

TRANSFER

The Steinbeis Magazine

Engine innovation

**“My PCD helped me to progress:
personally and professionally”**

TRANSFER speaks to Zoltan Barcza, graduate of
Steinbeis University Berlin

You do the research, we do the rest

The Steinbeis Northeast Team lends its support in managing
projects and securing third-party financing

Memorizing and mastering the melody of finance

Companies are finding it tough drumming up credit
at the moment

Collective Intelligence

Steinbeis University Berlin research workshop

Content

Editorial	Page 3
The challenge of energy efficiency Experts debate issues in a Steinbeis symposium	Page 4
Innovative diagnostic methods for pharmaceutical and biomedical technology From Reutlingen to Israel: technology transfer beyond borders	Page 6
“My PCD helped me to progress: personally and professionally” TRANSFER speaks to Zoltan Barcza, graduate of Steinbeis University Berlin	Page 8
How to win with BPO Doctorate studies at Steinbeis University Berlin	Page 9
You do the research, we do the rest The Steinbeis Northeast Team lends its support in managing projects and securing third-party financing	Page 10
Steinbeis-Edition recent releases	Page 11
Memorizing and mastering the melody of finance Companies are finding it tough drumming up credit at the moment	Page 12
Leading employer: TZM	Page 13
SHB spotlight	Page 14
Collective Intelligence: Pinpointing the Wisdom of Crowds Steinbeis University Berlin research workshop	Page 16
Call for Papers Business + Innovation Steinbeis Executive Magazine	Page 18
Steinbeis team from Pforzheim wins Innovation Award CeBIT 2009 achievement	Page 19
“Investing in education and research is vital during times of economic turbulence” TRANSFER speaks with Prof. Dr. Heinz Trasch, Chairman of the Board of the Steinbeis Foundation	Page 20
Keeping the windmill turning even in difficult times A catalog of measures for medium-sized businesses	Page 22
Steinbeis opens the door to Russian SMEs Building a network of partner firms in Russia	Page 23
Balluff scoops the Baden-Württemberg Competence Prize Breaking technology barriers – and adding customer benefits	Page 24
Outer suburbs take center stage SHB student named German metropolis’s first city district manager	Page 25
“Young Founders” – a success story Welcome to San Francisco! The 2008 winning team tours the US	Page 26
The 2009 Steinbeis Day Research & Development – powering the way out of the economic crisis	Page 27



News

News	Page 28
-------------	---------



Editorial

Dear readers,

"Prediction is very difficult, especially about the future." This highly insightful quotation has been attributed to a number of gentlemen over time, among them Winston Churchill and Mark Twain, and in today's turbulent times of economic instability, it feels even more fitting than in times of tranquillity. Now, more than ever, people and companies are crying out for pointers on the road ahead, signposts from trusted sources they can rely on – even for the immediate future, such as the next quarter or 12 months.

Companies have a remarkable, often overlooked resource which they can easily tap into to improve their prognosis: the knowledge of their people. In no other area will you find such a rich blend of experience and skills as in company's key players. By systematically tapping into the knowledge of each individual, companies gain access to "the wisdom of crowds", or what some would call collective intelligence.

To shed light on the various entry points to collective intelligence – especially fields such as swarm intelligence, prediction and information markets, open innovation exchanges and opinion mining – the Steinbeis University Berlin's School of Management and Innovation (SMI) organized the SMI spring workshop on collective intelligence with the Ferdinand Steinbeis Institute (FSTI). A variety of experts from other universities and enterprises were invited to the event, as well as members of the Steinbeis network. In this edition of Transfer Magazine, we have provided a synopsis of the workshop, which

demonstrated clearly that tools for innovation help create opportunities for small, locally networked teams – as well as global companies – to put the knowledge of every individual to good use. What's more, this can be done in real time and at relatively low cost, no matter what level of the organization employees work at. This makes it possible for each individual to play an active and concerted role in shaping the course of company strategy and management.

The Steinbeis Network has an unrivalled potential to further the application of collective intelligence processes. The competitive transfer of knowledge and technology allows project partners to build know-how networks and thus identify creative ways to come up with valuable new concepts. Recognizing and fostering the potential of employees to collectively develop new solutions will be a key task of the managers and leaders of the future. Long-term, forward-looking management of concepts and talent does not focus on decisions made in isolation. It draws efficiently on every available source of information – local and global, inside and outside the company.

Once again, we have seen that applied knowledge and technology transfer can be a win-win situation for everyone involved. We hope you find inspiration in the transfer projects outlined in this edition and are encouraged to share your own knowledge. The Steinbeis network is the ideal environment for doing precisely that.



A. Aulinger
Prof. Dr. habil. Andreas Aulinger



Max Pfeiffer
Max Pfeiffer

Prof. Dr. habil. Andreas Aulinger is a Professor of Organization and Program Director at the SMI School of Management and Innovation at Steinbeis University Berlin. Max Pfeiffer is head of the Ferdinand Steinbeis Institute in Stuttgart.

To read more about Steinbeis University Berlin's SMI spring workshop on collective intelligence, turn to page 16.

Experts debate issues in a Steinbeis symposium

The challenge of energy efficiency

At the Steinbeis symposium on "Energy – Efficiency in Application and Transformation" on April 1 – part of a series of events on applied technology – over 120 participants debated issues and challenges concerning energy use and the preservation of resources. The event was organized by the Steinbeis Technology Group (STG), the energy company Shell and the "innovation projects" department of the F.A.Z. Institute. The organizers invited a range of high-profile speakers from industry and academia to the one-day event at the Haus der Wirtschaft in Stuttgart.



supplies and protecting the climate in industry. In the second session, Professor Dr. Gunter Henn – the architect behind Volkswagen's Autostadt (car city) attraction in Wolfsburg and the Gläserne Manufaktur in Dresden – lectured on social and technological sustainability. Panjörg Salzmann of the firm DIW Instandhaltung gave the third lecture, in which he examined energy-efficient operation from operational and economic perspectives. Finally, Martin Mönig from ZF Sachs brought the plenary sessions to a close, speaking on aspects of energy procurement and resource preservation in factories.

Using resources intelligently – especially energy – has become essential for companies to safeguard financial success. Because if energy reserves dry up, industrial production becomes impossible.

By 2050, energy demand will outstrip the supply that can be generated from dwindling fossil fuels. This means we need to recognize the relationship between using resources efficiently and generating value-added – never forgetting that a sustainable energy supply is vital for the future.

The Steinbeis symposium offered participants a platform to debate key issues surrounding energy supplies, efficiency and the preservation of resources with high-profile speakers from industry and academia. Dr. Jörg Adolf from Shell

Deutschland Oil led the first of the day's four plenary sessions, discussing the challenges inherent in managing energy

In the afternoon, following the plenary sessions, two expert panels discussed the challenges involved in optimizing the relationship between using resources and adding value.



From left to right: Dr. Jörg Adolf, Karl Greißing, Daniel Schleidt, Prof. Dr.-Ing. Ulrich Günther and Prof. Dr.-Ing. habil. Eckhard Beyer discuss economical and environmental aspects of energy efficiency.

The panels discussed product development and production processes in complex manufacturing, as well as plant availability, based on the principle of "avoid rather than utilize" (with regard to functional materials, lightweight construction, product and process substitution, hybrids and near-net shape processes). The panels also addressed conventional and alternative approaches to energy generation and use (fossil, wind, solar, geothermal, etc.)

Daniel Schleidt of the F.A.Z. Institute led the closing podium discussion, in which Karl Greißing of the Baden-Württemberg Ministry of Economics, Dr. Jörg Adolf of Shell Deutschland Oil, Professor Dr.-Ing. habil. Eckhard Beyer of the Fraunhofer Institute for Material and Beam Technology and Prof. Dr.-Ing. Ulrich Günther of Steinbeis University Berlin addressed the challenge of energy efficiency in light of conflicting ecological and economic priorities. A specialist exhibition was also part of the conference.

The day's events were met with an overwhelmingly positive response – showing that the symposium delivered on its goal of providing suggestions and problem-solving approaches for a successful switchover to energy efficiency.

Abstracts of all presentations can be found in the conference transcript, which is available to download at www.stw.de (in the Events section). Print versions are also available for order from Steinbeis-Edition.

Prof. Dr.-Ing. Ulrich Günther
Steinbeis-Technology-Group
Steinbeis University Berlin
Berlin/Stuttgart
stz778@stw.de

Speakers and lectures:

