties, he served as chief engineer at their Toulouse factory. In his last position with the company, he was departmental manager for structural design and technology in Friedrichshafen and Oberpfaffenhofen. In 1994, he was appointed a professor in aircraft engineering at the University of Stuttgart. There, Prof. Voit-Nitschmann took on management responsibilities for a solar aircraft project, icare. His work disciplines extend to include research and teaching in the fields of aircraft engineering and lightweight construction using fiber composites. With regard to research, his main area of interest lies in the design of unconventional aircraft models. Here he focuses on efficient, environmentally-friendly constructions with an electric drive. Over the past few years, he has worked extensively on the development of e-Genius, one of the best performing electro-powered aircrafts worldwide. This has been primarily through his Steinbeis enterprise at the Institute for Aircraft Engineering at the University of Stuttgart.

In 1995, Voit-Nitschmann founded the Steinbeis Transfer Center for Aerodynamics, Aircraft Engineering and Lightweight Construction. In 2008, this center established itself as the Steinbeis Flugzeug- und Leichtbau GmbH (SFL-GmbH). The company offers customers and partners of the aerospace industry innovative design and development services for the construction and licensing of aircraft made of fiber composites. Another focal point is the development of high-altitude unmanned aircraft. Projects like these, show how the university's research and project work complements that of the Steinbeis transfer center and vice versa. The work done by Rudolf Voit-Nitschmann in the field of aircraft engineering has been distinguished with a number of awards. Voit-Nitschmann is also an experienced pilot. Not only does he understand the theory of flying, he has frequently sat in the cockpit of gliders, motor gliders and motorized aircraft.

Prof. Rudolf Voit-Nitschmann joined the award ceremony live from Santa Rosa, California, where he and his team were taking part in the 2011 Green Flight Challenge competition with their e-Genius aircraft. The competition was held by NASA and the Comparative Aircraft Flight Efficiency Foundation (CAFE), and participants could enter their designs for the most eco-friendly, practical and quiet aircraft. Here too, Prof. Voit-Nitschmann had every reason to celebrate: His team won second place in the overall competition and was awarded the Lindbergh Prize for the quietest aircraft.

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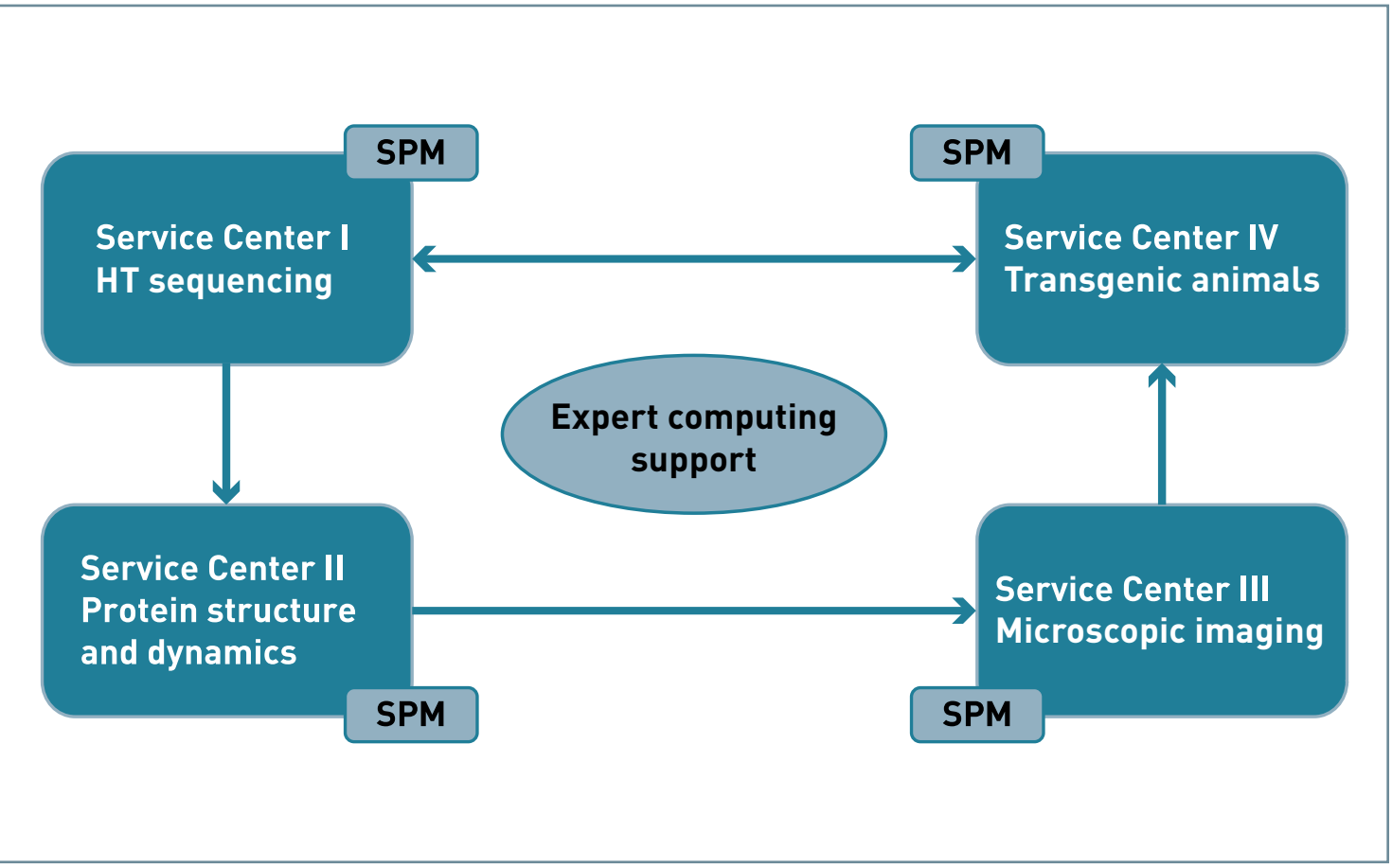
Prof. Dr. Dr. h.c. mult. Johann Löhn presenting the award to Prof. Rudolf Voit-Nitschmann (webcam image) and Magdalene Voit-Nitschmann (left to right)

Steinbeis experts provide support to Biocenter Oulu in Finnland

Safeguarding smooth-running services

Biocenter Oulu (BCO) is one of six biocenters run by Biocenter Finland. It offers services in the field of biomedicine, ranging from proteomics and microscopic studies to transgenic mouse models, including analysis. The BCO and the Steinbeis team Nordost from Rostock have just completed a pilot project on the development of commercial services for core facilities at Biocenter Oulu.



The proposed structure for the service center, which will coordinate the services provided by the core facilities of the BCO. The structure calls for a service project manager (SPM) who will perform a similar role to the director of a center in the Steinbeis network.

Until now, the portfolio of services offered by the BCO revolved mainly around the academic needs of the University of Oulu and Biocenter Finland. To generate income, establish commercial enterprises and promote competitiveness in the Oulu region, services needed to become more appealing to international and commercial organizations. The Steinbeis team of experts from Rostock evaluated service packages offered by the BCO as well as other biological services provided by the University of Oulu. It then tabled suggestions for expanding the portfolio. Supporting the team during their project was Frank Graage, who heads up Technology Management Nordost (a Steinbeis Research Center), Professor Hans-Jürgen Thiesen, director of the Steinbeis Transfer Center for Proteome Analysis, and Professor Michael Glocker, Head of the Rostock Proteome Center. Together, they leveraged experience in the BCO's fields of research, the commercial use of research, and in technology transfer.

During the joint project, the experts mapped out strategies for improving the existing BCO portfolio and identifying unused potential. Their suggestion was to adapt BCO's internal structure and admin processes to make specific service areas more appealing to customers. The team also suggested setting up four service centers, each headed up by a project manager. To plan next steps, two workshops were held with management and scientists from BCO and the University of Oulu, covering several issues:

- Reorganization of central administration to establish clearly defined service units and improve communication and transparency
- Offering end-to-end/integrated solutions instead of just stand-alone solutions by tapping into experience in related fields
- Definition of people responsible for contracts and for service delivery for specific scientific fields
- Transparent invoicing and an incentive system for services offered to external clients
- Comprehensive monitoring of service costs to make centers profitable
- Independent administration structures inside and outside BCO, similar to the Steinbeis Network

An important part of the planned strategy will be to integrate centralized services into the four service centers and thereby forge productive relationships with other biocenters in Finland, as well as partners in academia and industry (including SMEs), on a regional, national and international level. Life science research is divided into different levels, each more complex than the one below, starting with genomics, then proteomics, experiments on cells, and experiments on complex organisms and animals. Each of the four service centers is dedicated to one of these levels and includes three or four of the center's existing core facilities.

In-house service structures are not the only important factor. Customer perception outside the organization and client expectations also matter. Central to marketing the BCO portfolio will be:

- Customer priorities and market demands
- Project timings and service delivery capacity
- Quality control procedures and documentation
- Communications and pricing

The project team assessed customer priorities by sending a questionnaire to SMEs, manufacturing enterprises and academic institutions working in related biomedical fields in five European countries (22 responses, valid responses 75 %). According to the survey, the interest in services is relatively evenly spread across the four research fields the service centers work in. Each service center will address different customer demands by offering both simple and complex, end-to-end solutions. The facilities working on transgenic animals already offer end-to-end solutions and they have earned themselves a strong reputation in Europe. Other service centers previously focused more on local demand and stand-alone solutions.

The service centers have every potential to evolve into commercially successful service providers, as they can draw on the experience of researchers at Biocenter Oulu. Each service center will need to find a market niche and acquire customers.

BCO could aid in this process by acting as a platform to raise awareness for services. However, this must dovetail with internal structures and be market-focused. This could be achieved by adopting the approach used at Steinbeis, with a separate manager heading up each service center. These service project managers (SPMs) must have an incentive to acquire customers and be given enough leeway to implement projects. So each SPM should be familiar with the services on offer. SPMs would also be responsible for coordinating the personnel and technology needed to carry out newly acquired projects. Finally, the biomedical service centers could also be linked to a computerized expert system that would make it possible to conduct analysis ranging from literature searches to state-of-the-art evaluations of final results.

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Biocenter Oulu is a multi-disciplinary research institute that works in the field of biotechnology and medical research. Its work revolves round the research areas of the University of Oulu. The project spearheaded by Steinbeis was supported by European regional development funding, Oulu city council and companies in the area.

The **"Nordost" Steinbeis** enterprise has been providing life science services in Northern Europe – specifically, countries around the Baltic Sea and in Scandinavia – for many years. Its services also include EU research management and technology transfer in the field of medicine. As a founding member of ScanBalt, a network of bioregions in the Baltic area, Nordost is also involved in EU regional development strategies aimed at fostering international competitiveness throughout the region.

Training spotlight

SHB qualifies technical experts for sustainable building

Sustainability certification for buildings

Sustainable building is based on globally established targets for environmental protection and resource preservation. Since October 2011, the Steinbeis Transfer Institute for the Building and Property Industry has been offering qualifications for implementing the Assessment System for Sustainable Building (BNB). On successful completion of the program, participants earn certification as "Technical Expert for Sustainable Building (SHB)."

This training course teaches scientifically established principles and evaluation tools for the construction of sustainable buildings. The program is closely based on the Assessment System for Sustainable Building (BNB). The system was developed by the German Federal Ministry of Transport, Building and Urban Development (BMVBS). It evaluates new building projects in terms of "central dimensions" and "cross-sectional dimensions." The central dimensions include environmental, economical, socio-cultural and functional aspects, while the cross-sectional dimensions can be understood as relating to the technical and process quality. The quality of location is also added as additional information.

Graduates of the program can offer project-specific assessments of sustainability requirements in the designing and construction of buildings, in addition to consulting on market implementation. As evidence of the spectacular building quality, the certified technical experts can have their sustainability assessments inspected by the independent compliance examination board of the Steinbeis Transfer Institute. If the inspection results in a positive rating, a certificate and a seal of approval from the BMVBS can be conferred on the building owner.

The second training course begins on May 5, 2012 and includes 13 days of seminars and 2 days of examinations.

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Graduation Ceremony

Compliance and fraud experts honored in style

The School of Governance, Risk & Compliance (School GRC) at Steinbeis University Berlin held a graduation ceremony in December for the fifth year of graduates of the MBA program specializing in Governance, Risk, Compliance & Fraud Management, as well as for students newly qualified as Certified Investigation Experts (CIE) and Certified Compliance Experts (CCE).

The importance of this training and the responsibilities the compliance agents and fraud investigators will assume in companies, organizations and public administration were underscored in the keynote speech at the graduation ceremony. It was also reiterated how important it is that graduates are equipped with the expertise their companies need and that they make good use of it.

Speeches held by Prof. Dr. Dr. h. c. mult. Johann Löhn, president of Steinbeis University Berlin, and Prof. Gerd Neubeck, head of corporate security at Deutsche Bahn (the Germany national railway), honored the work completed by the graduates during their studies. The director of School GRC, Birgit Galley, hosted the festive event. In addition, a Steinbeis Oscar was conferred for Best Instructor, Best Graduate, Best Master's Thesis with Implementation Potential, and Best Academic Master's Thesis. The event was held in the old lecture theater at Berlin's Medical History Museum of the Charité. The inspiring location has rustic yet stately charm and is a great place for hosting festive events like graduation ceremonies. School GRC has been offering degree programs, individual workshops, and Corporate University courses specializing in governance, risk and compliance since 2004.

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Award for master's degree program

365 locations in the land of ideas – and the M.Sc. in International Management is one of them

The government initiative "land of ideas" honors 365 innovative and trendsetting projects each year – projects that are seen to contribute to Germany's continued competitiveness. Embodying the unique combination of theoretical content and practical transfer offered by Steinbeis University Berlin, the Master of Science in International Management program was bestowed an award in 2011 and has been named one of the 365 "select locations".

The winners from Baden-Württemberg were honored in July, in Stuttgart's New Palace in the city center. As part of the reception, each initiative had the opportunity to present itself and accept a certificate, bestowed by the minister-president, Winfried Kretschmann. The director of studies, Anne Bauer, presented the degree program and accepted the award on behalf of the School of International Business and Entrepreneurship (SIBE) at Steinbeis University Berlin, which runs the degree program. Under the auspices of Germany's President, Christian Wulff, the competition focuses on ideas and projects that actively shape Germany's future.

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Fully qualified "competence service masters"

Promoting to customers through complaints

Service personnel form a pivotal connection in the interface between companies and clients. Convincing customers, professionally receiving feedback from third parties and communicating effectively with departments are key to companies fostering innovation and sustainability. The qualification as a "competence service master" is offered by stw unisono training+consulting GmbH to prepare service staff for this challenging task.

Service providers don't have a good reputation in Germany. In some industries the situation is dire. Pointing people in the right direction, staying on the ball and reacting quickly keeps the company in the driver's seat. But it requires empathy and authenticity. The first training module of this program looks at flowcharts, service blueprinting and suitable strategies. Each participant is given a methods map to pinpoint themselves and localize their own personal goals. The roadmap to success is then developed in the group.

If service is tailored to customers, there are many ways to get them enthusiastic about it. In fact, there are some powerful ways to shape the exact point when customers first encounter a service, the "moment of truth". One technique called "vignetting" involves presenting a complete profile of the product with alternative concepts or scenarios. In established companies, after sales services can be a recipe for success. "It's often the small things that contribute to enduring customer relations," explains Prof. Dr. Arndt Borgmeier, lecturer on the competence service master program. These can include anything from surprising the customer with a gift after a sale to offering a complete service package.

"This isn't about the old idea of serving clients, but more about asking how to better support customers and work with them to come up with best-fit solutions," says service expert and instructor, Gerd Xeller. "This doesn't mean going through the motions. Enduring customer relations are based on quality, good service and trust. And that can easily be broken." The participants receive a practical training in which they are asked to successfully synthesize the goals of the customer with those of the company. Service management systems that aid internal and external transfer entail good teamwork. Outdoor exercises on the ropes course foster experiential teamwork and allow each participant to gain a better understanding of their own and others' perceptions of themselves. This establishes a powerful basis for the subsequent communication training, where participants learn the steps involved in nonviolent communication and problem-solving methods. They learn to identify conflict and use it to bring about change, to handle customer complaints from a solutions-oriented standpoint and to deal better with angry customers.

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"Youth Start-Ups" – the winning team reports from Silicon Valley

Hello Germany – With "Youth Start-Ups" in the USA

"Hi from sunny San Francisco!" In their first email home, the winning team of the "Youth Start-Ups – Entrepreneurial Talents of 2011" competition sent warm greetings back to the nonprofit innovation center at the Steinbeis Transfer Center for Business Development at the University of Applied Sciences in Pforzheim. The group was on a trip to Silicon Valley (USA) last September as part of their prize for taking first place in the business game competition "Youth Start-Ups." The trip was paid for by Steinbeis.

Prof. Dr. Heinz Trasch (Steinbeis Foundation), the winning team from 2011, and Prof. Dr. Barbara Burkhardt-Reich (Steinbeis Transfer Center for Business Development) (left to right).

"Apparently, we've been in the USA for 24 hours already – unbelievable how time flies. By 3:00 p.m. we'd already visited Intel and Google," wrote Mirko Articus, Jakob Wegmann, Emanuel Urmann and Maurizio Wack, the young entrepreneurial talents, in their email to the transfer center.

The students from the Schloss Hansenberg boarding school in Geisenheim, Hessen (Germany) were able to try their hand at consulting on a new company project at Detecon, a subsidiary of the German Telekom company. They then enjoyed a sightseeing tour through San Francisco, visiting Lombard Street, Russian Hill and the Golden Gate Bridge. They were also given exclusive access to the "Green Flight Challenge", a competition sponsored by NASA in which participants square off with energy-efficient aircraft designs. It was a unique opportunity for them to take a peek behind the scenes. The students were also able to talk with the various teams about their designs and take a closer look at the models.

The next day, it was off to the prison island of Alcatraz. After this, the students visited the beautiful campus of Stanford University. While meandering around the campus, the students took in the guided tour and soaked up the Californian sun – a wonderful way to become more closely acquainted with the university. Since innovation was in the foreground at "Youth Start-Ups," the next stop was Talent House, a startup which helps artists and companies organize competitions to promote their image and brand awareness.

As the day came to an end, there was one last stop on the agenda: a visit to Tesla, an electric vehicles manufacturer. There the young entrepreneurs were able to take a seat in one of these modern cars and work on their very own personalized design.

The icing on the cake was a visit to the Volkswagen Design Center, where VW and Audi prototypes are developed. The modern complex only opens its doors to about 50 visitors per year. The Youth Start-Ups winners were greeted by Jae Min, chief designer at the design center, who gave a brief presentation on the projects of the last few years. This was followed by standard tourist fare: Beverly Hills, the Walk of Fame, the Hollywood sign – the list goes on and on...

"Youth Start-Ups"

"Youth Start-Ups" is a business game competition for new and innovative business ideas and startups. The online competition is held nationwide, and is initiated and sponsored by the German Federal Ministry of Education and Research. The nonprofit innovation center at the Steinbeis Transfer Center for Business Development at the University of Applied Sciences in Pforzheim has assumed responsibility for the project.

The project allows teachers to add interesting content to the curriculum and introduce students and trainees to business and economic principles through practical examples that also ignite the motivation of the students. Participants in the two-phase competition first work up an innovative business concept for the manufacturing, service or retail industry. Once established, they then get to run their own virtual business.

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Meeting the challenges of our times

Working actively against stress

Stress has been identified as the #1 cause of illness today. A variety of recent scientific studies have shown that psychological pressures in the workplace are increasing across Europe. As a result, the World Health Organization has classified stress as one of the greatest risks to the well-being of humanity in the 21st century. Studies conducted within the EU indicate that approximately half of all workplace absences (days taken for sick leave) can be attributed to stress. Looking back over recent media reports, illness due to depression and anxiety threaten to become even more widespread in society.

The DAK health report for 2011 is also quite alarming: "[...] workplace absence due to conditions such as depression, burnout, stress or adjustment disorders has increased by 13.5% over the course of one year. In 2010, 12% of all employees reported ill attributed their condition to psychological distress, double the reported levels twelve years ago. Emotional distress is thus ranked fourth among the reasons for taking sick leave." Companies and society pay a heavy price for this: poor performance, workplace absence, and early retirement due to illness costs the economy nearly € 45 billion every year. According to a study carried out by the AOK, BKK and HVBG (German health insurance providers) as part of a "Health & Work" initiative, a third of these costs could be reduced by active health management on behalf of employers.

Demographic change presents particularly strong challenges for mid-sized businesses and the German economy in general. 71% of the German workforce is employed by small companies, and 49% of the value-added in Germany stems from this business sector. So if these companies want to safeguard know-how and value-added in the long term, it is up to them to do more to keep their older employees healthy, active and productive. If companies want to remain competitive, it would be wise to promote health awareness among staff and ensure they remain employable and motivated.

The Steinbeis Transfer Institute for Stressmanagement and Holistic Preventive health care at Steinbeis University Berlin, which is based in Radolfzell near Lake Constance, is geared toward supporting companies and management who expressly wish to take responsibility for professional and sustainable health care management. In doing so, companies can actively work toward maintaining and improving the health of their employees. The institute also supports people who would like to find ways to improve their own performance levels and emotional well-being in order to improve their quality of life. It is committed to dealing with issues related to stress and burnout prevention for individuals and employees, drawing on years of experience in applying their own proven holistic treatment approach. The institute places emphasis on sharing "tools for self-help" in day-to-day business. Experience has shown that prevention can go a long way toward reducing psychological illness and its negative effects.

In a series of seminars, participants learn how to identify and change their personal and professional stress catalysts. In doing so, they achieve an improved sense of self. Each individual develops new strategies for finding and strengthening inner balance to improve performance at work and their overall quality of life. This allows participants to proactively counter the subtle process of advancing burnout, which is typically heralded by a feeling of exhaustion – physically, mentally and emotionally.

Existing state programs available to companies indicate a growing interest in preventative health care. As a rule, companies can claim back the tax on the spa visits of employees. Measures introduced by companies to promote employee health are tax-exempt and not subject to social security, as long as they contribute to the general well-being of staff, promote health in the business, and the costs per employee per year do not exceed € 500.

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Ways to match research funding programs more closely to SMEs

MaPEeR SME: strengthening medium-sized companies

There are around 23 million SMEs in Europe – representing 99% of all companies and providing around 80% of the jobs in some industries in the private sector. SMEs are a catalyst of innovation and one of the things that makes Europe competitive. A number of regional, national and EU funding programs are available as an important instrument in promoting innovative practice in SMEs and strengthening their research and development activities. The Steinbeis-Europa-Zentrum (SEZ) ensures that EU programs provide support more suited to the needs of SMEs.

The SEZ is working on a joint EU project called MaPEeR SME. Over the course of this project, it has been analyzing the experiences made by SMEs on public research and innovation programs. MaPEeR SME is being backed as part of the 7th Research Framework Program funded by the European Commission. Its aim is to gain insights into the planning, implementation and impact of national, regional and European funding programs targeted at research and innovation in SMEs.

The EU study was launched to find out more about the problems, requirements and benefits to SMEs that stem from publicly funded programs. The study also looked at the general needs and problems encountered while implementing research and development activities, and what happens when innovations eventually go to market. 14 project partners contacted SMEs in 27 EU states plus Bosnia and Herzegovina. Each SME was surveyed using a standardized questionnaire. In total, the SEZ evaluated nearly 1,000 valid questionnaires. The aim of the project is to provide policy makers with specific ideas for improving funding programs by matching them more closely to needs of SMEs.

The SMEs in the survey were split into five categories according to their R&D capacities. The categories with the least and most R&D resources were scrutinized more closely. They were also broken down and analyzed by EU region and company size. Most of the SMEs in the survey with low-level R&D capacity were small enterprises (10-49 employees) working in manufacturing. There was a tendency for these to be in the accession states that joined the EU in 2004. The majority of these SMEs have never taken part in a sponsored R&D program. The second group, with the highest level of R&D resources mainly fell into the micro-business category (less than 10 employees). Most of these were in the ICT business and a large number of them had already been involved in national or EU-backed programs.

One of the main reasons SMEs do not take part in funding programs is the quagmire of administrative and financial hurdles to overcome, which can be a major headache while the program is running. This indicates that the rules for SMEs to participate in funding programs should be simplified. Also, additional sources of funding play a decisive role for SMEs if they are going to meet the expense of research and innovation projects.

The survey also examined whether the needs of SMEs are better addressed on a domestic level or through EU funding. It was found that EU research programs are favored because, compared to national programs, they promote internationalization, help forge networks and enhance the reputation of companies (especially through transparency in research findings). In terms of administration, national programs scored better.

Both R&D capacity groups had a different perception of the benefits of participation in national R&D funding programs. As a rule, the study indicated that SMEs with more R&D resources gained more benefit by participating in programs than the SMEs with lower R&D resource levels. For SMEs with more R&D capacity, the value of funding programs was shown in improvements to in-house know-how and skills, and the improved access to complementary third-party expertise. The SMEs with the lowest R&D capacity mainly reported commercial benefits and enhanced company reputation.