- Energy supply management and climate protection – future challenges for industry
Dr. Jörg Adolf, Shell Deutschland Oil
- Energy efficiency as a driving force behind renewable energy – as demonstrated by wind power
Dr. Andreas Basteck, Voith Turbo Wind GmbH
- Economical and renewable energy technology in industry
Jörg Baumgärtner, EGS Plan, Ingenieurgesellschaft für Energie-, Gebäude- und Solartechnik, mbH
- Solar technology in production and application
Alexander Bayerlein and Roland Sillmann, Inventux Technologies AG
- Energy efficiency in the development and use of machine tools
Thomas Bayha, MAG Powertrain
- Increasing energy efficiency by reducing friction
Prof. Dr.-Ing. habil. Eckhard Beyer, Fraunhofer Institute for Material and Beam Technology IWS
- A tool manufacturer's perspective on preserving resources in component machining
Jörg Drobniowski, Walter AG/Prof. Dr.-Ing. Ulrich Günther, Steinbeis University Berlin/Charsten Wienbreyer, Shell Lubricants
- Test methods and equipment to increase energy efficiency in lightweight construction
Hon.-Prof. Dr.-Ing. Thomas Fleischer, IMA Materialforschung und Anwendungstechnik GmbH
- Optimizing drive train performance with fluid design
Dr. Eric Froböse, Shell Global Solutions (Germany)
- Using ball bearings as a key to increased efficiency
Dr. Arbogast M. Grunau, Schaeffler KG
- Strategies to increase energy and material efficiency in production
Prof. Dr. Günter Haag, STASA Steinbeis Angewandte Systemanalyse GmbH
- Energy efficiency in machine tool construction and operation
Guido Hegener, EMAG Salach Maschinenfabrik GmbH
- Social and technological sustainability
Prof. Dr. Gunter Henn, Henn Architects
- Regional developments in renewable energy: a case study of the autonomous Italian province of South Tyrol
Dr. Hubert M. Hofer, TIS innovation park
- Energy efficiency: opportunities and potential in the plastic injection molding industry
Martin Hoyer, Arburg GmbH & Co. KG
- Plasma at atmospheric pressure: energy efficient production of solar cells
Prof. Dr. rer. nat. habil. Stefan Kaskel, TU Dresden
- Optimizing resources when using cooling lubricants in metal processing
Arno Kiechle, Daimler AG
- Energy efficient construction with near-surface geothermal energy
Edmond D. Krecké, TSW Terra-Sol international association for science and economy
- Aspects of procurement and resource preservation in factory management
Martin Mönig, ZF Sachs AG
- Energy-efficient drive and storage systems
Jörg Neugärtner, A. T. Süd GmbH
- An overall perspectives of energy-efficient operation
Panjörg Salzmann, DIW Instandhaltung Ltd. & Co. KG
- Efficient use and storage of renewable energy
Dr.-Ing. Peter Werth, Wolf tank Systems S.r.l. – GmbH

From Reutlingen to Israel: technology transfer beyond borders

Innovative diagnostic methods for pharmaceutical and biomedical technology

Mediagnost, an SME based in Reutlingen, owes its success to its close ties with research facilities at the University of Tübingen. The company, which develops diagnostic solutions for customers in the pharmaceutical and biomedical technology industries, is closely involved in research projects which aim to develop ever more efficient and sensitive diagnostic methods using the latest technology. Thanks to the support of Steinbeis-Europa-Zentrum, Mediagnost was able to promote its products across Europe and make contact with technology firms and research institutes from other countries. Many of these initial contacts have now blossomed into fruitful partnerships.



Photo: [photocase.de/kyro](https://www.photocase.de/kyro)

Mediagnost develops, manufactures and markets testing systems for a range of applications in infection diagnostics and endocrinology. The company offers a broad range of services, from the production of antibodies, proteins and viruses to identifying samples in assays and packaging raw materials.

Thanks to its proximity to the University of Tübingen and a myriad of links with other research institutes, Mediagnost is in a position to bring technological developments from the frontiers of science straight to the customer – technology transfer par excellence. As Mediagnost is keen to maintain international partnerships, the company has been collaborating with institutes such

as Steinbeis-Europa-Zentrums (SEZ) for a number of years. SEZ offers services which help firms like Mediagnost benefit from international technology transfer and EU research funding.

For Dr. Andrea Normann, Product Line Manager for Molecular Diagnostics at Mediagnost, the chance to join business delegations to Romania and Israel was one too good to miss. In both countries, SEZ organized meetings and training sessions for female entrepreneurs interested in forming partnerships with firms from Germany and other EU countries. To make this happen, SEZ collaborated with the Romanian Chamber Of Commerce – which provided organizational assistance on the ground in Romania – and

with a research institute in Israel. The trips were financed by the European Commission as part of WE-Mentor, an EU project coordinated by SEZ.

The trips gave Dr. Normann the opportunity to introduce her company to female entrepreneurs and researchers in Romania and Israel, and present promising ideas for future research partnerships. Confidential one-on-one talks with female representatives of industry and research provided the perfect opportunity to discuss potential research topics in more detail and elaborate future partnerships. Normann was also able to present herself as a role model to female colleagues in Romania and Israel, and to

Mediagnost

The Mediagnost Association for Diagnostics Research and Manufacture was founded in Tübingen in 1985, and rapidly grew into an innovative, international biotech firm which currently has 20 employees. Mediagnost is based in the Tübingen-Reutlingen Technology Park and specializes in contractual diagnostics, production of diagnostics, and diagnostic testing systems.

Mediagnost helps perform routine diagnosis of *Pseudomonas aeruginosa* infections in collaboration with the Institute for Medicinal Microbiology and Hygiene at the University Hospital Tübingen. Infections of this type can lead to inflammation of the lungs, infected wounds and sepsis. In addition, Mediagnost has over 20 years' experience in developing and producing antibodies, proteins and viruses, with particular expertise in the production of hepatitis viruses. Mediagnost and its partners constantly strive to identify new diagnostic markers.



The next generation of female scientists surveys the research landscape in Israel. SEZ organized this trip as part of the German-Israeli Year of Science and Technology, an initiative spearheaded by the German Federal Ministry of Education and Research

showcase Mediagnost as a textbook example of innovation in business.

Steinbeis-Europa-Zentrum organized the trip to Israel for female scientists as part of the German-Israeli Year of Science and Technology 2008, an initiative spearheaded by the German Federal Ministry of Education and Research. The German-Israeli Year aimed to showcase bilateral scientific partnerships between the two countries, highlighting their excellence and diversity. Furthermore, it aims to promote Germany as a research location in Israel. Andrea Normann was one of 16 female scientists and academics from the German states of Baden-Württemberg, Bavaria and Lower Saxony who traveled to Galilee in the north of Israel in November 2008. Spanning a range of fields including biology, medicine, social science, economics and humanities, the German experts presented research proposals and conducted over 60 discussions with female Israeli colleagues.

Just a month later in December 2008, the Israeli researchers visited Germany, including a visit to Mediagnost. This gave Andrea Normann the chance to highlight her com-

pany's research links to the University Children's Hospital Tübingen and the Natural and Medical Sciences Institute (NMI). She was also able to engage in more in-depth talks with members of the Israeli delegation and discuss specific project ideas.

As a result of the trips and the contact opportunities they offered, Mediagnost and the University of Tübingen were able to sign four cooperation agreements with partner institutes in Israel. The trips have also led to a joint application for an EU project between the University of Tübingen and the Galilee Technology Center (MIGAL), allowing the two institutions to exchange students and learn from each other. Mediagnost also established promising contacts with Maccabi Group Holding in Tel Aviv, opening the door to possible future partnerships concerning the development of diagnostic methods.

International technology transfer with SEZ

Steinbeis-Europa-Zentrum is one of around 600 partners which make up the Enterprise Europe Network, created by the European Commission in January 2008. The network helps firms at the frontiers of innovation make new contacts and establish bilateral technological partnerships. SEZ encourages the development of international partnerships by organizing business delegations for entrepreneurs, as well as cooperation forums involving European partners. SEZ offers firms the following services:

- Innovation workshops aimed at analyzing company's strengths and weaknesses
- Active monitoring of technology across Europe with the Service Tech Alert
- Identification of areas for potential cooperation
- Assistance in searching for EU projects and project results
- Creation of a search profile and assistance in finding license and technology partners
- Management of cooperation agreements (industrial property rights, licenses)
- Participation in international cooperation forums and business delegations for entrepreneurs
- Development of future strategies

Prof. Dr. Norbert Höptner
Dr. Petra Püchner
Valerie Bahr
Steinbeis-Europa-Zentrum
Stuttgart
stz1216@stw.de

TRANSFER speaks to Zoltan Barcza, graduate of Steinbeis University Berlin

“My PCD helped me to progress: personally and professionally”

Zoltan Barcza is a true all-round European: the 32-year-old graduate of the School of International Business and Entrepreneurship (SIBE) at Steinbeis University Berlin (SHB) grew up in Hungary, completed his MBA in Germany and is now the Regional Director for Hungary, Romania, Turkey and Israel at the firm Roediger Vacuum. We met up with Zoltan to talk about life as a young manager.



Zoltan Barcza

Mr Barcza: your degree was centered around a real-world project, as are all project competence degrees offered by Steinbeis University Berlin. What did your project involve?

I completed my MBA project at a subsidiary of Bilfinger Berger which aimed to expand in eastern Europe. Our team was assigned a major task: to complete a thorough market analysis of several countries in eastern Europe and determine whether the company could successfully expand into them. After finishing the analysis, we then had to rank the countries in order of suitability for expansion.

agreed with almost all my ideas and suggested solutions.

That's certainly quite an ambitious project. The choice of country for expansion and the company's success there depended heavily on your decisions. So, if you'll allow us to jump ahead slightly, what conclusions did your project arrive at?

After analyzing the different countries, it became clear that there was one in particular that we should focus on which was most suitable for expansion: Romania. At this time, our company wasn't active in Romania at all. So my task was to enter the Romanian market, where we had no presence, and publicize our latest technological develop-

As an MBA student, what was your role in this project?

Although the company only has a relatively small number of employees, it is active in over 40 countries. So the core team is very international. Generally speaking, employees tend to come from the countries in which the firm is active – meaning every employee is an expert in their own area of business. As I'm from Hungary, I became responsible for the firm's expansion into a number of eastern European markets. And I'm pleased to say the firm trusted my expertise and

ments. It was a bit like being a missionary! I moved to Romania for a year and only returned to Germany to attend MBA seminars. This made it easy to build contacts to new partner firms and retailers, and I was able to raise the profile of our company's technology very quickly.

All that may sound simple in hindsight, but of course, it requires a highly strategic approach. So how was the project structured – what were the individual steps?

When you've just arrived in a new country, where you don't know anyone and where your company's technology is unheard of, the first step has to be getting to know people – building relationships with local contacts who like the technology and can sway the opinions of key decision makers. This means investing a lot of time and money, especially at the beginning: traveling, meeting contacts, broadening your network. And of course, it's imperative to have a marketing strategy, so you can take part in trade fairs and make sure you're where the action is – it's as simple as that. On a cultural level, I found the most interesting part of the experience was discovering how business is conducted in a foreign country I had no previous experience of.