When asked to name "good examples" of funding programs, the companies with the highest level of R&D capacity pointed to SME schemes with simple application procedures and simple reporting requirements. They also praise short time-to-funding periods with high funding rates and the possibility to apply for subsequent funding by accessing additional third-party backing. The SMEs also expressed a need for closer involvement in policymaking relating to the planning and implementation of research programs. SMEs with the lowest levels of R&D resources would like SME funding programs that not only offer the aforementioned financial and administrative improvements but also ways to train project

managers to run projects and oversee innovations, as well as support when forging contacts with suitable networks and research partners. The results of the survey will be published shortly in Steinbeis-Edition.

Steinbeis-Europa-Zentrum supports companies in the project bidding process for EU funding and provides help with project management:

Before projects
- Selection of funding programs
- Help with project definition
- SWOT analysis
- Technology watch and market opportunities
- Assessment of likelihood of a submission being approved
- Help writing proposals
- Help finding partners, support setting up consortia

During live projects
- Coaching on negotiating contracts
- Project management with administration and finances
- Management of innovation issues
- Advice on intellectual property rights
- Help with utilizing technology
- Advice on intercultural team work and communication

After projects
- Dissemination of R&D findings and furthering innovation processes through:
  - studies on regional technology demands and offers
  - participation in European technology fairs and company missions

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Obituary

A pioneer and mentor of research management

Steinbeis mourns the loss of its Chairman of the Board of Trustees, Professor Dr. Max Syrbe, who passed away in September after a long-term illness.

The passing of Max Syrbe spells the loss of a long-standing supporter of the Steinbeis Foundation. Max Syrbe was not only highly respected and esteemed, but will also be remembered for his warm-hearted, kind manner, his comprehensive specialist knowledge, and his indefatigable commitment to his work. Max Syrbe joined the Board of Trustees in 1983, and acted as chairman since 1991. He was a particularly reliable and trusted colleague who gave his full support to the strategic development of the Steinbeis Network.

Max Syrbe (1929–2011)

Max Syrbe was born in Leipzig in 1929 and studied physics in Frankfurt. After completing his Ph.D., he worked for Brown Boveri in Mannheim. In 1968, he was appointed head of the Institute of Oscillation Research (ISF), which subsequently became the Karlsruhe Fraunhofer Institute IITB in 1970.

In 1966, Syrbe was appointed to the Fraunhofer Society Senate. In 1983, he became Fraunhofer president, a role he fulfilled until 1993. It was thanks to the initiative taken by Max Syrbe that the foundations were laid for the development of the Fraunhofer Society. Syrbe pushed ahead with performance-related contractual research for businesses and public bodies, providing a basis for Fraunhofer to facilitate applied research in the Federal Republic of Germany. In 1975, the Computer Science department at the University of Karlsruhe (TH) appointed Syrbe as honorary professor.

As well as research policy and research management, Max Syrbe's scientific work revolved primarily around automation and anthropotechnology, especially man-machine systems. Syrbe was a winner of the Fraunhofer Sculpture, the highest honor bestowed by the Fraunhofer Society. He was also an honorary doctor of the Department of Engineering Sciences at the University of Duisburg-Essen and an honorary senator of the University of Freiburg. Further, Syrbe was awarded the Grand Cross of Merit under the Order of Merit of the Federal Republic of Germany, as well as the Order of Merit of the Federal State of Bavaria. In particular recognition of his lifetime achievements, the Steinbeis Foundation awarded Max Syrbe an honorary Löhn Award in 2009.

The Steinbeis Foundation will always honor the memory of Max Syrbe.

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Consulting spotlight

Free advice for SMEs

Short consulting sessions à la Steinbeis

The Steinbeis Foundation helps small and medium-sized enterprises gain access to technology and science expertise through free short consulting sessions. These sessions are organized by Steinbeis Beratungszentren GmbH, which puts companies in touch with experts throughout the Steinbeis network and provides detailed advice and information on new products, technologies and processes.

Requests for a short consulting session can be submitted by companies, representatives of various chambers, L-Bank, economic development institutions, and managing directors of Steinbeis Enterprises, in each case specifying what the session should address. All forms required can be found online. Short consulting sessions must meet the following criteria:

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

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Financing innovations

Systematic success

Few companies make proper use of the funding options open to them. The extent of the problem is most apparent in the financing of innovations. Just under 10% of all companies exploit all of the potential funding available to them.

Helmut Haimerl, director of the Steinbeis Consulting Center for Technology Promotion & Project Financing, recommends the following approach for systematic funding management. The first step is a meeting to discuss the projects in question and the company's situation. Then comes the analysis phase, where ideas and plans are evaluated and suitable funding programs can be selected. At this point different ways to structure financing need to be considered. With highly innovative projects, it may be worth considering several sources of funding. Preliminary talks with project sponsors or the bank help clarify priorities and avoid going around in circles. The options are then assessed together with all key parties. The decision typically revolves around the size of grants, or the bank's or project sponsor's schedule. It is important that all parties understand what is needed to submit requests and are committed to going ahead with the project.

It is also important to systematically capture all data needed for the funding program. At this stage, it is also important to find suitable partners and come to certain agreements. Any new demands from the project sponsor need to be met, and, once funding is approved, requests need preparing along with proofs of utilization and reports.

The process can be long-winded, but the benefits more than make up for it:

- Innovation grants covering up to 50% of development costs
- Investment grants covering up to 50% of costs for SMEs
- Low-interest loans, subsidized subordinated loans.

Funding helps companies exploit market potential systematically and enhances their growth potential.

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Seminar program

Funding renewable energy

The third revision of Germany's Renewable Energies Act (EEG) came into effect on January 1st, 2012. With it come a variety of changes for companies, such as the introduction of a market premium for the direct selling of electricity generated from renewable sources. The aim of the premium is to encourage greater use of storage technology and flexible generation to match market needs.

These amendments have been added to the seminar program "Funding Renewable Energy", run by the Steinbeis Consulting Center for Corporate Finance. The seminars can be held in-house or attended at associations and selected universities.

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Designing product families systematically and sustainably

Life cycle engineering – thinking about tomorrow, today

2E mechatronic, a specialist in the development of innovative mechatronics products in the fields of sensors, precision injection molding and microelectromechanical systems, has made a name for itself as a specialist in 3D injection-molded circuit carriers and other technologies. The company has grown continuously over the past decade. The Steinbeis Transfer Center "Management – Innovation – Technology" (MIT) supported 2E on an innovative product development project in the field of sensors. The challenge: to develop product architecture suitable for a variety of product variants, and optimize all engineering processes throughout the entire product life cycle.

"Our innovation projects are becoming more and more complex and their product life cycles shorter and shorter. For maximum efficiency in all processes, we increasingly need to focus on our core competencies," explains Uwe Remer, managing partner at 2E. Key to this is 2E's building-block approach to developing innovative products. This approach recently provided a springboard for an inclination sensor enhancement project.

As well as the need to optimize internal processes, the building-block approach also entails finding and selecting the right third-party support – people with the right skills. "Networking has been central to all of 2E's innovation work for over 15 years, throughout the supply chain, all the way to the customer," continues Remer. 2E didn't want to leave finding these partners to chance.

The project scope was clearly defined. The second generation of the inclination sensor should be based on a clear design principle – similar to the architecture of a house. Preplanned, combinable product and process elements should be used to generate new customer-specific solutions quickly and reliably. The entire life cycle of the product, from initial brainstorming to follow-on products, should be taken into account, and all engineering processes should be set up accordingly. For functions and processes beyond 2E's core competences, value creation partners should be identified and successfully integrated into company networks.

The 2E project team invited the experts from Steinbeis to join them on this challenging task. 2E chose to work with Steinbeis as a consulting partner because of their excellent product and process engineering network, and their expertise in managing networks both within companies and between them. The team used the Steinbeis Transfer Center's three-phase model:

Phase 1: Customer requirements and system development
Systematically classify customer and market needs and develop suitable integrated technology/functional modules.

Phase 2: Product classification and configuration
Draw up a product catalog of basic functionalities, standard (catalog) options and tailored (customer) versions.

Phase 3: Process evaluation and value creation partners
Optimize core processes (internal) for core functions; evaluate special processes (external) for special functions, network processes efficiently, adapt regularly.

2E's self-assessment highlighted where its core competences lie within the engineering processes. However, certain key figures highlighted that there was still plenty of potential to standardize and optimize inclination sensor product architecture. "Too many product variants, too low volumes," sums up Uwe Remer. "We could meet all kinds of different customer needs with our inclination sensor technology – but we don't want to," he continues. To avoid adapting products to each new customer, the team systematically analyzed selected target groups in the chosen markets, and implemented their requirements in appropriate product modules. This

massively reduces the time-to-market for each order – and the freed-up development capacity can now be used for customer projects that really do match company goals.

For the catalog modules, the team determined and optimized corresponding engineering processes. 2E no longer develops special processes for tailored solutions, but buys them from reliable network partners. Uwe Remer is already thinking one step further. "We're designing an entire product portfolio for each application area – after all, we have the technological expertise to do this. But it takes careful planning to integrate this sensibly into our existing business fields without customer projects getting in each other's way. Our goal is to maximize efficiency!"

Remer is delighted with the outcome of the project. "We wanted to expand into new markets and industries for our innovative inclination sensor – and do this more quickly than before, in a more targeted way. Now that we have a pretty good idea which application fields our technology matches best, we can offer them the right product variants without delay. We also now know the exact areas we need to improve our engineering processes in – and we've already found the right external process specialists to support us with this."

For Dr. Günther Würtz, director of the MIT Steinbeis Transfer Center, the key to long term success also lies in networked engineering processes. "Focusing solely on the development process is no guarantee of long-term success. For lasting profitability, the entire product life cycle needs to work as efficiently as possible, from first prototypes to second generation products. The rule for each and every process is the same: simply the best. We only want to retain in-house processes that are core competences – all other processes can be taken care of by our excellent new partners."

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netvico shares the limelight with Udo Schöbel

Setting pop art images in motion

The artist Udo Schöbel has seen a lot of success on German TV with his gaudy pop art commercials. He also creates portraits of prominent contemporary figures. His success has led to a flood of portrait requests from celebrities like Nora Tschirner, Nina Hagen and the rapper Smudo. For his Stuttgart exhibition, SEITEN WECHSEL ("Switching Sides"), the multidisciplinary master of media used a digital placard made by netvico to share his offbeat comic world with visitors. Steinbeis has had a stake in netvico since its foundation.

When German kids are encouraged to hop around to bunny music on the children's channel KI.KA, or Eckart von Hirschhausen is handing out portraits to winners on the "Frag doch mal die Maus" show ("Just ask the mouse"), Udo Schöbel is the talent behind the scenes. The Stuttgarter, who now lives in Berlin, is an all-rounder and always at the center of the action: delivering concepts, designs, animations, even the music. The fast-moving world of the comic pop-artist is a perfect match with digital signage from netvico. So the duo decided to set up a multimedia eye-catcher: a digital placard system at the SEITEN WECHSEL exhibition, displaying clips Schöbel's fictional character Karl Anton – including sound.

The digital placard system developed by netvico is used to present all kinds of information, whether in public areas or in corporate communications and employee relations. The advantage of this kind of digital signage is that it is easy to update, as content can be replaced quickly. It also displays moving images, thereby scoring highly on emotional appeal and most definitely turning heads.

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The SIBE Competence Model for governmental administration in Brazil

How do you measure competence?

Brazil is enjoying an upswing, and economic development has become more and more dynamic in recent years. Brazilian markets are gaining in importance for German businesses and many large companies now have subsidiaries there, providing them with a strong foothold in the country. For Brazilians, it is becoming increasingly important to manage skills, as was confirmed by the National Congress of Knowledge Management in the Public Sector (CONGEP, Congresso Nacional de Gestão do Conhecimento na Esfera Pública). Almost 400 people attended the convention, most of them from public bodies and educational establishments. It was opened by a speech held by Silke Keim from the School of International Business and Entrepreneurship (SIBE) at Steinbeis University Berlin, which was received with great interest.

For many Brazilians, Germany acts as a role model for training, staff development and university education. It is also admired for its public administration. Unlike in Germany, however, in Brazil, considerably higher importance is given to knowledge and skills management. In fact, it is captured in the Brazilian Federal Ordinance. Consequently, a convention addressing these topics (CONGEP) has been held in recent years.