How did your MBA studies help you to complete the project and achieve your career goals?

After studying with Steinbeis for two years, I recognize the benefits of the "project competence degree" concept more than ever. The MBA program really helped me develop:

both personally and professionally. I enjoyed managing my own project for two years and also being able to follow the projects of my fellow MBA students – around 20 of them. I would have appreciated more one-on-one supervision from lecturers – that's one area of the MBA program that I'd pinpoint for improvement. But Steinbeis University Berlin is the only institution that offers MBA programs which combine working and studying, or "learning and doing". Not only that, the company which commissions the project pays for the degree. If I'm talking to people not familiar with Steinbeis University, I simply explain the concept to them and they quickly recognize the benefits. The course certainly lived up to my expectations, and I think it'll really help my career, too.

One final question, Mr Barcza: what was your most valuable experience during your MBA studies?

If you'll allow me to use an analogy for a moment: imagine you're a lumberjack out in the forest, felling trees with a blunt saw. You work hard and you fell a lot of trees, but of course, your boss wants you to fell even more – so you work even harder and even longer. It's an all too familiar situation. But the most sensible thing to do would be to stop for a moment, take stock of the situation, and sharpen the saw. Simple as that. Studying with Steinbeis for two years gave me a good opportunity to sharpen my saw. Now I hope we can maintain a strong alumni network, so my fellow graduates and I can remain in contact with each other now that we've all completed our degrees.

Jens Mergenthaler
School of International Business and
Entrepreneurship (SIBE)
Steinbeis University Berlin
Berlin/Herrenberg
stz1249@stw.de

Doctorate studies at Steinbeis University Berlin

How to win with BPO

Business process outsourcing (BPO) has been growing in popularity over recent years – as it allows firms to focus on their core areas of expertise. Despite the operational and strategic risks it may entail, BPO can significantly reduce costs across the board while boosting service quality. It can also save time – in areas such as product development. Jan Bartenschlager analyzed the potential impact of BPO on company success in a research project at the Steinbeis Center of Management and Technology (SCMT), part of Steinbeis University Berlin. He has now completed his dissertation – the first doctoral student to graduate from the university.

Despite the well-known operational and strategic risks, BPO can be an excellent opportunity for companies to cut costs, make use of variable resources or achieve other company goals. But the complex interactions between BPO and company success are still not fully understood. To shed light on this area, Jan



Dr. Jan Bartenschlager

Bartenschlager worked in partnership with Navisco AG to conduct theoretical and empirical research into the myriad of links and interactions between BPO and company success. As part of an empirical study, he invited over 1000 firms with experience in BPO to participate in a survey. Of these, around 120 responded by completing a standardized questionnaire. In his dissertation, Bartenschlager has now outlined the foundations and best courses of action for successful BPO.

Jan Bartenschlager studied business administration at Hamburg University, and completed his research project while working as a consultant at Navisco in Hamburg. Today, he is an associate partner at ZELOS Management Consultants. His

work and research focuses on assessing sourcing strategies and sourcing management, and implementing value-based management strategies as well as company-wide cost allocation and service accounting systems. Jan Bartenschlager is a member of the Steinbeis Certified

Consultant certification board.

Copies of the dissertation can be obtained from Steinbeis-Edition at www.steinbeis-edition.de:

Erfolgswirkung des Business Process Outsourcing – Effekte vom BPO auf die strategischen Erfolgsfaktoren und den Erfolg von Großunternehmen in Deutschland
(The impact of business process outsourcing on company success – the effects of BPO on strategic success factors and the success of large scale enterprises in Germany)

Jan Bartenschlager
ISBN 978-3-938062-85-2
Steinbeis-Edition, Stuttgart

The Steinbeis Northeast Team lends its support in managing projects and securing third-party financing

You do the research, we do the rest

"We don't conduct research ourselves, but we help facilitate world-class research by providing scientists and companies who do this kind of work with the right tools," says Frank Graage, head of the Steinbeis Research Center (SFC) Technology Management Northeast. With the support of the Steinbeis main office, Graage founded the SFC in 2001 in the northern German city of Rostock.



The Steinbeis team from left to right: Frank Graage, Anke Wagner, Henner Willnow, Dr. Gertraud Klinkenberg, Heike Gesk

Since then, he and his team have done more than co-commission and co-supervise countless Transfer Network projects – they've played a key role in establishing 30 Steinbeis Enterprises in the German state of Mecklenburg-Western Pomerania.

Over the past eight years, the SFC team has broadened its services to meet growing customer needs. Now the third pillar of the SFC's portfolio – professional development – runs alongside consultation and first-hand support.

Why the third pillar? Scientists and engineers from all walks of research kept asking the same questions: How do I write a proper application for the EU? How do I manage my research project? Present my project? Market my results? Frank Graage

saw this as an opportunity to organize a series of seminars with his associates in the Steinbeis Transfer Network. "Young scientists in particular are extremely interested in learning new skills," reports Graage. "This earns them greater respect in workgroups, and, of course, they reap immediate benefits, one of them being an application approved by the European RTD framework program." The series addresses the specific needs of scientists as well as companies who conduct research, especially those looking for real-world professional development. The seminars are designed to allow instructors to integrate their own experiences into the lesson while leaving plenty of time for practical exercises that help participants work on their own scientific subjects. In a project management course, for example, participants will draft a strategy for their current or upcoming projects; most participants of an EU application seminar will leave the course with an initial outline of their very own application.

Zuzana Hugonin, a Slovakian Ph.D. candidate working in the Inorganic Chemistry department at the University of Stockholm, reflects on the workshops she attended on "management in research": "I didn't realize how many mistakes I could have avoided in my projects. But now I know what to improve. I'm definitely going to use this new information in my scientific work. It's clear to me now that using my head when preparing and organizing my tasks will give me more time to do my work and help keep me flexible."

The Steinbeis team's customers hail from northern Germany and neighbors from across the Baltic Sea. Workshops are co-run with research institutes in Vilnius (Lithuania) and Turku (Finland); meetings and consultations are set in Gdansk and Cracow (Poland), Greifswald (Germany), and Copenhagen (Denmark). The workshop on how to write a successful application for EU funding is now a regular feature of the annual world-class ScanBalt Forum,

hosted in one of the Baltic Sea's "bioregions" and attended by internationally renowned professionals. The Steinbeis team also sees something of the south and west, holding workshops in Würzburg, Göttingen and Berlin.

Frank Graage particularly enjoys hosting a week-long "Research Management Boot Camp" on the Baltic Sea. "It strikes the perfect balance," he boasts. "Participants can leave their research hum-drum at the door and learn a broad set of new skills. And the area around Rostock is the perfect 'workshop environment'. Taking a walk on the beach during lunch or an evening paddle out on the water – that's what makes learning fun!"

Henner Willnow
Steinbeis Research Center Technology
Management Northeast
Rostock
stz885@stw.de

Steinbeis-Edition recent releases

Know – Read – Learn

Steinbeis-Edition publishes the expert knowledge within the Steinbeis Transfer Network.

Visit our online shop at www.Steinbeis-Edition.de to order titles at your convenience.

Erfolgswirkung des Business Process Outsourcing – Effekte vom BPO auf die strategischen Erfolgsfaktoren und den Erfolg von Großunternehmen in Deutschland

Jan Bartenschlager

ISBN 978-3-938062-85-2



The German dissertation of Jan Bartenschlager, a graduate of Steinbeis University Berlin. For more information, please see page 9.

Linear Control Systems Analysis and synthesis – Theory and applications

Florin Ionescu and Florin Stratulat

ISBN 978-3-938062-72-2 (English)

Linear Control Systems with MATLAB® contains 9 chapters and 4 annexes, while each chapter is divided into a short theoretical presentation and a second part of applications, supported by MATLAB®. Examples are focused on a systemic approach of design



and are devoted to induce the user expertise into analysis, the capacity of abstract thinking and theoretical understanding and developing of approaches for an appropriate solving algorithm, the use of MATLAB® Libraries and the evaluation of the obtained results for further approaches. This part is detailed and is leading the user into the basic mathematical principles, is preparing him to select of the solving solution, while MATLAB® routines are supporting him.

Britta Faisst
Steinbeis-Edition
Stuttgart
britta.faisst@stw.de

Companies are finding it tough drumming up credit at the moment

Memorizing and mastering the melody of finance

Banks have tightened the credit purse strings in recent months, setting the yardstick higher and higher as a direct reaction to the downturn in the global economy. Their aim: to make sure nobody has to default on their loan. According to a survey conducted by the German Bundesbank of a representative sample of financial institutions, the standards applied to corporate finance agreements in the last quarter were even stricter than normal. Even if companies are given credit, they have to provide more guarantees than they used to. Most banks have exploited sinking interest rates to improve their margins. Only a fraction of the three per cent drop in European Central Bank (ECB) interest rates announced last October has been handed on to banking customers. Despite the restrictive approach taken by the banks, the Frankfurt-based Steinbeis Consulting Center Medium-Sized Businesses Financing and Investments has developed financial concepts for a number of medium-sized companies – and successfully translated them into practice.



Photo: photocase.de/DJ

The right preparation and innovative ideas can help companies attract the financial backing they need. One company in the automotive sector, set up only three years ago, grew so rapidly that its turnover is

already in the tens of millions of euros. To maintain its course of expansion, it needed a new injection of funding, so in December of last year, the company approached its bank – only to be left hanging

until mid-February. By this time, the owner had decided to call in the specialists from the Frankfurt Steinbeis Consulting Center Medium-Sized Businesses Financing and Investments.

Less than two weeks after the initial meeting, the company's owner received a financial rating detailing the current status of his company. Next came an evaluation of the firm's financial gearing and its actual finance requirements. In the third and final step, the Steinbeis experts issued an executive summary complete with a funding concept for new investment.

The proposed funding concept involved partial collateral from public funds and the use of a dormant holding equivalent to 25 per cent. This approach made it possible to raise the proportion of proprietor's capital to more than 30 per cent on the December 2008 balance sheet, giving the company a much more stable financial footing. With the dormant holding option, the financing costs for the 25 per cent share of capital may have been higher, but this was compensated for by lower finance charges for borrowed capital. The good rating and investment gearing made it possible for the company to achieve an average interest rate for borrowed capital of less than four per cent.

Previously, the company was wholly dependent on a single bank. The Steinbeis experts therefore considered it important to select another source of finance and start using it. To do this, they whittled their selection down to four banks, which were then invited for interviews.

The banks were shown the full background of the company and introduced to the planned financial concept. They were also given an opportunity to outline their strengths in providing finance to medium-sized companies. Just six weeks later, the company was making its first credit decisions – and after weighing up the options, it selected the bank that best matched its long-term needs. One central aspect of the company's decision was whether the bank also had subsidiaries outside Germany, which would allow the firm to build up an international cash management system in the years to come.

Looking back on the project, it is clear that by providing a detailed funding proposal, the advisors from the Steinbeis Consulting Center Medium-Sized Businesses Financing and Investments made it possible for the company to considerably broaden its financial base and reduce its dependence on a single source of funds, simply by using two banks. The company's gearing remained stable and a further two million euros of funding were obtained. The terms of funding improved by more than two per cent compared to the terms previously offered by the company's original bank.

None of this would have been possible without knowing which "financial melodies to play", combined with careful preparation before meeting with banks and credit institutes. Funding from banks is extremely tight at the moment and the situation is not likely to improve in the months to come – which is why it is now more important than ever to prepare discussions with banks professionally and carefully. As specialists in financial issues, the Frankfurt-based Steinbeis consultants understand the ins and outs of banks and the demands they make, and know exactly how to prepare for interviews and evaluations. This means they can negotiate with banks on a level playing field when acting on behalf of their clients.

Dieter Dorn
Steinbeis Consulting Center Medium-Sized
Businesses Financing and Investments
Frankfurt
stz1180@stw.de

Leading employer: TZM

The Göppingen-based Steinbeis Transfer Center for Microelectronics (TZM) is one of Germany's "Leading Employers of Engineers 2009". This was the finding of the second edition of "Top Employers" – a study aimed at engineers, published by research company CRF in cooperation with consultants A.T. Kearney, the Technische Universität München (Munich) and a panel of independent business journalists.

Firms are always on the lookout for the type of innovative thinking offered by German engineers – and the engineering job market is still buoyant, even in the current economic climate. As a result, engineers assess potential employers according to a careful list of criteria. How international are they? Do they offer good entry options and career potential in my field? And which companies really put the innovation skills of their engineers to good use? These are just some of the criteria used to rate companies in the study.

The TZM received outstanding scores for remuneration, work/life balance, career progression and innovation management. It was also praised for job security and the company culture. Founded in 1991, the Steinbeis enterprise helps clients develop and test hardware and software for a variety of applications. In recent years, it has specialized more in the core fields of software development and engineering services.

Steinbeis Transfer Center Microelectronics
Göppingen
stz130@stw.de

Several SIBE degrees gain FIBAA accreditation

Quality requirements exceeded on several fronts

The Master of Arts in Management and Master of Science in International Management at SHB's School of International Business and Entrepreneurship (SIBE) have gained official accreditation from the Foundation for International Business Administration Accreditation (FIBAA). In a number of areas, they even exceeded FIBAA quality standards. In their closing report, the FIBAA experts emphasized the particular strengths of SIBE degrees as being the selection process, the marriage of theory and practice, the fostering of career skills, the positioning of the degrees in the education and employment market, and the teaching concept.

According to the FIBAA auditors, the tuition style and methodology at the SIBE "provides plenty of room for active, participatory teaching and learning methods, thus taking into account the aims of the project competence degree – to foster students' profes-

sional abilities and help them transfer [insights] into their future roles as managers". As studies are integrated into live projects within companies, graduates of the master's degree programs demonstrate excellent professional skills. Commenting on this, the

FIBAA experts wrote, "As the development of professional skills plays a central role in all stages of a degree and [the degrees are] systematically tailored to the needs of the job market, it is hardly surprising that graduates have few problems finding work." Central to this is the role played by careers advice and the SIBE placement service – which also exceeded FIBAA quality standards.

Patricia Mezger
School of International Business and
Entrepreneurship (SIBE)
Steinbeis University Berlin
Berlin/Herrenberg
stz1249@stw.de

The BSc in Physician Assistance produces its first graduates

A success for graduates

Earlier this year, the first graduation ceremony took place for students completing a Bachelor of Science in Physician Assistance. Thinking about the future, Prof. Dr. Marc O. Schurr, Director of the Steinbeis Transfer Institute for Healthcare Industries (IHCI), emphasized the role played by the degree in promoting healthcare careers.

Speaking on behalf of the university and his department, Prof. Schurr congratulated the first ever graduates of a German Bachelor of Science in Physician Assistance. And in the graduation address, the degree's clinical program director Prof. Dr. med. Stefan Bauer, MBA, Senior Physician at MediClin Herzzentrum Lahr/Baden GmbH & Co. KG, looked back on his time with the students, highlighting the importance of clinical instruction as part of the program. Prof. Bauer also discussed the emergence of Physician Assistance as a new field of medical education.

Dr. med. Jürgen Ennker, a private lecturer, medical director and senior consultant in the heart, thoracic and vascular surgery department of the MediClin Heart Center, used

his speech to explain the role played by physician assistants in open heart surgery and described his experience as a clinical director. The welcome address on behalf of the European Board of Cardiovascular Perfusion was given by Dipl.-Med. Päd. Frank Merkle, Director of the Steinbeis Transfer Institute for Perfusion at the German Heart Institute in Berlin. Bringing the ceremony to a close, SHB President Prof. Dr. Dr. h. c. mult. Johann Löhn presented the graduates with their graduation certificates.

Prof. Dr. med. Marc O. Schurr
Steinbeis Transfer Institute for Healthcare
Industries
Berlin/Tübingen
stz628@stw.de

A partnership between School GRC and

Even closer links between and compliance

The German chapter of the Association Of Certified Fraud Examiners (ACFE) and the School of Governance, Risk & Compliance (School GRC) at Steinbeis University Berlin (SHB) will be working even more closely with each other on training programs in the future.

Thanks to the new partnership, professional qualifications gained by Certified Fraud Examiners (CFE) now count towards a state-approved MBA specializing in Governance, Risk, Compliance & Fraud Management.

Praising the partnership and commenting on the benefits it will bring to his members, Tom Woodson, Chairman of the German chapter of the ACFE, said, "The professional qualification to become a certified fraud examiner now offers even wider practical and scientific applications – and

A new bachelor's and master's degree program specializing in real estate

Winds of change sweep through the property market

Complex fiscal issues, portfolio strategies, innovative marketing, the accelerating pace of internationalization – these are all key topics which play an ever more prominent role in today's real estate market. As any professional involved in the property market will tell you, managers are facing increasing pressure on all sides. Against this backdrop, the Center for Real Estate Studies (CRES) is now offering two bachelor's and master's degrees for people in full-time employment. The CRES is the result of a partnership between the School of Management and Innovation (SMI) at the SHB and the German real estate academy Deutsche Immobilien-Akademie (DIA).

The Bachelor of Arts in Real Estate is an undergraduate business administration and real estate management degree that dovetails closely with programs offered by the DIA. Students are also enrolled at SHB's CRES, allowing

them to benefit from an integrated study program. This study program at the CRES is thus a shining example of "academic permeability" – exactly what German politicians and business people have been demanding for decades.

The postgraduate Master of Arts in Real Estate explores strategic real estate management in greater depth. A specialized degree, it is targeted at experienced professionals who already have a university degree, albeit less specialized. Students are given complex tasks to complete and thus learn how to merge different disciplines and implement successful business strategies. To complement modules, students can also opt to attend a summer school outside Germany. The Master of Arts in Real Estate degree program starts in the autumn of 2009. Entry to both programs is possible at any time and all applications are welcome.

Nina Peiris
School of Management and Innovation (SMI)
Steinbeis University Berlin
Berlin/Stuttgart
stz405@stw.de

the ACFE en fraud prevention

is also gaining even greater acceptance among universities."

The MBA degree at the School of Governance, Risk & Compliance is centered on the prevention of fraudulent practice, compliance, and corporate governance. The fifth intake of students is due to start in October of this year.

Melanie Reichelt
School of Governance Risk & Compliance
Steinbeis University Berlin
Berlin
stz1142@stw.de

A new institute offering managers a new way to gain qualifications

Sustainable leadership at Steinbeis University

"The managers of tomorrow will be judged by the amount of responsibility they assume for entrepreneurial undertakings worldwide – including through personal action." That's the belief of Prof. Dr. Wilfried Mödinger, head of the recently founded Steinbeis Transfer Institute IBR Institute of Sustainable Leadership at Steinbeis University Berlin.

The aim of the institute is to allow managers to gain qualifications in sustainable leadership and value-oriented management skills, via a specially-tailored executive management program. The program spans three modules: the contemplation of meaning and personal values in management practice; working as a manager on a global socio-economic project; and the development of new business processes through sustainable management.