Silke Keim, School of International Business and Entrepreneurship (SIBE), Steinbeis University Berlin (SHB)

The sixth CONGEP took place last August in Brasilia, the country's capital. In the opening remarks, Silke Keim discussed the application of competence management in the public sector, and introduced the concept of "project skills degrees" at Steinbeis University Berlin as well as KODE®/KODE®X, the instrument for measuring competence. The audience listened attentively, as these points found interest in light of the current restructuring of Brazilian ministries and lower-level authorities. It was evident from the subsequent discussion that skills management could be an important consideration during the reorganization, and in filling new positions. The measurement techniques used by SIBE are ideally suited to the administrative reorganization that is about to take place because it allows managers to lay down target profiles by department and define required skills. It also provides support and useful pointers with self-assessments and third-party evaluations.

Silke Keim joined Peter Dostler, SIBE's business partner in Brazil, and managing director of the Brazilian consulting company GD Consult, to discuss specific approaches in a series of workshops at CONGEP. The workshops involved over 80 representatives of government ministries. In addition, SIBE is now setting up a collaborative project with local partners. A team of Brazilian consultants will be trained to use KODE®/KODE®X assessment methods, adapted in terms of programming and language to Brazilian projects. This will make it possible for the Brazilian ministries to focus on projects and skills in their work and training.

The Brazilians define competence as the interplay between knowledge, skills and attitude in order to carry out work, solve problems or achieve results – or all of these together. Their definition is an excellent fit with the SIBE description of competence developed by Prof. John Erpenbeck, which defines competence as the "Disposition to self-organize one's work," which lies at the heart of the KODE®/KODE®X instrument.

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Research spotlight

Sandblasting Systems

Innovative Surface Treatment

Surfaces are frequently treated by using sandblasting equipment or centrifugal blast wheels. The technical systems involved range from large-scale, continuous-use machines to manual techniques involving blasting booths. Working on behalf of a medium-sized company, on a project sponsored by the Federal Ministry of Economics and Technology, Steinbeis experts from Chemnitz have developed a new generation of compact machines, specially designed to sandblast small aluminum parts.

Using scientific methods, the Steinbeis experts worked out the ideal blast wheel geometry to optimize jet performance, prevent material damage and efficiently treat surfaces. Their development work resulted in the construction of a blasting booth which allows for 40 parts to be treated at the same time, thanks to a specially developed motion system. The process and the equipment have been patented.

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Multilingual Software

Overcoming Language Barriers and Condensing Information

It is generally advantageous to companies to own large volumes of information, and this mostly also holds true for the fields of security and risk management. However, too much information can also be counterproductive. In fact, it can even be damaging to a company. During its international projects, Steinbeis Advanced Risk Technologies has often run into the issue: Which information – from the mass of available data – is relevant to decision-making? To identify this information, the enterprise has developed its own solutions.

These solutions are based on three principles: multilingual solutions, automatically translated content and the automated compression of large volumes of data. The software packages developed by Steinbeis Advanced Risk Technologies work across several languages and allow users to translate content into any other language themselves. More "autonomous" automatic translation allows SMEs to seamlessly combine security data. For example, PromisLingua projects work in English, German, Italian, Spanish, French, Portuguese, Greek, Romanian and Hungarian. Large volumes of information can be compressed by using a technique involving semantic networks. The information is examined with the aim of identifying "internal structures" and concepts or connections contained within these structures. This enables "customized" identification of content which is important in terms of security or risk. The solutions are currently undergoing further development as part of a variety of projects in collaboration with clients and business partners.

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Ergospirometry

New Diagnostic Methods

The Poppenhausen-based Steinbeis Research Center for Medical Physics and Information is working on a project with the recently established high-tech medical company Geratherm Respiratory from Bad Kissingen. Project goals: to translate research findings quickly into innovative medical solutions.

New high-tech companies are often short of the experienced research and development staff they need to implement new and innovative products. Geratherm Respiratory and the Steinbeis research center have been working successfully in close cooperation to transfer research findings from the field of medicine, physiology and physics into the development of new diagnostic methods needed in cardio-vascular treatment. While the Steinbeis center deals with the processing and implementation of the findings, the company looks at technical requirements and certification. Together they have already implemented new medical diagnostic methods in recent months, primarily in the clinical setting.

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Monitoring D&D management with ekm-PotenzialCheck

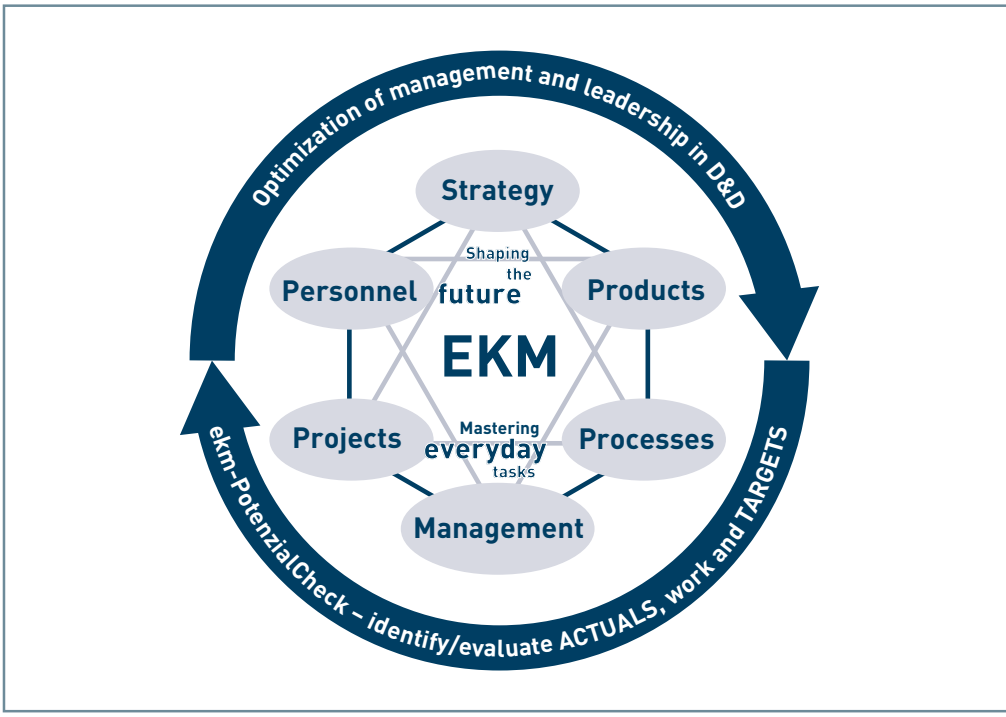
Fit for the future

Zeitlauf, from the small town of Lauf near Nuremberg, is considered one of the world's leading producers of drive technology solutions and developers of drive engines, placing it amongst the league of successful, rapidly expanding medium-sized enterprises. But with so much stiff competition in the drive technology market, will this be enough for the company to hold its own in the future? By drawing on the experience of development and design (D&D) consultants and using a series of systematic analysis techniques, plus tried-and-trusted software, the Steinbeis Transfer Institute of Development and Management took an objective snapshot of the development department at Zeitlauf.

Though the managers at Zeitlauf are aware that their company is well placed to deal with today's demands, they also know they will have to look more closely at some important changes, and think carefully about development processes and product complexities as the business grows. Acting as a system supplier is increasingly becoming the rule, not the exception.

To address the situation, the medium-sized enterprise turned to the Stuttgart-based Steinbeis Transfer Institute which carried out an ekm-PotenzialCheck project to assess the current standing of the development department. "The ekm-PotenzialCheck tool was designed to be different from conventional industry benchmarking instrument. It draws on the experience of the D&D consultants, so each evaluation is individualized," explains D&D expert Georg Villinger.

The analysis focuses on D&D factors most relevant to engineering: processes, products, projects, personnel, technological strategy and management. The Steinbeis experts also looked at important crossover points, such as technical sales and work preparation. The ekm software provided documentation for interviews and the auditing process itself. This was given to the company for free to provide the head of development with a tool to steer internal changes himself. The ekm-PotenzialCheck project identified key strengths and weaknesses in development and design processes within a matter of days, and also highlighted root causes. It also provided a roadmap with a detailed action plan for the next 12 months.



The key to success is to ensure people understand the six D&D factors properly and to make sure these feed into IT systems: "It was only when they carried out the ekm check that we really comprehended how it all fits together," explains Friedrich Obermeyer, head of development. "Even if the IT systems are in good shape, heterogeneous IT structures and stand-alone solutions still creep in as time goes on. The task, then, is to systematically eradicate redundant data and the long-winded processes such data leads to," continues Oliver Brehm, the IT expert on the ekm team. Steinbeis evaluated all six key D&D factors and showed staff how to optimize these factors properly and use the ekm software themselves. This done, Zeitlauf is able to continually assess and improve its own performance. The results of its actions will be transparent, making success "measurable." As a result, Zeitlauf will now also be an important step ahead of its competitors in the future.

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Steinbeis model supports Sparda Sales Training with Web 2.0 (SALT 2.0)

Improving appetite for learning with SALT

The School of Management and Innovation at Steinbeis University Berlin and the Sparda group of cooperative banks have developed a new model for using Web 2.0 applications to secure sustainable success in sales training. The project involved four steps. First, training needs were ascertained across all sales project teams at Sparda banks. Next, the experts worked out learning solutions for selected Sparda banks and wrote teaching concepts. Once training programs had been implemented, they were then evaluated.

The program is based on social networking principles

Training needs were assessed by surveying 693 employees at the Sparda bank and their cooperative partner, DEVK Insurance. Respondents were asked how important and useful Web 2.0 applications are for in-house training. It emerged that low earners and trainees do find Web 2.0 important, but not particularly useful. The eldest respondents (over 60) found Web 2.0 both important and useful. The findings indicate that trainees tend to feel Web applications are for leisure time activities, not work or learning. Conversely, older employees may feel confronted with technological change and believe they need to be part of it. In contrast to both groups, higher-earning managers had little interest in the introduction and use of emerging technology.

Based on the survey of requirements, three training programs were identified. A course for trainees to improve teamwork, a course for sales staff to improve their use of an enterprise solution called Prisma, and training for higher-level one-on-one customer advisors who help train other employees. The learning environment was based closely on the design of social networks like the German business forum Xing and Facebook.

The courses involved 79 employees from three Sparda banks, 41 of whom completed a final evaluation. An online survey was used, allowing course participants to score course preparation, the running of courses and the extent to which course content could be applied to their working environment. 39% of respondents said the course was an improvement on previous training. 41% wanted to see more teaching using this method. The opinions relating to course preparation and running showed some interesting correlations regarding satisfaction and recommendations to others. If people gave course preparation a good score, it was almost impossible to improve their overall course assessment through positive experiences during the learning process. But if they gave course preparation a bad score, the overall assessment improved significantly through the positive learning process. Positive learning experiences were, to a large extent, influenced by good preparation, but learning satisfaction and being prepared to recommend a course to others generally developed during the learning process.

The outcome of the project was warmly received by the Sparda group of cooperative banks. After the pilot program, the customer-oriented use of sales software rose by 29% and indirect training costs went down from € 6,000 to € 2,900. Absence during courses was reduced from 60 days to 30. The trainees and the instructors were so enthusiastic about the new training programs that the Sparda group decided to make a firm commitment to use Web 2.0 for more future training.

The evaluation and research findings are documented in a report which includes recommendations on the use of Web 2.0 in in-house training, described in more detail in a practical guide which is available through the School of Management and Innovation.

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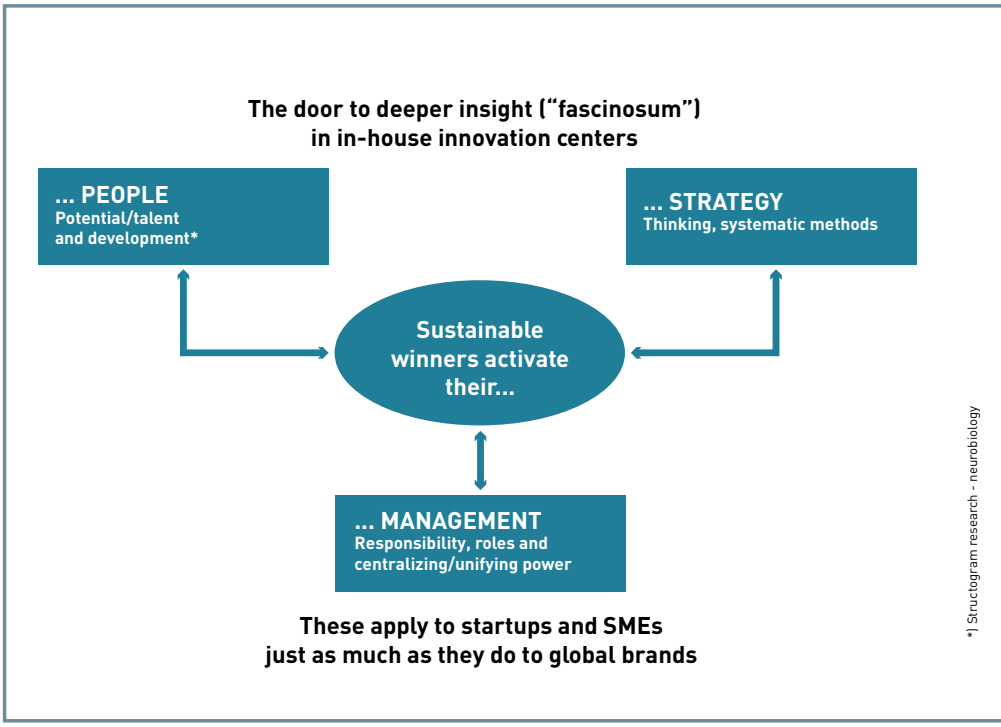
Analytical tool for managing business and preserving value

A unique consulting tool: SUA©

The cycles of global change are becoming increasingly shorter, and in terms of perception, change often feels like pressure. It is difficult for companies to maintain their course under so much pressure to change. They have to cope with different factors outside and inside the company. And some factors are simply difficult to influence. To analyze the current situation facing companies and deduce from this the key decisions that will affect the future, the Main-Tauber Steinbeis Consulting Center uses a "strategic corporate agenda" tool called SUA©. It was developed with the IFZM (Institute of Future Management) from Spraitbach.

If commercial success really does depend to 80% on the company strategy, then it is important for managers and (senior) personnel to regularly invest time in the long-term issues that affect their business. One particular issue can be the relationship between senior management and employees, and more specifically, whether employees are an intrinsic part of success and actually share in it.



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Well-structured companies with a clear focus on future markets invest as little time as possible in seeking short-term gains. Instead, they base their activities on long-term issues which will have a lasting effect on the business. But to do this, and improve, companies must understand the skills and know-how that will be required in the future. Before translating any ideas into actions, an analysis is required to assess the current situation. This is where the strategic business agenda tool SUA© plays a role. With the tool, employees themselves diagnose management techniques needed to succeed as a whole. The idea underlying the SUA© is that methods and know-how should not be imposed on companies or the people involved. It allows people to reflect on the situation and realize what is happening themselves. They are then empowered to steer the company in the right direction. This comes as a revelation. The excitement that participants feel and the drive to get on and do something about it is palpable. Reactions include: "I'm amazed how quickly and easily complex issues can be captured and made transparent [...], the invisible become visible," or "I was fascinated by these evaluations: I can see with my own two eyes, where, in essence, I need to just get on with things and improve my future performance."

The consultants at the IFZM and its certified IFZM partner, the Main-Tauber Steinbeis Consulting Center, support companies as they gear themselves to the future, steady the company and make it sustainable by "living" the newly acquired values. The two parties now offer: strategic planning and knowledge-sharing seminars, one-on-one business dialog (coaching), management audits, and the "IFZM Future Workshop 2011 – Questions and Answers on Management in the Future," which typically involves no more than 10 companies. The sessions provide hands-on tools to help companies succeed.

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Growth by investments in Germany

Strategically anticipated

There are over 300 producers of aluminum die-cast components in Germany. Julius Schüle, a die casting company from Schwäbisch Gmünd, has been an industry player for many decades and is a reliable supplier and development partner to international clients in the automotive and automation industries. The solutions supplied by Schüle, a technology leader with 650 employees, have always been the epitome of quality, technical delivery and value for money. However, even industry champions notice the tremors when clients and markets start shifting. The future strategic business development, however, needs to be planned in due time in case the company wants to keep on leading. The Steinbeis Consulting Center for Business Excellence supported Schüle in this task.

Hr. Scholze (Schüle), Prof. Finkel (Steinbeis), Hr. Nowak (Schüle) and Dr. Schöffner (Steinbeis) (left to right)

Leading from the front in terms of strategic business development sometimes means not to follow every trend but sometimes to set the trend. Thus, Schüle decided to make major investments in its operations in Germany and, apart from its existing factory in Slovakia, not to set up any further production facilities outside Germany, even if these measures contradict the general trend of its industry. The company's decision was the result of a comprehensive strategic review spearheaded by the Steinbeis Consulting Center for Business Excellence (BE).

Schüle is set to discontinue entire product groups in the years to come, although they will be replaced by new ones. This requires proactive planning in good time. The markets Schüle operates in may have been relatively stable for a number of years, so conceivably, it would be possible to extrapolate existing strategic plans to the future years. However, as the recent market turmoil has had a more far-reaching effect than past changes, Schüle decided to bring in professional support in the form of experts from the Steinbeis Network. Despite all of its in-house expertise, the company wanted to be sure it was choosing the right course in the long term.

Developments in Schüle's market forced the manufacturer to make an important decision if it was to strengthen its existing competitive advantages and to enjoy continuous business growth: Which products should be produced, at what cost, and where? The effects of recent developments had been so far-reaching that using the previous approach to strategic decision-making would have been highly risky. 2009 was a difficult year, and although Schüle survived it very well, its competitors became much more aggressive. The challenging market had begun to expose cracks in communication processes and management systems at Schüle. Previously this was not necessarily a problem, but now the firm needed new ways to plan its business strategy and run management. The BE team from Steinbeis would be able to make an objective assessment of these processes from the outside.

The aim of the project was to work systematically towards an adapted business strategy, in keeping with changes in the market. For the project to succeed, it was important to look at the company from as holistic a standpoint as far as possible. The EFQM business excellence model, which is the main technique used by the Steinbeis Consulting Center, proved to be invaluable. It was important not just to use the model as a template, but also to weight individual factors according to Schüle´s needs. Taking a holistic view at Schüle meant understanding the impact each strategic change would have on the rest of the company and the people involved. It would have been counterproductive to change the strategy based solely on individual factors. This does sometimes have advantages, but the impact in areas that are not considered can be devastating. The holistic approach made it possible to plan key steps properly. This included aspects like seeing the company as a single business unit split across two sites. Systematically analyzing location issues, based on objective facts, allowed the team to plan production options and set the ball rolling in a way that matched future market require-

ments. For example, the much lower labor costs in Slovakia were crucial regarding some product areas to enable the company to safeguard its turnover and revenues. In others, being close to clients in Germany was much more important than labor costs. Once Schüle had taken this and other factors into account, it concluded that it would have to keep investing in Germany. Even if this goes against the general trend, it will help the medium-sized company to remain a professional and reliable partner to its customers and provide world-class quality. The stronger standing of the company has also affected the factory in Slovakia, which can boost growth by tapping into the experience and expertise of German co-workers on-site. This approach to company leadership takes both technological and management issues into account. The BE team from Steinbeis was able to help Schüle chart a course for future success by using a systematic, tailor made and methods-based approach that considers each issue holistically. The experts will continue to support Schüle as it now implements its strategy.

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New centers in the Steinbeis Network

The Steinbeis Network comprises around 850 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 August 2011:

ROSTOCK

Psychophys

Director: Prof. Dr. Peter Kropp

E-mail: su1546@stw.de

Range of services:

- Applied research and development in the field of psychophysiology
- Seminars and training on psychophysiological issues
- Characterization of neurophysiological and psychophysiological brain performance parameters
- Development of human-machine interfaces in psychophysiology
- Definition of paradigms in the field of psychophysiological communication
- Psychophysiological research into neuropsychological issues
- Development and evaluation of therapy procedures in the field of psychophysiology and behavior therapy

HEILBRONN

Technology Consultancy

Directors: Prof. Dr.-Ing. Wolfgang Wehl
Prof. Dr.-Ing. Jörg Wild

E-mail: su1547@stw.de

Range of services:

- Consulting
- Applied R&D
- Expert reports

FAHLENBACH

Audiovisual media VIDEODOC

Directors: Margot Mayer, M. A.
Dipl.-Biol. Jürgen Skuda

E-mail: su1548@stw.de

Range of services:

- Production and design of blended learning models
- Film production

TÜBINGEN

Graphical data processing and image processing at the University of Tübingen

Director: Prof. Dr. Andreas Schilling

E-mail: su1549@stw.de

Range of services:

- Consulting, expert reports and feasibility studies
- Application-oriented research and prototype development
- Courses on current issues in visual computing

STUTTGART

Competences, Communication, Cultures

Director: Dr. Sabine Horst

E-mail: su1550@stw.de

Range of services:

- Workshops and seminars
- Individual, group and team coaching, virtual coaching
- Team building
- Consultation
- Development of blended learning modules, concepts and materials

CHEMNITZ

Automation in lightweight construction processes (ALP)

Directors: Dr.-Ing. Wolfgang Nendel
Dipl.-Ing. Mirko Spieler

E-mail: su1551@stw.de

Range of services:

- Automation concepts for lightweight construction processes
- Research project coordination
- Contract planning for handling technology and special purpose machinery
- Prototype solutions for automation concepts

BERLIN

Corporate & Career Development (CCD)

Directors: Dipl.-Betriebswirt (BA) Carsten Rasner
Ina Schaper, MBA

E-mail: su1552@stw.de

Range of services:

- HR marketing
- Recruitment
- Selection and matching
- Training
- Career coaching

School of Integrative Medicine

Directors: Dr. med. Friedrich Douwes
Birgit Gaida

E-mail: su1553@stw.de

Range of services:

- Master of Science in Integrative Health Science

HALLE

Institute for Management Accounting

Director: Dipl.-Finanzwirt, Dipl.-Kfm.
Volker Schulte

E-mail: su1554@stw.de

Range of services:

- Continuing professional development in the fields of financial control, management accounting and general management
- Seminars and in-house training
- Consulting

BAAR

Health and Development

Director: Urs Gruber

E-mail: su1557@stw.de

Range of services:

- Education in the field of health and development
- Science and research in the field of health and development
- Consulting in the field of education, health and development

KITZINGEN

Academy for complementery medicine and medical teaching

Director: Rolf Schneider

E-mail: su1558@stw.de

Range of services:

- Planning and implementation of complementary medicine degrees
- Planning of dual education degrees in the healthcare industry
- Planning of didactic learning and teaching programs, both on a general basis or specially for complementary medicine
- Planning teaching skills programs for people in healthcare professions

LUDWIGSHAFEN

Innovation: Consulting+Coaching (ICC)

Directors: Christoph Thome, MBA
Dipl.-Betriebswirt (FH) Holger Schaaf

E-mail: su1559@stw.de

Range of services:

- The Steinbeis Transfer Center focuses on issues relating to innovation management from a perspective of integration.
- Consulting: planning advice, from the initial situational analysis (e.g., market analysis) to deriving objectives, developing strategies and implementing effective and efficient measures resulting in tangible success. Example of situational analyses: qualitative research (e.g., explorative interviews for market surveys or trend screening) or quantitative research (e.g., customer satisfaction surveys); benchmarking for quick-win exercises and long-term optimization programs.
- Coaching: Innovative learning through individual, transfer-based seminars; coaching session of immediate benefit to businesspeople and scientists; speeches on pertinent topics in science and business; independent, authoritative expert reports as a basis for decision-making, sourcing of experts in specialized fields.

NAGOLD

Clinical Anatomy

Directors: Prof. Dr. Matthias Beck
Birgit Gaida

E-mail: su1560@stw.de

Range of services:

- The planning, organization and implementation of degree programs in the field of complementary medicine
- The development of degree programs and continuous professional development for doctors, dental specialists and physiotherapists
- Practical running of degree programs and continuous professional development for doctors, dental specialists and physiotherapists
- The planning of educational programs aimed at fostering practice and evidence-based techniques of life-long learning and supporting implementation in a clinical setting
- The running of post-graduate programs Research of clinical anatomy in complimentary and dental medicine
- Practice-based research projects aimed at optimizing structures and the quality of results in acute, rehabilitiation and complementary medicine care institutions
- The planning of interdisciplinary qualification profiles aimed at fostering innovative treatment processes in dental medicine and physiotherapy
- Networking of universities of medicine and bio-science at an international level

CHEMNITZ

Marketing Consulting, Market Research, Knowledge Transfer

Director: Prof. Dr. Cornelia Zanger

E-mail: su1563@stw.de

Range of services:

- Market research studies (market research, competitive analysis, qualitative and quantitative/representative surveys, face-to-face, on the telephone, written and online, brand equity analysis, mystery shopping, multivariate data analysis)
- Consulting in the field of marketing strategy development and marketing operations
- Marketing control, evaluation and audits
- In-house seminars and coaching

Scheduled renewal of committee members

New members appointed to Steinbeis Board of Trustees

The Steinbeis Foundation provides an umbrella over the entire Steinbeis Network. Its remit is laid down by the Board of Trustees. As the previous term of office drew to a close, many members automatically retired from the Board of Trustees in 2011.