The institute offers two different programs: "management expert for sustainable business processes" and a "corporate volunteer and manager sans frontiers". Graduates of

both programs receive certification from the Steinbeis University Berlin. The role played by a "manager sans frontiers" is particularly interesting – managers learn to apply their management knowledge and skills to a global, socio-economic transfer project and thus develop sustainable leadership skills through a mixture of reflection and instruction. The program was developed with the support of the German Manager ohne Grenzen foundation.

Prof. Dr. Wilfried Mödinger
Steinbeis Transfer Institute IBR Institute of Sustainable Leadership
Stuttgart
stz1327@stw.de

Steinbeis University Berlin research workshop

Collective Intelligence: Pinpointing the Wisdom of Crowds

Information markets, prediction markets, swarm intelligence, the wisdom of crowds – even in 2009, mentioning collective intelligence to decision-makers can result in raised eyebrows and inquisitive glances. It also begs a question: what actual use is it for industry today? To look at the issue of collective intelligence, people from science and academia joined managers and technology users at a top-level research workshop in March. The SMI Spring Workshop took place in Stuttgart and was organized by Prof. Dr. habil. Andreas Aulinger and Max Pfeiffer on behalf of the Steinbeis School of Management and Innovation (SMI) at Steinbeis University Berlin (SHB) and the Ferdinand Steinbeis Institute (FSTI).



Image: © iStockphoto.com/Amanda Rohde

Both scientists are closely involved in projects looking at the promotion of collective intelligence. Some of the issues they have stumbled across were discussed with the experts from science and industry at the workshop.

One starting point of collective intelligence research was the work of British scholar Francis Galton. On a visit to a cattle market one day (the "West England Fat Stock and Poultry Exhibition"), Galton monitored a competition to guess the weight of a huge ox. For a sixpence, visitors could submit their guess on a scrap of paper. Around 800 people tried their luck. After evaluating the guesses, Galton discovered that the average of all guesses was less than 0.1% from the actual weight of the ox: its true weight was 1198 lb, the average of all guesses was 1197 lb.

In another area of collective intelligence, researchers pinpointed the amazing ability of swarms of animals. Despite the lack

of hierarchies and the limited cognitive ability of certain types of animals (such as fish, ants and birds), entire swarms react in an extremely intelligent manner based on a small selection of instinctively adhered to behav-

ioural patterns – thus the common term swarm intelligence is used. It's often equalized to collective intelligence.

In the literature, however, a clear distinction is made between the two phenomena. For example, Aulinger refers to the ox story as an example of collective intelligence involving "many unaffected". With swarm intelligence he describes it as collective intelligence of "many affected". In the former example collective intelligence is the result of many agents providing predictions or descriptions of a situation independently of one another, culminating in an average value. In the latter, collective intelligence results from agents reacting directly to each other and a small number of instinctively followed behavioural patterns. The SMI spring workshop examined both forms of collective intelligence and went on to ask what could be applied to modern companies and what fundamental attributes of collective intelligence exist.

In total, 14 experts came from all over Germany to give a lecture at the SMI spring workshop and discuss their research and practical interests in collective intelligence.

Professor Ulrich Krause from Bremen University proposed a field experiment on swarm intelligence and made a link to mathematical computations based on averaging. Stephan Stathel from the IT research center at the University of Karlsruhe looked at the value of

innovation scoring in information markets. Max Pfeiffer, Director of the Ferdinand Steinbeis Institute and doctoral student at Steinbeis University, explained the significance of information markets as one part of prediction markets. Information markets try to make knowledge of the individual accessible by using the incentive structures of the community – e.g. departments, companies or public bodies – and, by making predictions, package this into aggregated opinion. These predictions can then be used within companies as a benchmark for new ideas and to support strategic decisions. Christian Slamka from Frankfurt University presented idea markets as another area of use. Laura Miller, a Steinbeis University doctoral student from Rofin Sinar Laser GmbH showcased her experience with processes that use collective intelligence to make market predictions for SMEs.

It is not only companies that use the inputs of individuals to form intelligent predictions. Dr. Oliver Märker from Zebralog GmbH & Co. KG outlined how the City of Cologne's "citizen's budget" initiative uses new media in the form of e-participation to improve public participation and use collective intelligence to optimize the allocation of resources.

To add everyday examples of applications to the workshop, three providers working in information markets were invited to talk about their experience in this area. Dr. Bernd Ankenbrand, managing director of Witten/Herdecke University's knowledgelab and Gexid GmbH reported that even the US scientific community – a driving force and hotbed of instruments promoting collective intelligence – still has no clearly established model. There may be dozens of live examples from companies like Google, Hewlett Packard and Microsoft, that show that information markets can possess a wealth of predictive intelligence, but an analytical model has yet to be produced.

Drawing on examples with the Analyx platform, Georg Peller and Caroline Rudzinski

from Management Zentrum Witten also showed that retailers are already successfully using predictive markets. However, despite proven success, generally applicable success factors have yet to be identified. As well as looking at the use of information markets, Dr. Christoph Hartl described how the German army is also trying to speed up the process of supplying clear situation reports during complex missions by linking up technologies and infrastructures more closely. Andreas Schäfer, from Fraunhofer IAIS, drew on a number of examples to demonstrate that consumers are already unknowingly part of collective intelligence thanks to data mining. Anonymised positioning data generated by mobile devices with navigation systems is merged to provide traffic updates in real time. Collective intelligence methods are especially useful when making predictions in real time. Possible cost benefits – and a strong ability to stimulate those involved – spell much potential for this approach to information gathering.

As part of the SMI Spring Workshop, Swarmworks Ltd. provided some innovative ways to evaluate the results of the workshop, connecting large groups interactively and intelligently via connected workstations. A brainstorming session resulted in seven core fields where collective intelligence is expected to be applied:

- Forecasting (traffic management, economic and market forecasts)
- In-house applications (fostering motivation, change management, recruitment)
- Idea management/screening
- Social applications (budgeting, natural resource management)
- Gathering feedback
- Decision making (forming opinions in real time, decision preparation)
- General information management (identifying experts, connecting knowledge management systems)

The complete findings of the SMI Spring Workshop on collective intelligence will be

released in Autumn 2009 in the conference minutes published in the Steinbeis Edition. Edited by Prof. Dr. habil. Andreas Aulinger and Max Pfeiffer, the volume provides an excellent summary of the current status of collective intelligence.

References

Surowiecki, J.: The Wisdom of Crowds. Why groups are more intelligent than individuals. 1st Edition, July 2007. Publisher: Wilhelm Goldmann, Munich.

Aulinger, A.: Verfahren kollektiver Intelligenz zur Evaluation von Verbundnetzwerken. [Processes of collective intelligence used in evaluating linked networks] In: Aulinger, A. [Pub.]: Netzwerk-Evaluation. Herausforderungen und Praktiken in Verbundnetzwerken. 1st Edition, October 2006. Publisher: Kohlhammer, Stuttgart.

Prof. Dr. habil. Andreas Aulinger
School of Management and Innovation (SMI)
Steinbeis University Berlin
Berlin/Stuttgart
andreas.aulinger@stw.de

Max Pfeiffer
Ferdinand Steinbeis Institute
Stuttgart
max.pfeiffer@stw.de

Business + Innovation Steinbeis Executive Magazine Call for Papers

In April 2010, Steinbeis University Berlin (SHB) will commission Gabler Verlag to publish the first issue of the university's magazine, Business + Innovation – Steinbeis Executive Magazine (B+I). Authors are encouraged to send submissions.

As an independent business trade quarterly that focuses on the intersections of transfer and research, the magazine will draw on theory and practice to offer over 60 pages of relevant insight into

- strategy (strategic management, organization management, business modeling),
- innovation (innovation and knowledge management, technology, information and communication management),

– global perspectives (primarily interdisciplinary trends and recent market developments).

These will be complemented with interviews, sweeping case studies and an opinion barometer. Information that underpins success is kept concise and never strays off topic, so readers will always be able to keep pace with and respond to new challenges in management.

A "melting pot" for theory and practice, B+I aims to engage decision makers at large and medium-sized companies in every industry. Readership will also include specialists and senior executives in strategic corporate and organizational development as well as university professors, college instructors and students of business administration.

To ensure submissions of the highest quality, B+I will subject them to a double-blind review. The review will be performed by an editorial board of experts consisting of some of the most recognized and respected names in business and science.

Science writers and other authors "in the field" who see an overlap with B+I are encouraged to submit pieces from their line of work. Writers can obtain more information from:

Prof. Dr. rer. pol. habil. Frank Keuper
School of Management and Innovation (SMI)
Steinbeis University Berlin
Berlin/Stuttgart
frank.keuper@stw.de

New Steinbeis Enterprises

Abbreviations:

SCC: Steinbeis Consulting Center

SRC: Steinbeis Research Center

SIC: Steinbeis Innovation Center

STI: Steinbeis Transfer Institute

STC: Steinbeis Transfer Center

FTC: Focos Transfer Center

The following Steinbeis Enterprises have been founded as of February 2009:

SRC Material Engineering Center Saarland (MECS), Saarbrücken

Director: Prof. Dr.-Ing. Frank Mücklich

SRC Advertising and Communication, Ravensburg

Director: Prof. Dr. Simon Ottler

SRC immunoHTS, Bonn

Director: Prof. Dr. med. Veit Hornung

Steinbeis Consulting Mergers & Acquisitions GmbH, Weinheim

Directors: Dipl.-Wirt.-Ing. Steffen Lohrer
Dipl.-Kfm. Lothar Jakob

Steinbeis TIB Technologiebewertung und Innovationsberatung GmbH, Mannheim

Director: Dipl.-Kfm. Detlef Berger

STC Technical Communication, Salach

Director: Prof. Dr. Michael Bauer

SCC Application of Alternative and Regenerative Energy Forms, Trossingen

Director: Dipl.-Wirt.-Ing. (FH) Christian Klaiber

STI Operations Management, Berlin

Directors: Prof. (asoc. univ.) Dr. Hubert Dollack
Gerhard Weindler

SCC ACES – Analytical Consulting, Engineering and Software, Ulm

Director: Prof. Dr. Reinhold von Schwerin

SCC Operational Health Management, Herrenberg

Directors: Ulrike Niethammer
Betriebswirtin Gabriele Wagner

STC Education-Catering and Cooking at Hochschule Fulda, Motten

Director: Prof. Dr. habil. Georg Koscielny

STC PharmaEngineering, Inzighofen

Director: Dipl.-Ing. (FH) Elke Weber, M. Sc.