Dr. Hartmut Richter represented the Baden-Württemberg Manual Trades Association (BWHT) on the board since 1985, and was also a committee member since it was set up in 1996. Prof. Dr. h. c. Dietmar von Hoyningen-Huene represented the interests of universities of applied science since 1991, and was also a committee member since 1996.

Reiner Moser (joined 2006), Assistant State Secretary at the Baden-Württemberg Ministry of Finance and Economy, Dr. Reinhard Altenmüller (joined 2003), while on the board, also an Executive Ministerial Counselor at the Baden-Württemberg Ministry of Finance and Economy, and Dr. Michael Hagenmeyer (joined 1990), board chairman at bw-i Gesellschaft für internationale wirtschaftliche und wissenschaftliche Zusammenarbeit mbH, were all members from the area of public administration. Dr.-Ing. Heinz-Peter Germann, while on the board, also director of the leather and tanning institute Lederinstitut Gerberschule Reutlingen e. V., represented the institutes of joint industrial research since 1995. Dr. Augustin Siegel (joined 2001) represented commercial research bodies.

Members representing the Baden-Württemberg parliamentary groups also left the committee at the end of the term of office: Stefan Teufel (joined 2006, CDU), Werner Pfisterer (joined 2006, former CDU parliamentary representative), Rudolf Hausmann (joined 1996, formerly SPD), Beate Fauser (joined 1996, formerly FDP/DVP), the minister Theresia Bauer (joined 2001, GRÜNE) and Edith Sitzmann (joined 2006, GRÜNE) all supported the Foundation over the years.

The new members of the Board of Trustees are (in alphabetical order): Susanne Ahmed, Assistant State Secretary, Baden-Württemberg Ministry of Science, Research and the Arts; Alfred Dietenberger, Executive Ministerial Counselor, Baden-Württemberg State Ministry; Leopold Grimm, Member of the Baden-Württemberg Parliament, FDP/DVP; Prof. Dr. Hugo Hämmerle, Director, NMI Natural and Medical Sciences Institute, Tübingen University; Peter Hofelich, Member of the Baden-Württemberg Parliament, SPD; Andrea Lindlohr, Member of the Baden-Württemberg Parliament, GRÜNE; Dr. Peter Mendler, Executive Ministerial Counselor, Baden-Württemberg Ministry of Finance and Economy; Claus Paal, Member of the Baden-Württemberg Parliament, CDU; Dr.-Ing. Peter Post, Research Director, Festo AG & Co. KG; Dr. Kai Schmidt-Eisenlohr, Member of the Baden-Württemberg Parliament, GRÜNE; Prof. Dr. Gerhard Schneider, Rector, Aalen University; Oskar Vogel, Managing Director, Baden-Württemberg Manual Trades Association (BWHT); Tobias Wald, Member of the Baden-Württemberg Parliament, CDU; Prof. Dr. Marion Weissenberger-Eibl, Director, Fraunhofer Institute for Systems and Innovation Research (ISI).

Steinbeis would like to thank the retiring members for their support and looks forward to much fruitful discussion and collaboration with its new members.

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Obituary

Prof. Dr.-Ing. Hansjürgen Linde

Steinbeis University Berlin (SHB) mourns the death of Professor Dr.-Ing. Hansjürgen Linde. Hansjürgen Linde last worked as a lecturer at the School of Management and Technology at SHB where he taught Strategic Innovation to students on the MBA program.

On completion of his apprenticeship as a fitter, Hansjürgen Linde studied Engineering Education and Processing Technology in the city now known as Chemnitz. In 1988, he completed his Ph.D. at the Technical University of Dresden on "Elementary Laws, Methodical Means and Strategies for Determining Development Tasks under Inventive Objectives."

After working in a variety of engineering roles at Mechanisierung Gotha, in 1990 Linde was appointed by BMW as a development engineer. Between 1991 and his entering retirement in 2009, he was a professor at Coburg University of Applied Sciences. In 1992, Linde founded the WOIS Institute for Innovation Research and Processing, which ran numerous seminars and innovation projects with business partners. In 2005, he founded the WOIS Innovation School at Coburg University of Applied Sciences.

From 2006 to the time of his passing, Hansjürgen Linde was a lecturer on the Master of Business Administration program at Steinbeis University Berlin.

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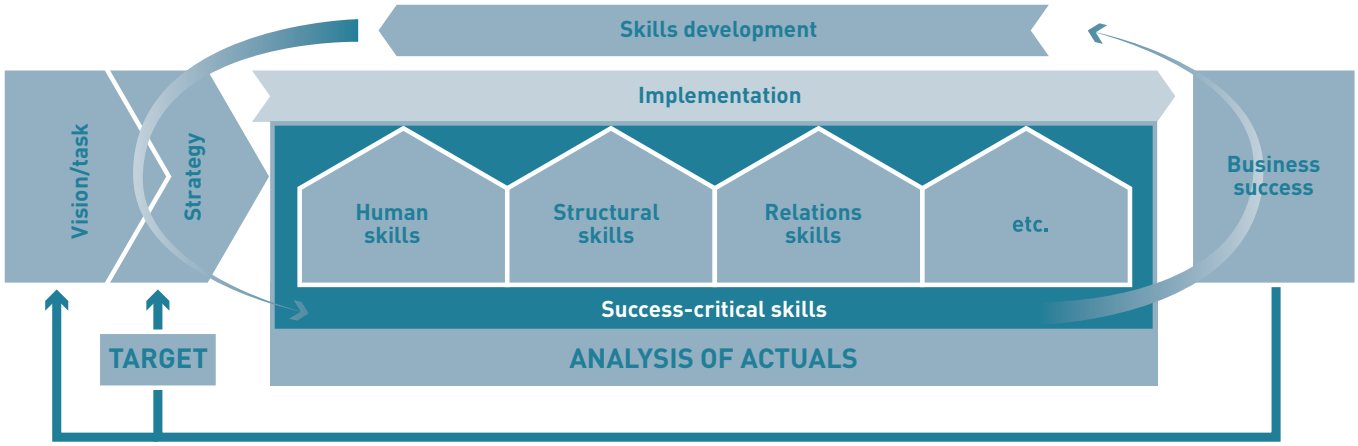
Improving the link between strategy implementation and HR development

Skills portfolios and adding up intellectual capital

Business strategies are central to the future success of companies. Two of the biggest challenges in implementing strategies and ultimately securing strategic success are resistance within the organization and a lack of commitment. The Fraunhofer Institute for Production Systems and Design Technology (IPK) has developed a tool called the Strategy-Based Skills Portfolio together with the Steinbeis Consulting Center for Human Capital Management (HCM). Its aim: to improve links between company strategy and HR development planning.



The relationship between strategies and employee skills

The tool, which was derived from a Fraunhofer IPK method for capturing intellectual capital in a business, was designed to help integrate HR experts more closely into an organization's core processes, strategy planning and strategic implementation.

Currently, in many sectors of industry, companies rarely involve HR specialists in strategy implementation. Experience has shown time and time again that communicating strategic goals and adapting them to individual needs is a key challenge of strategic leadership. By contrast, HR development processes typically work independently with few links to the core goals of an organization, which are usually derived from the business strategy. Further, there is an increasing tendency for firms to question the ability of HR development to add value to the business. Yet dovetailing strategy implementation and HR development more closely holds tremendous potential. The Strategy-Based Skills Portfolio, which was based on "intellectual capital statements" designed by the Fraunhofer IPK, helps companies develop ways to dovetail these two activities and put these methods into practice.

The underlying idea of the "Intellectual Capital Statement – Made in Germany" is to provide user-friendly tools for measuring the intellectual capital (IC) within a business in a way that matches the needs of SMEs. It helps firms assess IC, then work out and steer key measures that not only match the strategy but also move the company forward, especially "soft" success factors. IC within an organization describes all intangible success factors important to the running of the business and the links between success factors. They fall into three categories: human, structural and relational capital. Human capital encompasses all attributes and skills of individual workers. Structural capital describes supportive infrastructure used by workers to do their job throughout the business. Relational capital describes all relationships with groups and people outside the organization that are drawn upon in carrying out work. Within these three categories of capital, there are also individual, nontangible influencing factors. When a business is undergoing change, these factors have a direct or indirect impact on business success and an organization's ability to achieve its goals.

An intellectual capital statement (ICS) can thus be used as a tool for decision-making or as a monitoring instrument, with the overall aim of developing intellectual capital. Apart from this steering function, the ICS can also be used for internal or external communication purposes to make the intangible assets of a

company more transparent to different target groups. A software package or ICS Toolbox breaks the technique down into eight simple steps: the business model, IC, evaluation, measurement, effect, assessment, actions and the ICS itself.

The Steinbeis Consulting Center has updated this method for summarizing intellectual capital in collaboration with the Fraunhofer IPK. The aim was to adapt the approach to the needs and conditions of HR development. One of the key differences with the new system is that the evaluation tool is used by the company's HR development experts within departments or teams. Unlike the approach underlying the ICS, the aim with this system is to take a comprehensive snapshot of the company. The method behind the Strategy-Based Skills Portfolio is based on a survey conducted using questionnaires during workshops. The priority is to work out HR development tools according to the needs of individual departments. Using this approach, a methodology was developed for planning investments in HR development that are more closely based on the business strategy.

The strategy used at the start of the process has to be as detailed as possible. Ideally, it should also be derived from higher-level corporate strategies for the specific department. The goals defined within the strategy provide a basis for defining department-specific influencers (competences) which simultaneously provide an evaluation template for managers and workers. The quick ICS test involves a questionnaire, initially based on standard, more general influencers (taken from empirical sources), which is used to carry out preliminary online evaluations.

The fundamental strategic approach underlying the ICS, and the methodical approach used to work out the influencing factors (which are needed as intangible resources to implement a strategy), are an excellent starting point for dovetailing HR development plans with business strategies. The fact that the workers themselves assess influencing factors, by referring to the departmental strategy, means that they have to be familiar with the (previously communicated) business strategy.

The tool makes it possible to work out specific HR development requirements within each department, based on corporate and business area strategies. To do this, managers have to ensure four activities take place:

- Strategy communication: presentation and discussion of the key thrusts of the business or departmental strategy with people working in each area.
- Determination of key required skills on an individual and departmental level, to focus departmental priorities, in keeping with the strategy.
- Later: assessment by workers of skills profiles within the department, based on the "importance of each type of skill in implementing the strategy" and the "existing levels of each type of skill" within each department.
- Pooling of the results of each survey to arrive at a "strategic skills portfolio." The areas in which development is needed in the department, as identified by workers and managers, are plotted. This development profile is used to draft an HR development plan which links back systematically to the strategy.

One of the main benefits of using the "strategic skills portfolio" is that HR development plans are more tightly focused on the business strategy and resources. It thus allows HR development experts to bolster their role in communicating and implementing the business strategy. Workers understand why they are important in implementing the strategy and how they can make a contribution. Overall, this amplifies the relevance of HR development as a business activity.

The Strategy-Based Skills Portfolio fulfills three main objectives in strategic HR development:

- Value-adding contributions made by HR: Like a funnel, this tool helps the company focus HR development decisions on core challenges posed by the company strategy. By dovetailing individual HR development decisions with strategic demands, information relating to the strategic direction improves, as does understanding among staff. This cuts the cost of implementing the strategy and combats resistance.
- Strategy communication: the tool simplifies dialog between managers and workers regarding goals and challenges, as dialog takes on a life of its own – talking about the strategy becomes a natural part of annual HR development processes.
- Focus: the strategic skills portfolio helps reduce the risk of simply dumping decisions on workers from above – especially regarding staff training, as this is now based on the strategy process in the business. The business relevance of HR development, which is sometimes not seen as relevant, improves, as do contributions to value-added.

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25 years of TQU

An idea goes forward

The Steinbeis Network's TQU has been involved in setting up and implementing management systems for a quarter of a century. These days, the focus lies in offering customers a comprehensive service portfolio, which allows companies and employees to tackle and overcome future challenges.

This isn't just about developing strategies and business concepts, but actually applying them to business scenarios. The team of experts at TQU Group sticks to its fundamental principle: working closely with people, walking the road to skills and know-how development with them, and offering customers a comprehensive service package. This includes everything from support with strategy development, strategy implementation, shaping organizational structures, product development, optimizing business and technical processes, and, most importantly, HR development. All this is designed to help companies help themselves in a five-pronged process for engineering, operational, organizational, personal and business excellence.

The TQU Group places particular emphasis on the original ideas of its founder, Professor Jürgen P. Bläsing. In carrying these further, and continuing to provide customer-oriented development strategies, TQU opens up new avenues to people and companies based on solid, well-founded business practice. At the 25-year anniversary celebrations held last summer in Ulm, this idea was highlighted not only in the reference projects presented, but also in subsequent discussion with customers, business partners and employees, as well as in the opening and key note speeches given.

The TQU Group, established out of the Steinbeis Transfer Center TQU Quality and Environment, is directed by Helmut Bayer and pulls together the services of consulting, support, continuing professional development, information and certification – thus providing customers with a value-added umbrella under which they can draw on standard or tailor-made solutions aimed at addressing the complexities of organizations, structures and globalization. All this is done with an emphasis on customer benefit.

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SHB certification course on professional speaking

Training – with a difference

Job applications, vocational college, part-time studies, overdrafts, afternoon meet-ups with friends – people associate many different things with "training" and "studying." But what's an "apprentice whisperer?" The term came up during a certification course on professional speaking which is jointly organized by the German Speakers Association and Steinbeis University Berlin (SHB). The course participants and the exam commission are now very familiar with the term.

Where did they learn the term? Simple: In a speech given during their own final examinations. They were witnessing a captivating talk given by Sabine Bleumortier called "From dog trainer to apprentice whisperer." Ever since then, they all know what apprentice whisperers are and what they do differently from normal instructors!

The story told in her keynote speech is a tale of personal development and success. It was just over a year ago that Bleumortier, a personal trainer and consultant, decided to train as a professional speaker and take the SHB certification course. Already well-established in the training and seminar market, she had been gravitating towards public speaking and a career on the stage. She was determined to explore uncharted territory and enter new business fields.

And why did she choose the SHB course? "The training you receive on this course is totally unique. During the training, we learned from some of the best public speakers in Germany, and really benefited from their specialist expertise. My performance has improved tremendously. It's a real honor to think that I was the best on the course," states Bleumortier. Markus Hofmann, director of the Steinbeis Transfer Institute "Professional Speaker GSA," shares her enthusiasm: "Sabine Bleumortier's personal development was brilliant. Her presence is magnificent. But I'd also like to extend my compliments to everyone on

Steinbeis Business Academy celebrates 10 years

Inspiring people for education!

... in keeping with this thought, the Steinbeis Business Academy (SBA) at Steinbeis University Berlin (SHB), has now been successfully running continuing professional development programs for 10 years. Around 2,000 students are currently enrolled on SBA courses. 1,400 graduate alumni have picked up essential career skills at the SBA.

The founders of the SBA, Birgit Gaida and Professor Dr. Peter Dohm, were quick to recognize the need among specialists and managers for continuing professional education; at first in the social sector, and soon after this within small and medium-sized enterprises. The SBA had already subscribed heavily to the newly developed SHB concept of "project skills," which to this day provides a perfect basis for targeted employee training by blending degree-level education with full-time work. The SBA now collaborates with a variety of SMEs and larger companies, who not only provide projects for the project skills degrees but also employ the students. The synergies created by "triangular" project work – involving companies, students and supervisors at the SBA – as well as the importance of developing skills professionally, were reflected at a ceremony held in Gernsbach in October to mark the SBA's 10th anniversary. The speeches and the discussions that followed underscored the model's ability to inspire people to learn new skills.

A key success factor at the SBA has always been its focus on collaboration and leveraging resulting synergies. A number of programs, although fairly niche in nature, run successfully with a small number of participants. The SBA fares excellently on a national level and is firmly established. Its aim, now, is to look beyond the borders of Germany and one priority will be to offer training programs targeted at specific countries. For example, the SBA is already working closely with the Lebanese German University (LGU) in Beirut on an executive degree for full-time employees in Lebanon, focusing on business administration.

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The Institute for Management in Health and Social Administrations was founded under the leadership of Prof. Dr. Peter Dohm in 2001 with the aim of offering bachelor degrees for people working in the health sector. Within a year, the concept had been extended to commercial fields. Under the new Institute of Management & Business, in-depth modules were now offered in international marketing and international and European law.

Master's degrees and MBAs were first offered in 2003. Shortly after that, the **Steinbeis Business Academy** umbrella brand was launched, providing a common platform for both institutes. In the years that followed, offices were opened in Stuttgart and Stockach. In 2009, the SBA announced its first international university collaboration. Since then, the SBA has worked in a variety of interdisciplinary fields with Royal Roads University on Vancouver Island, Canada.

the course for their commitment and professionalism."

The professional speaking course was launched in 2010. The first round of 16 graduates already passed their exams by the beginning of September. They were awarded their certificates as part of a formal ceremony at a "Black & White" gala evening at this year's GSA convention.

Certification Course Professional Speaking

The course is targeted at personal trainers who would like to qualify as public speakers, as well as managers aiming to build on and improve their rhetorical skills. A variety of leading lecturers share their expertise on the course, paving the way for a career in public speaking.

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Steinbeis Transfer Center bestows award to successful students

Sponsoring talented students at Magdeburg University

The Steinbeis Research Center for Electrical Networks and Regenerative Energy Sources and the Department of Electrical Engineering and Information Technology at Otto-von-Guericke University in Magdeburg bestowed an award in the 2011 summer semester for the best exam grades in the previous winter semester.

Robert Renner

The aim of the award is to reward the most talented students and raise the appeal of studying at the department to the outside world. From the many applicants, the student chosen to be awarded the prize was Robert Renner (29). Renner successfully completed his engineering degree at Bielefeld University of Applied Sciences in 2010, majoring in electrical engineering (in the field of regenerative power generation).

He wrote his diploma on the subject of "Assessing Network Conditions in the Operational Management of Electrical Energy Networks" during an internship at Dutrain. Since October 2010, Renner has being studying for his master's degree in "Electrical Energy Systems – Renewable Energy" at Otto-von-Guericke University in Magdeburg. His research centers on the use of electric vehicles as mobile storage units in electricity networks and the optimum use of HVDC power transmission. Renner is also a volunteer for the local IEEE Student Branch at the university.

All students reading "Electrical Energy Systems – Renewable Energy" at the university are eligible to apply for the award. The award commission comprises Prof. Andreas Lindemann, the head of the department of Electrical Engineering and Information Technology, Prof. Zbigniew Antoni Styczynski, director of the Steinbeis Research Center, and two scientific assistants at the Institute of Electrical Energy Systems.

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Honor for outstanding service

Cross of Merit for Horst-Dieter Westerhoff

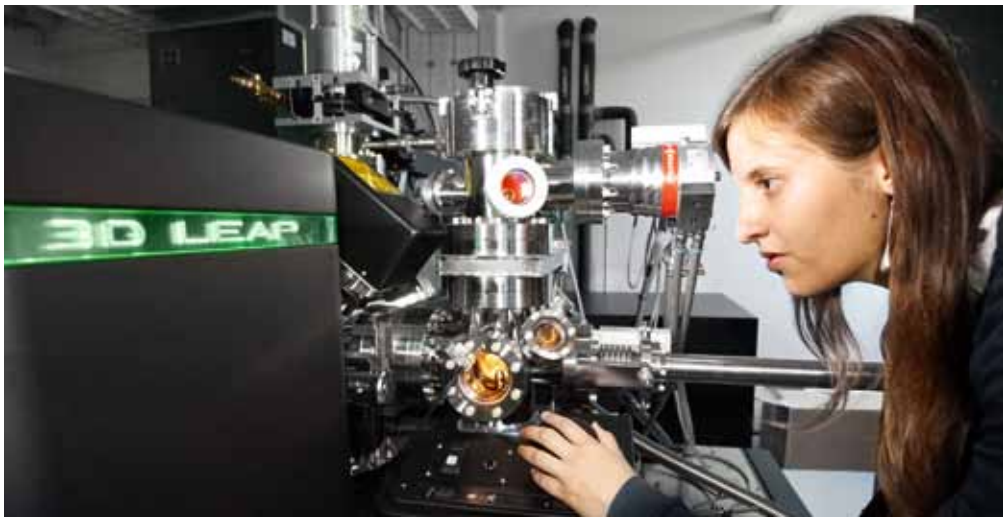
Prof. Dr. Horst-Dieter Westerhoff, Professor of Political Economics and Professor at Steinbeis University Berlin (SHB), has been awarded the Verdienstkreuz am Bande (Knight's Cross) of the Federal Republic of Germany. The honor was bestowed by the German President, Christian Wulff, in acknowledgement of Westerhoff's many years of outstanding service to academia, economic policy and economic structure. The Order of Merit is the only general award of merit in Germany and the highest mark of esteem that can be awarded for services to the common good.

Horst-Dieter Westerhoff is Director of the Steinbeis Transfer Institute of Politics and Economic Management. Since 2004, he has been the honorary chairman and a member of the advisory board of the Steinbeis Transfer Institute of Risk and Fraud Management at the SHB. Before entering teaching, Westerhoff worked for the Federal Chancellery from 1989 to 2006

Atom probe tomography lab opened

Taking an exact view of materials research in Saarbrücken

Materials may have to put up with a lot of wear and tear, but sometimes they actually do wear. For example, every time an electric switch is flicked, an extremely hot spark is created, discharging highly concentrated energy in an area measuring only thousandths of a millimeter. The microscopic damage this causes, which is frequently only at the atomic scale, can now be observed using new technology. A laboratory has been set up at Saarland University to carry out atom probe tomography (APT). The lab was opened in November by Prof. Dr. Frank Mücklich, professor of functional materials at Saar University and director of the MECS Steinbeis Research Center (Material Engineering Center Saarland).



Whether materials become softer or more malleable during processing, or have smooth surfaces with low frictional loss, depends on the actual substances they consist of and their structures. "To make the often complex geometry of a material more visible, a variety of new techniques have now been developed. Not only can we chemically analyze materials to see which atoms they contain, we can even illustrate the lattice structures of crystals and show the nanostructures that are formed out of them," explains Mücklich. The new APT technique even makes it possible to look into the very heart of materials and determine the spatial positioning of atoms. "With the insights this provides, we can optimize existing materials and develop completely new materials," states Frank Mücklich.

The new laboratory, located at the Steinbeis Research Center for Material Engineering in Saarland; is now equipped with the world's leading full-size atom probe for carrying out material tomography. Produced by CAMECA™, an American based company, the Local Electrode Atom Probe (LEAP) instrument was funded with the support of the German Research Foundation. It supplements the 2D and 3D analysis equipment already installed in laboratories on the campus. Nano-scale tomography produces similar images to those produced by computer tomography used in medical fields. The difference is that the material being examined is not radiographed. Instead, atoms are field evaporated as ions from a sharp needle-shaped sample by the application of high voltage fields. The flying ions are then collected by a position sensitive detector, where the position of each ion impact is used to build a virtual 3D reconstruction representing the evaporated volume from the sample.

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where his last position was Group Head of Social Policy. Since 2001, Westerhoff has also been the Managing Director of the Berlin-based association "Gesellschaft zum Studium strukturpolitischer Fragen e. V." ("Society for the Study of Structural Policy Issues"). In 1999, he was appointed Honorary Professor at the University of Duisburg-Essen.

Westerhoff is also a member of the teaching staff at School of Banking in Poland. As a supervisory board member of InGeoForum, he also promotes collaboration between research bodies, universities, business and associations, with the aim of putting geodata to innovative use in both the public and private sector.

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Web-based platform to support social projects

Sharing gifts and supporting social causes

One of the core activities of the Strategy & Innovation Steinbeis Consulting Center (SCC) is to support innovative projects in trade and industry. The SCC has recently launched Herzflair.de, a website which supports social causes in different areas of Germany by selling premium gifts and event vouchers.

In the run-up to Christmas, there is a greater tendency to want to help people in need. But charities also need support at other times of the year, especially local charities, which generally do not occupy the limelight as much as the big ones. Many clubs and social initiatives offer wide-ranging support to give hope to people who have hit on hard times. Most work is unpaid or on a voluntary basis. To provide as many people as possible with grassroots support, these social causes need financial backing.

It was this thought that fuelled the concept behind the Herzflair.de website – to combine helping others with the trend toward online shopping. The online outlet for specialty gifts makes a fixed donation to local charities for every article sold. Next to the price of each item are the proceeds that go to charity. These are already included in the sale price, without surcharge. Herzflair.de automatically channels proceeds to charity after each sale. This way, customers can support the work of charities without paying an extra fee.

To make sure people also get to hear about the kind actions of others, each gift comes with a tag about the donation and the project being supported. The buyers decide which charity the gift proceeds should go toward. They can even suggest new charities, beyond those social causes already checked by Herzflair.de.