STC Micro-, Nano- and Reliability Analytics, Deggendorf

Director: Prof. Dr.-Ing. Günther Benstetter

SCC Derivative Competence Center (DCC)

Finance and Energy Derivates, Stuttgart

Director: Prof. Dr. Marc-Oliver Otto

SRC Data Mining and Knowledge Engineering (DMAKE), Magdeburg

Director: Prof. Dr.-Ing. Andreas Nürnberger

SRC Health and Social Administrations, Einbeck

Director: Heinz Rinas, BBA

STC Pforzheim Management Institute PF-MI, Pforzheim

Director: Prof. Dr. Joachim Paul

SRC Institute for Accident Surgical Research, Schorndorf

Director: Dr. med. Andreas Appelt

STC Applied Light Engineering, Altdorf

Director: Prof. Dr.-Ing. Alexander von Hoffmann

CeBIT 2009 achievement

Steinbeis team from Pforzheim wins Innovation Award

A team of graduates from Pforzheim University with Prof. Dr. Elke Theobald at the helm has reason to celebrate. **MANAGEMENT MONITOR**, a product brought to life by the Steinbeis Transfer Center for Business Development Pforzheim University, was named the most innovative IT solution – and won first prize in the Business Intelligence category – at this year's CeBIT. Several major corporations behind consumer brands, financial services and retail are already taking advantage of the highly efficient and innovative software.

Bestowed by Germany's SME Initiative, this award also falls under the umbrella of the country's Federal Ministry of Economics and Technology. As a scalable and adaptable Web-based platform, **MANAGEMENT MONITOR** merges marketing and market research data and displays them in a user-friendly way for a variety of groups. Over time, companies using the products create their own integrated Marketing Intelligence System that opens up key marketing information across the entire company.

Marketing is constantly beleaguered with the challenge of working with multiple formats and sources of data. Various in-



Jan Britsch and Anja Spaete at the CeBIT 2009 awards ceremony

STI Research in Management and Technology, Filderstadt

Directors: Dipl.-Ing. (BA) Walter Beck, MBA
Prof. Dr. Andreas Seufert

STI Medicine and Allied Health, Berlin

Directors: Dipl.-Med. Päd. Frank Merkle
Prof. Dr. med. Stefan Friedrich Bauer
Prof. Dr. med. Marc O. Schurr

SCC HCI Healthcare Consulting Institute, Rastatt

Directors: Dipl.-Ing. (FH) Walter Seeger
Dipl.-Kfm. Frank Boos
Prof. Dr. Peter Dohm

STI School of Management and Technology, Filderstadt

Directors: Corinna Katzmaier, BBA
Dr. Diana Pressl

SRC M2M Communities, Darmstadt

Director: Dr.-Ing. Peter Conradi

CELO Therapeutics GmbH, Bonn

Director: Dipl.-Ing. (FH) Uwe Haug

STI IBR Institute of Sustainable Leadership, Stuttgart

Director: Prof. Dr. Wilfried Mödinger

ternal and external sources of information feed massive piles of data that can seldom be managed with one digital solution. The Marketing Intelligence solution developed in Pforzheim amalgamates all kinds of information into a single data warehouse and uses OLAP to structure the data into areas that marketing professionals can use. Even better: all Office and SPSS files can be captured and made accessible as easily as highly standardized files (such as database information).

The system's benefits are crystal clear. With a single comprehensive knowledge base, companies can see what expertise is available and take full advantage of it. What's more, the add-on **WEBSCANNER** module continuously monitors blogs, social networks and rating sites to monitor opinions expressed

online. Another module, **WETTBEWERBSRADAR**, follows what the competition is doing online and notifies those in charge if competitors update their websites significantly. **MANAGEMENT MONITOR** is a textbook example of successful transfer between universities and business: the team of developers and marketers at the Steinbeis Transfer Center for Business Development Pforzheim University consists of Pforzheim University business informatics and marketing graduates.

Verena Niebling
Steinbeis Transfer Center for Business
Development Pforzheim University
Pforzheim
stz587@stw.de

TRANSFER speaks with Prof. Dr. Heinz Trasch, Chairman of the Board of the Steinbeis Foundation

“Investing in education and research is vital during times of economic turbulence”



Prof. Dr. Heinz Trasch

Professor Trasch: SMEs in particular benefit from the services provided by the Steinbeis Foundation. At the same time in periods of economic turbulence, these smaller firms also receive far less attention than large enterprises when experiencing difficulties. What advice would you give to SMEs currently suffering under the economic crisis?

Take an active approach – tackle the crisis head-on. Don't just take a back seat and wait to see how the economic situation will develop, letting your company merely drift with the tide – take the initiative and act. If employees have to switch to short time because of a lack of orders, firms should make

the most of this extra free time by arranging training sessions and professional development measures for staff to take advantage of. German chambers and associations as well as Steinbeis offer a very wide range of courses and seminars. But firms can also tailor their own training to respond directly to customer needs – such as training on different management systems or new technical methods. Companies should take a critical look at their product or service portfolio and update it if necessary, or even develop innovative new products and services to add to their portfolio.

Firms who want to do this can consult Steinbeis companies for advice on planned innovations – in fact, we offer complimentary initial consultations to SMEs in the state of Baden-Württemberg, as long as their annual turnover was under 100 million euros in the last fiscal year. An initial consultation with Steinbeis experts can help firms develop potential solutions for problems relating to processes, products or services, or can even help generate innovative new ideas. Steinbeis experts also provide firms with technical assistance in turning these ideas into reality, as well as advice on funding.

One thing is crucial in a crisis: professional consultation needs to go

beyond merely analyzing problems, it should help firms develop potential solutions which can be readily put into practice. Will Steinbeis be continuing its offer of complimentary initial consultations for SMEs?

Yes, Steinbeis will continue to offer initial consultations at no charge. This offer really proved its worth in the past, so we began to offer complimentary initial consultations again in Baden-Württemberg as of October 2005. This allows us to complement other consultation services offered by German chambers and organizations. Very small companies in particular – which make up a large number of SMEs – are taking advantage of this service. Microenterprises like these benefit from discussing their challenges and ideas with top Steinbeis consultants who are experts in their field. In many cases, Steinbeis consultants are able to suggest a variety of funding programs and help firms take advantage of them. Surveys have shown that companies are highly satisfied with our consultation service, and complimentary initial consultations often lead to tangible projects.

One of the key criteria for financial success, now more than ever, is a firm's ability to innovate. Meanwhile, there's been years of criticism that the German economy generates plenty of innovative ideas; the problem lies merely in implementing them. How would you rate the innovative power of German firms in general – and what do you think could be improved?

The economist J. A. Schumpeter defines innovation as the implementation of a new idea in the production process – on either

a technical or managerial level. But that doesn't suffice to describe what we mean by innovation today. J. Hausschildt, a researcher of innovation, defines innovation as a new idea in a business which has a positive impact on the existing situation. By combining both of these definitions so that they complement each other, we arrive at the current understanding of innovation – a new idea in a business which leads to financial success.

For an innovation to come into being, firms must be in touch with the latest information and research on technology and management systems. Over 97% of firms in Germany have fewer than 50 employees – which means the vast majority of these firms have no research department of their own and have to rely on external sources – such as universities – to tap into current information and research.

Companies can benefit from this expertise directly by employing graduates or maintaining contacts with Steinbeis centers at universities. This is one area that I believe holds tremendous potential for innovation which many firms have yet to exploit. Even companies overflowing with knowledge don't necessarily have the expertise to translate their visions into reality. The most efficient way to bring new ideas to life is by working with experts who are able to take this knowledge and turn it into financial success. This is the principle by which Steinbeis companies work: our specialist consultants do more than answer questions and advise firms on their problems, they help firms solve these problems and put new ideas into practice. And in doing this, our experts are aided by the modern infrastructure of our centers and academic institutions. Our services stand at the crossroads of science and business, but firms are still not making the most of them. So at Steinbeis, we intend to step up our discussions with SMEs.

The Bologna Declaration and its effects are still viewed somewhat critically in Germany – and universities

are under a great deal of pressure to implement its resolutions. Will the Bologna Process have a major impact on the current system of knowledge and technology transfer between Steinbeis and universities?

I think the Bologna Declarations are exactly the right way to establish a uniform higher education system across Europe, and even worldwide – even if this means abandoning certain traditions. Bologna helps create an open marketplace for higher education, one which allows international competition. And just like in a free market economy, quality – in this case, the quality of tuition and research – will remain key. The prospect of gaining a bachelor's degree after only 3 or 4 years of study is bound to encourage more high school graduates to enter university – a key goal of the German government. In turn, this means that universities and colleges will need to expand, leading to a growth in research output. Especially for Germany, a country with relatively few natural raw materials, knowledge is key to developing innovations which can help companies compete internationally. As university research departments expand, more and more German SMEs will want to tap into their expertise. So once the terms of the Bologna Declaration have been adopted in 2010, I expect universities to see increased demand for knowledge and technology transfer – not just from SMEs, but also from large enterprises.

It was long feared that government research funding could be an early victim of the financial crisis. Now, thankfully, the federal and state governments have agreed to continue to subsidize research. The German government has earmarked 16 billion euros for higher education and research institutions – what does that mean for you?

The government's provision of 16 billion euros is further proof that investing in education and research is vital during times of economic turbulence – to provide the foundations needed for innovation in business. This investment will support and stabilize

the national research network and is proof of the German government's long-term vision. As well as funding academic research, the government has launched the ZIM innovation program to subsidize innovative SMEs and the research institutes with which they collaborate in the same field. Together, these measures give companies the potential to be more proactive than ever and kick-start innovation – as long as they are able to tap into academic expertise easily and use it to their benefit. This is the role of the Steinbeis centers – as well as helping companies find funding programs which meet their needs.

In Chinese, the word crisis is a combination of the characters for opportunity and risk. If we take steps to counteract risk and thus avoid disaster, this leaves us with opportunity – the chance to emerge from the crisis financially successful. This is how I see the situation: we should make the most of the government's financial commitment and work together to try to bring the economy back on course. We need to give companies and financial institutions the opportunity to become successful again by acting independently, responsibly and entrepreneurially.

A catalog of measures for medium-sized businesses

Keeping the windmill turning even in difficult times

The economic crisis hit the automotive sector right between the eyes. The Stuttgart-based Steinbeis Consulting Center for Corporate Evaluation and Rehabilitation visited a variety of manufacturing clients with close links to carmakers. Their objective: to develop strategies for coping with current economic challenges.



Photo: photocase.de/laborant

The measures they came up with were by no means exhaustive but they did provide pointers which could also help medium-sized businesses in other areas. Ideas spanned all fields, from changes in production to pricing, customer services and even innovation

In all companies visited already had simple instruments in place to cut costs: agency staff had been laid off, untaken leave and time in lieu had been used up, almost all factories were on short time. Most firms had also done what they could to keep materials, stocks and expenses to a minimum, to match the expected dip in sales. They were talking regularly with their banks and adapting reporting procedures. And almost all were – at least in principle – in a position to use a second source of finance in an emergency.

During the interviews, one of the first questions was what other measures could be taken to prepare for an even deeper recession. Here, the experts from the Steinbeis Consulting Center drew inspiration from a Chinese proverb – when the winds of change blow, some people build walls, but others build windmills – and worked out coping strategies together with their clients to steal a march on the crisis.

management. Of course, it is vital for manufacturing companies to be supported by an expert in all aspects of crisis management when implementing measures. One place to turn to for help is a Steinbeis mentor.

The catalog of measures, based on a wide range of discussions, shows that there is no panacea for all ills during an economic downturn. The name of the game at the moment is to secure key resources to guarantee a position at the head of the pack when things improve. Firms also need excellent employees, quality products and services, marketing that makes a mark, a powerful sales division and a bank that listens and cares. The medium-sized companies that Steinbeis interviewed were currently discussing with their banks ways to adjust the burden placed on finances by accrued interest payable. Because at the moment, debt rescheduling, reduced liabilities, and interest adjustments are just as important as project funding.

Measures for "staying active in a crisis"

1. Scale down production – proactively – through flexible rescheduling: only make what has been sold.
2. Reassess batch sizes in serial production and recalculate volume limits.
3. Under no circumstances should all prices be reduced; instead, offer clients rebates in kind.
4. When submitting offers, don't get involved in price wars. If possible, actually seek partnerships with competitors willing to work together.
5. Ask suppliers to be more understanding, and if possible, try to extend payment terms. This may mean considering purchasing a wider range of products and changing the structure of suppliers, and following through on this if necessary.
6. If clients stop buying products, one option is to offer more services. For example, margins can be improved through maintenance contracts.
7. If you're fully confident in your products and services, lengthen the guarantee offered to customers.
8. Extend the product/service portfolio to complementary business fields and thus make better use of Sales. If possible, also line up financial support.
9. Under no circumstances should you scale down design, development and engineering. Instead, promote "innovation management" based on new principles.
10. Invest more in the Sales department and break into hitherto neglected markets. Push all free capacity into frontline client activities and trade fairs.

Jürgen Schmid
Steinbeis Consulting Center for Corporate
Evaluation and Rehabilitation
Stuttgart
stz981@stw.de

Building a network of partner firms in Russia

Steinbeis opens the door to Russian SMEs

To be successful in the Russian market, working with the right partners is everything. Often, though, the only partners available to German SMEs are large Russian firms – which may have very different interests and operating principles. But there is a solution: the Steinbeis Transfer Center for East-West Joint Ventures helps German firms find the perfect partner in Russia.

The Steinbeis Transfer Center for East-West Joint Ventures allows German SMEs to forge ties with over 4000 SMEs and over 450 R&D institutes in Russia. This is thanks to the center's close cooperation with the Russian Agency for SMEs.

Russia is brimming with enticing business opportunities in practically all areas of industry – but almost all business models require a local partner. It's easy for German SMEs to make contact with large firms – as they still dominate the Russian market. But however globally successful German SMEs may be, even those with years of international experience under their belt can still find it hard to launch partnerships with large Russian firms. Experience has shown that large Russian firms simply don't take suggested partnerships with German SMEs seriously. So for these SMEs to be successful in Russia, they need to work with companies of a similar size and structure. Now is a better time than ever: the number of SMEs in Russia is booming, as the Russian government has spearheaded a range of economic development measures aimed at strengthening the SME sector. However, most Russian SMEs have no international presence, making it difficult for German firms to contact them. To help German firms find the perfect partner, the Steinbeis Transfer Center for East-West Joint Ventures has intensified its cooperation with partner agencies in Russia.

The center works closely with the Russian Agency for SMEs. This agency maintains strategic partnerships with other key organizations such as the Russian Technology

Transfer Network and the Russian Union of Innovation and Technology Centers. Together, they form Gate2RuBIN – the Gate to Russian Business Innovation Network, a consortium that acts as official coordinator of the Enterprise Europe Network in Russia. Its mission is to encourage partnerships based on technology transfer between companies in Europe and Russia, as well as between companies and R&D institutes.

The Steinbeis Transfer Center for East-West Joint Ventures believes this area is key for German firms to successfully enter the Russian market. The German government also encourages German-Russian R&D partnerships and innovation projects by providing firms with subsidies. Although Russia is not a typical "outsourcing" country in the conventional sense, such as Romania or China, it offers excellent R&D potential and an attractive market for German products, even in times of economic downturn. Not only that, it consistently offers a broad spectrum of partnership opportunities for joint production.

The Steinbeis Transfer Center for East-West Joint Ventures and its partners in Russia do much more than arrange initial contact between firms. They assess potential partners on-site, hammer out and prepare partnerships, and supervise the implementation of projects. Staff at the center are also experts in cultural differences and ready to advise firms in this area.

The network of partner firms in Russia is growing every day. It already includes key regions of the Russian Federation, and



will soon include even more. SMEs in both countries recognize the practical benefits of working together beyond borders – to the benefit of all.

Jürgen Raizner
Steinbeis Transfer Centre for
East-West Joint Ventures
Deggingen
stz236@stw.de

Breaking technology barriers – and adding customer benefits

Balluff scoops the Baden-Württemberg Competence Prize

The "Baden-Württemberg Competence Prize for Innovation and Quality" was bestowed for the second time at the Control trade fair in Stuttgart in May. This year, the prize was awarded to the Neuhausen-based company Balluff GmbH – a global leader in the production of sensor technology for over half a century. The Steinbeis Foundation for Economic Development is the patron of the Competence Prize, which was launched in 2008 by P. E. Schall GmbH & Co. KG and TQU.



The prize is awarded to companies demonstrating business excellence, even in difficult times – and this in a federal state of Germany already unrivalled for its innovative flair across a variety of industrial sectors. As Helmut Bayer, jury member and director of TQU Business, explained at the awards ceremony, the jury places particular emphasis on companies which "set an example by submitting themselves for the Baden-Württemberg Competence Prize".

"The Balluff submission did precisely that," said Professor Dr. Heinz Trasch, Chairman of the Steinbeis Foundation Board, in his congratulatory speech. "As a owner-managed Swabian firm which already lays particular emphasis on quality due to its heritage, this firm did not rest on its laurels and merely bask in its excellent market position. It continued to aim even higher."

The jury praised Balluff in particular for not "acting out of distress" but, even as a market leader, scrutinizing its own products and processes from the customer viewpoint and drawing up procedures to secure outstanding quality. In particular, Balluff was looking for a new way to analyze and evaluate long-term reliability and error rates across the entire product lifecycle. The aim: even greater customer benefit. And the result? A monitoring process called HALT, which was

chosen specifically to transcend technical specifications and thus make a significant contribution to enhancing customer benefit. As the jury stated unanimously, "This first step created new challenges which were systematically resolved through organizational steps – making it possible to offer the customer value-added."

Baluff also earned particular praise for shifting the emphasis of its philosophy from "We prove that our products are good" to "We seek out technical weak points in our products that could cause difficulties for our customers in the future". Overall, Balluff succeeded in pulling together a package of measures that guarantee reliably functioning products, safeguard the smooth operation of customers' machinery, cut the cost of servicing, and result in competitive advantage and a higher market share for the innovative firm.



Rolf Hermle (Balluff GmbH), Prof. Dr. Heinz Trasch (Steinbeis), Paul Schall (P. E. Schall GmbH & Co. KG), Helmut Bayer (TQU Business GmbH) and Bettina Schall (P. E. Schall GmbH & Co. KG) at the awards ceremony.

Ellen Spieth
TQU Business GmbH
Ulm
stz1103@stw.de



SHB student named German metropolis's first city district manager

Outer suburbs take center stage

Today, many European cities are structured along "polycentric" lines. This means that a city's center is complemented by districts that have their own developed centers. For citizens living there, these districts offer the basics in terms of retail goods and other businesses. But these same places are seeing more and more retailers shutter and move away. How can we counter this trend? And what can we do to revitalize business in these districts? Torsten von Appen, a student at Steinbeis University Berlin and city district manager in Stuttgart, is exploring these very questions in his bachelor's degree project.