The Steinbeis center also places emphasis on which products are sold. The range includes products specially designed by artists from Germany and England, as well as gifts and decorative items produced in social enterprises, which are produced to a very high standard. Jewelry and event vouchers are also sold, as well as a variety of interesting gift ideas that offer a little something different, and make a difference to others.

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New releases from Steinbeis-Edition

Experts. Knowledge. Sharing.

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

Kephalometrie – Cephalometry (TDR)
(Bilingual Edition, germ./engl.)
Gregor Slavicek
ISBN 978-3-941417-72-4

Using cephalometric radiography in a targeted and professional manner in science, medical diagnosis, treatment and treatment planning requires in-depth knowledge of the technology and a detailed understanding of its strengths and weaknesses. This book explains the fundamentals of how to analyze a lateral cephalometric tele-x-ray. It also provides interesting background information and insights into historical developments. As such, the book is designed to serve as a textbook for students and a reference work for professionals and academics to consult in their daily work. This bilingual edition (German and English) eases the reader into this specialist field and helps them learn the relevant terminology.

About the author

Prof. Dr. med. univ. et med. dent. Gregor Slavicek is a doctor of general medicine and specialist in dental, oral and maxillofacial medicine. Alongside Birgit Gaida, Professor Slavicek is co-director of the Steinbeis Transfer Institute for Biotechnology in Interdisciplinary Dentistry, which was founded in 2008. He is also academic director of

the SHB degrees Bachelor of Science in Dental Technology and Management, Master of Science in Innovative Dental Technology, and Master of Science in Biotechnology and Interdisciplinary Dentistry.

A Valuation Model for Heritage Assets in Public Possession. A Discussion Paper.
(In German only) Bärbel Held
ISBN 978-3-941417-85-4

Transparency and maintaining the value of tangible assets within regional authorities are an integral part of reforms in municipal budgeting and accounting processes. To manage assets professionally, balance sheets are needed that capture all property and capital assets. This also applies to works of art and cultural possessions. Currently, there is no generally accepted evaluation model for such property, either in Germany or beyond. This paper provides a basis for discussion, suggesting a model based on the balance sheet accounting of immaterial assets for use in evaluating heritage assets in public possession, within the context of International Public Sector Accounting Standards (IPSAS). Heritage assets are treated like tangible assets, but because they have an indefinable value they are categorized according to their benefit to society. To evaluate this, a utility analysis was carried out, assessing works of art and cultural possessions in local museums.

About the author
Professor Dr. Bärbel Held has been a professor of public management at Steinbeis University Berlin since 2011. As well as heading up the "Institute of Economics" Steinbeis Transfer Institute, she is the academic director of the Academy of Public Administration and Law (Akademie für öffentliche Verwaltung und Recht) in Berlin. Held is also a guest professor at Nanchang University in China. This publication is the first volume in the "Academic Series in New Public Management" being published by the author.

The commercial significance of a DCM-based approach in (partly) residential geriatric care
(In German only)
Lieseltraud Lange-Riechmann
ISBN 978-3-941417-81-6

Dementia Care Mapping (DCM) is used in caring for and supervising dementia patients living in inpatient care facilities provided by the German Medical Review Board of the Statutory Health Insurance Funds (MDK) as a tool for measuring quality of life. Given the nature of in-patient care, one issue looked at is the expectations institutions have when using DCM-based procedures with respect to quality assurance and cost-cutting, as well as the commercial significance resulting from these expectations. As a basis for calculation, break-even, human capital, net present value, sensitivity analysis and return on investment are examined hand in hand with their role in strategic management in applying DCM. How can using DCM in HR development contribute to cost-cutting? As part of a study, the effectiveness of measures pertinent to HR, operations management, knowledge management, financial management, marketing and international networking are examined within the context of DCM when applied to the specialist care of dementia patients in (partly) ward-based geriatric care.

The results of the study make it possible to evaluate the costs and benefits of areas relevant in the services industry. The limitations of DCM-aided care are also highlighted. This makes it possible for enterprises to plan strategies based on commercial and patient care insights with respect to DCM as an instrument for safeguarding the quality of services.

About the author
Lieseltraud Lange-Riechmann graduated with a Master of Business Administration from Steinbeis Business Academy in 2007. Her master's thesis is now among selected student papers published in Steinbeis-Edition. With around 2000 enrolled students, the Steinbeis Business Academy is the largest Network institute at Steinbeis University Berlin.

Ethics, intrinsic value and sustainability in the financial system
(German and English articles)
Sabine Meck, Frank Zschaler,
Jens Kleine (Publ.)
ISBN 978-3-941417-33-5

Ethics, moral standards, norms and values have a bearing on systems in all areas of life – on a personal or individual level, within organizations and institutions, and within a culture or society as a whole. Examining interactions between different factors and levels, especially with respect to the role of financial subsystems, was the aim of the first Finethikon financial ethics convention held in Berlin in 2010. This publication contains the speeches, panel discussion and workshop results from this interdisciplinary, internationally-focused event involving participants from academia and business. The Finethikon almanacs, which feature articles published at regular intervals in German and English, document the speeches, discussions and workshops at each of the financial ethics conventions. They also include other articles that the publisher considers high-quality and of importance to financial and business ethics. The series

also provides a medium for discussing ethics beyond financial, organizational and economic circles. This publication is the first volume of the new Almanac of Financial and Organizational Ethics ("Jahrbuch für Finanz- und Organisationsethik") published by Sabine Meck, Frank Zschaler, Frits van Engeldorp Gastelaars, Christoph Weber-Berg, and Jens Kleine.

About the publishers

Prof. Dr. Dr. Sabine Meck has been head of the Steinbeis Transfer Institute of Financial Behavior and Ethics at Steinbeis University Berlin since 2008. Prof. Dr. Frank Zschaler is a professor of Economic and Social History at the Catholic University of Eichstätt-Ingolstadt. Prof. Dr. Jens Kleine has been director of the chair of Management and Financial Services at Steinbeis University Berlin and director of the Research Center for Financial Services, also a Steinbeis Transfer Institute, since 2004.

Industrial research communication at large international companies. Aims, stakeholders and instruments

(In German only) Christiane Beck

ISBN 978-3-941417-75-5

In highly specialized technology markets, industrial research carried out as part of innovation management is gaining in importance in safeguarding the long-term success of companies. Customers, business partners and the general public are increasingly being involved in research activities early in the process, building on internal communication to share experiences, ideas and knowledge. Against this backdrop, companies increasingly find it necessary to communicate their research areas and activities to internal and external stakeholders as part of innovation management. This book examines industrial research communication, taking a theoretical and empirical look at the three core aspects of communication objectives, stakeholders and communication tools. The results are based on a preliminary qualitative study involving 14 large companies and a quantitative study involving 92 large companies. The book also includes a detailed case study based on the example of a specific company in the IT sector.

About the author

Christiane Beck studied business with a major in marketing at Ludwigshafen University of Applied Sciences. Since completing her degree in 2006, she has been working in research communication at a leading IT company. In this position, she played a pivotal role in setting up a department for research communication, and is currently responsible for events management, PR and online communications. Between 2007 and 2010 Beck studied toward her Ph.D. at Steinbeis University Berlin.

Computer-based learning. An exploratory study into the variables of human-computer interaction/ Development of a methodological approach to evaluate the usability of an e-learning application

(In German only) Anders T. Lehr | Peter A. Henning, Anders T. Lehr (Publ.)

ISBN 978-3-941417-67-0

For many students, e-learning is now an integral part of acquiring new knowledge. In recent years, a variety of learning techniques and technical aids have been developed (such as web-based training, mobile learning, blended learning and e-learning 2.0). All promise students ultimate flexibility in deciding where to learn and when. Their aim is to promote more individual learning by allowing students to dictate the pace and content of learning and monitor their own progress. Experience shows that despite the number of options provided, computer-based learning is still not very effective, efficient or satisfactory. Many e-learning applications score badly on usability (user-friendliness). As part of this study, a methodology was developed to evaluate the usability of an e-learning application. The aim is to match e-learning applications more closely to student needs. This involved several exploratory studies into the variables of human-computer interaction. The results helped in the redesign of an e-learning application to improve usability.

About the author/publisher

Dr. Anders T. Lehr worked as a research assistant at the Institute for Applied Research at Karlsruhe University between 2004 and 2007. During this time, he organized the European e-learning award EureleA together with Prof. Peter A. Henning. Dr. Lehr successfully completed his doctorate at Karlsruhe University of Education in November 2010. He founded the STC for Professional Learning, Education Management and IT, a member of the Steinbeis Network, in 2010.

Steinbeis – a technology satellite. Computer graphics by Prof. Alfred Lutz for the 2011 Steinbeis Day

(In German only) Alfred Lutz | Steinbeis-Stiftung (Hrsg.)

ISBN 978-3-941417-76-2

If you look carefully at the activities Steinbeis is involved in, the picture is of an economic development enterprise that has generated unparalleled growth in Germany over the past thirty years, and now even beyond the borders of Germany. What has been its success formula? The key message conveyed by Steinbeis is Technology, Transfer, Application –

which is plausible and understandable. It's a message with a calming undertone of abiding sustainability. Steinbeis is an oasis of calm in a field marked by dynamic activity. A marriage of stability and change. Any artist or designer would find it interesting to explore whether the way people look at a company is also mirrored by its visual communication – such as the company logo. With Steinbeis, it certainly is. Even in the early days, Stein-beis used a square in its logo. In semantic terms, this fundamental geometric shape conveys stability, authority and calm. This became the basis for a series of designs that went on display at the 2011 Steinbeis Day. The guidelines included the basic shapes of geometry, and the square as a fundamental element and symbol of stability, in combination with a triangle and circle representing conflicts between growth and flexibility. The entrepreneurial processes of Steinbeis are multifaceted: give impetus, create synergies, and facilitate cooperation, to name but a few. For an artist, these associations are a source for creating fascinating graphical compositions that make a strong visual impression and are laden with emotion. This catalog presents works created by Alfred Lutz for the exhibition "Steinbeis –a technology satellite" held at the 2011 Steinbeis Day in Stuttgart's Haus der Wirtschaft.

About the artist

Prof. Alfred Lutz is a freelance and commercial artist. After seeing success in international competitions and having a variety of his works published in design magazines, he worked as freelancer for BASF in Ludwigshafen between 1950 and 1960 in the field of visual print media and trade show booth design. In 1970, he was asked to set up the Graphical Design/Visual Communication Department at the University of Design in Schwäbisch Gmünd, where he was vice-chancellor between 1979 and 1984. He first came into contact with Steinbeis in the early 1980s when he designed annual reports, exhibitions and books for the foundation. In 1987, he founded the Steinbeis Transfer Center for Media Design, which he headed up until 1992.

Other recent publications:
The 2011 Steinbeis Day –
Collected proceedings.
(In German only)
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The 2011 Löhn Award Yearbook –
The Transfer Prize of the
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Transfer Entrepreneurship
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Ferdinand Steinbeis
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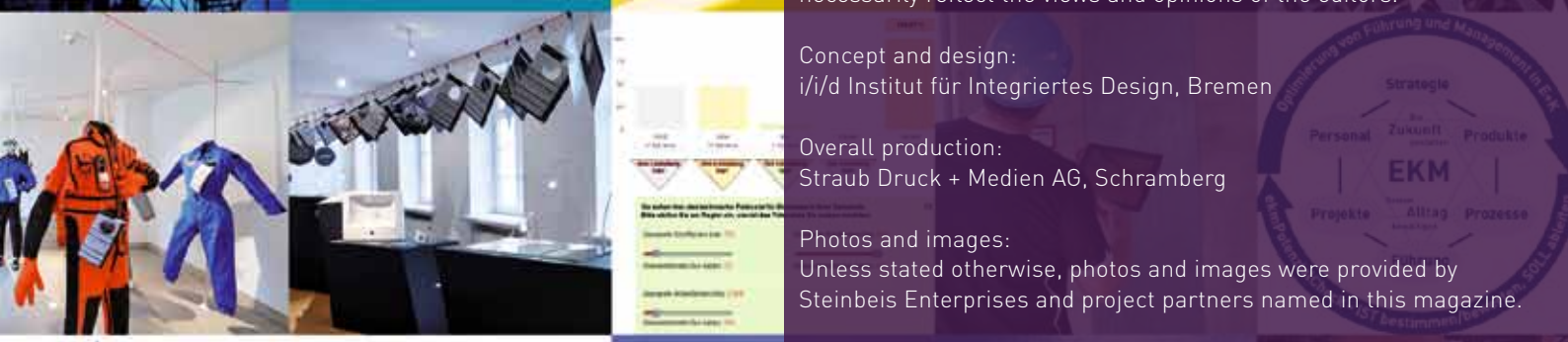

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