Torsten von Appen

The structural upheaval felt in city districts was originally triggered by changing buyers' habits. Two trends underpin these changes. The first: shopping areas are being shifted to greenfield sites or urban fringes. And the second? City centers are taking greater advantage of "the shopping experience." New kinds of distribution and the market power of large businesses – such as discounters – that use aggressive pricing are putting the pressure on retailers and tradespeople. In district centers, only the largest companies are likely to turn a profit. If they haven't left already, small and medium-sized companies are thin on the ground.

Stuttgart's first "city manager" of one of its districts, Torsten von Appen has devoted himself to Stuttgart's economic development. Since 2007, he's been seeing to the needs of Stuttgart's suburbs. His bachelor's degree project outlines a model that aims to reinvigorate business in four pilot suburbs: Stammheim, Zuffenhausen, Weilimdorf and Plieningen/Birkach plus the boroughs of Obertürkheim, Untertürkheim, Hedelfingen and Wangen.

Von Appen has given his project four cornerstones: acting as a pilot; creating a basis for communication; managing vacant properties; and receiving EU backing. As the project steward, von Appen plans to put administrative professionals in touch with one another, leverage synergies and liaise between businesspeople and city officials. Equally important: managing vacant properties. At the moment, all vacant properties in the pilot areas are being surveyed, photographed, described in writing and entered into a database. This information will be used in a residents' survey with the help of Stuttgart's Statistical Office. The increases and decreases in buying power within each of the areas will be captured. Every one of these undertakings requires city planners to work in close collaboration with building code officials.

Ideally, the strategy will be applied to other parts of Stuttgart. As city districts within major metropolitan areas around Europe are faced with similar structural challenges, this economic development project was named a "lead partner" in October 2008 in association with other German and European cities and universities. Together, this consortium was granted funds to launch a project across Europe. The backer, an EU program called INTERREG IVB MANDIE / District Center Management in North West Europe, sees this project as a transnational approach to make cities, communities and rural areas better places to live, work and do business while helping regions remain economically competitive.

Katrin Ziem
Steinbeis Business Academy
Steinbeis University Berlin
Berlin/Kuppenheim
stz638@stw.de

Welcome to San Francisco! The 2008 winning team tours the US

“Young Founders” – a success story

With the financial crisis in full swing, where can you go to see challenges transformed into business ideas? And practice entrepreneurship as a way to prepare for your profession? At “Young Founders,” of course – a nationwide, online contest held by Germany’s Federal Ministry of Education and Research. The Steinbeis Foundation has lent its support to the initiative for years.



From left to right: (front) Julia Beck, Theresa Eger, Yeliz Akkus, Theresa Albrecht, Mathias Fromberger, Matthias Oberbauer; (back) Dr. Nils Högsdal, Frederik Hermann

Now in its sixth year (the 08/09 school year), the “Young Founders” competition has broken another record. This time, nearly 4500 participants had plenty of fun learning business administration skills in a virtual setting and demonstrating what capable entrepreneurs they were. Last year, nearly 3300 students participated.

The team of Theresa Albrecht, Julia Beck, Theresa Eger, Yeliz Akkus, Matthias Oberbauer and Mathias Fromberger won first place in last year’s competition and, sponsored by the Steinbeis Foundation, recently embarked on a trip to Silicon Valley.

Group chaperon Dr. Nils Högsdal greeted the team with a hearty “Welcome to San Francisco!” upon its arrival in the US. The trip began with an excursion to Oakland.

On the way, the team made a stop in the TESLA showroom. Based on the design of a British sports car, TESLA produces lithium-ion battery-operated electric vehicles that make you feel like you’re in a roadster – but without the liquid fuel. The team then visited the Computer History Museum in Silicon Valley. Exhibits there trace the path of technical innovation from early days and the high hopes of the eighteenth century right up to today. One innovation that laid the foundation for Silicon Valley to become what it is today? The computer.

The next day, the team followed the footsteps of some of the world’s most high-profile criminals at Alcatraz – they were kept on the island penitentiary years ago. Then it was on to the San Francisco’s famed Chinatown as well as a bohemian district that transports

visitors back to the wild 1970s. Next stop: Stanford University and Jajah, a Silicon Valley-based company that paved the way for people to use the Internet to call each other all over the world for mere pennies. While there, the team spoke with Frederik Hermann (Director of Global Marketing) about emerging trends in telecommunications. The young founders also visited the in-house museum of one of California’s high-tech powerhouses: Intel, the chip manufacturer. And while at DETECON, a technology consultancy, the team met with a representative to discuss the latest in technology.

The trip wound its way through Santa Monica and Santa Barbara to Los Angeles, where the team saw the celebrated Walk of Fame and wondered at the cliff-set letters of the Hollywood Sign from a nearby outlook. The trip ended memorably with an excursion to the VW Design Center, where the group was treated to plenty of insight on upcoming automotive design studies and spent time chatting with the designers about “the cars of tomorrow and beyond.”

Birgit Metzbaur
Steinbeis Transfer Center for Business
Development Pforzheim University
Pforzheim
stz587@stw.de

Research & Development – powering the way out of the economic crisis

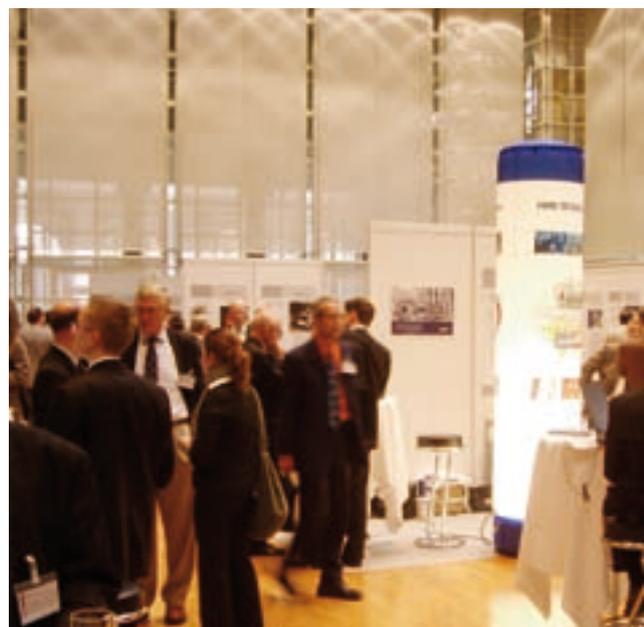
The 2009 Steinbeis Day

There is still no clear route out of the current economic and financial crisis. But companies, politicians and analysts alike all agree on one thing: investment in R&D is an investment in the future, a prerequisite for translating innovation into business and the market. As such, this year's Steinbeis Day, which takes place on 25 September in the Stuttgart "Haus der Wirtschaft", will act as a forum for meeting Steinbeis enterprises, scientists and clients. The event will also showcase the latest trends and offer advice on a variety of business issues.



The one-day event is a chance for Steinbeis enterprises to present and discuss their services and projects, as well as answer questions. Still not found the right people to carry out your research? Need some advice on a tricky issue, specific to your type of business? Interested in staff training or executive education? On 25 September, a variety of experts from the Steinbeis network will be in Stuttgart to provide professional answers to your questions.

After the resounding success of previous years, a selection of Steinbeis enterprises will introduce their projects at the Steinbeis Forum in the afternoon and give short presentations. Speakers will be available for Q&A sessions afterwards. In the morning of the Steinbeis



Day, the 2009 Prof. Adalbert Seifriz Prize will be awarded. There is no entrance fee for the exhibition or the awards ceremony – please visit our website to register. A complete schedule and an overview of the exhibitors are online.

The 2009 Steinbeis Day (last updated August 09)

10:00 – 10:15 am	Official opening
10:15 – 11:00 am	Bestowal of the 2009 Prof. Adalbert Seifriz Prize
11:00 am onwards	Steinbeis Network Exhibition
11:15 am – 12:15 pm	Steinbeis-Info <i>Private event for all SE managers/directors</i>
12:00 – 1:30 pm	Lunch
12:00 – 5:15 pm	Steinbeisers' corner <i>Short presentations by exhibitors</i>
1:00 – 5:30 pm	Supporting event <i>For spouses and partners of Steinbeis managers</i>
5:45 pm	Close
7:30 pm	Evening entertainment <i>Private event for Steinbeis managers and customers</i>

To find out more and register for the event, please contact:

Anja Reinhardt
Steinbeis Foundation
Stuttgart
anja.reinhardt@stw.de
www.steinbeis-tag.de

Steinbeis enterprises can find information on the exhibition, as well as registration details, in the Steinbeis SIS system (click on "Steinbeis-Tag").

Publication details

Transfer. The Steinbeis magazine
The magazine for Steinbeis Network employees and customers
Edition 2/2009
ISSN 1864-1768 (Print)

Steinbeis GmbH & Co. KG für Technologietransfer
Willi-Bleicher-Str. 19
70174 Stuttgart
Germany
Phone: 0711 – 18 39-5
Fax: 0711 – 18 39-7 00
E-mail: stw@stw.de
Web: www.stw.de

Editorial coordinators:
Anja Reinhardt
Marina Tiourmina
E-mail: transfermagazin@stw.de

Concept and design:
i/i/d Institut für Integriertes Design, Bremen

Overall production:
Straub Druck + Medien AG, Schramberg

Photos and images:
Unless stated otherwise, photos and images were provided
by Steinbeis Enterprises and project partners named in this
magazine.

cover image: photocase.de/lego

127869-0209