Steinbeis

TRANSFER

The Steinbeis magazine

Experts – Synergies – Innovations

"Helping people to help themselves"
We meet Prof. Dr.-Ing. habil. Eberhard Kallenbach

Careers, not fixed tracks
Banking careers for specialists, managers and project managers

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04|2008

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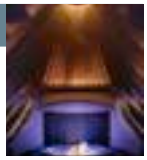

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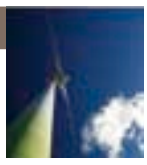

Editorial

Dear readers,

Transfer is no mean task. It's like a river, with containers piling high on one bank, brimming with the latest insights, potential solutions, laboratory samples and pilot products. On the other bank, trucks, wagons and cargo planes line up to transport valuable freight to the users in trade and industry, and politics and society as a whole. But the river runs deep and is fraught with danger. The banks are rocky, the shallows, current and eddies unpredictable.

To traverse the transfer river and navigate its waters successfully, you need certain skills. To deal with uncertainty and danger, the unknown and the unfamiliar, takes independence and creativity. You need the discipline it takes to combat challenging issues – mentally and if necessary, physically. This ability to organize yourself (self-discipline) could also be called competence. Prerequisite skills, in every individual, in any transfer project.

Conversely, however, the opposite is also true: transfer creates competence. Confronting uncertainty and the unknown is an excellent way to learn self-discipline. There can be no better way to pick up new skills.

This correlation is a central theme running through this issue of Transfer Magazine. On the one hand, it documents the theoretical and practical implications of skills and personal competence, the types of issues addressed at the first Stuttgart Competencies Day. On the other, it outlines how successful concepts and solutions can be transferred from one party to another, with examples such as 3D data capture using wireless signal transmission, quality control in spectral analysis, and an image processing system used for quality control in production.

This edition also documents why it makes sense to work on live projects during a degree. Rather than try to teach work skills through scientific or academic instruction (which has proven ineffective), people are given the chance to work on successful real-life projects, often bringing substantial commercial benefits to a company. Some examples: training offered to managers at Steinbeis University; targeted skills development as a value success factor in developing people's potential; an approach taken by an employment services company to invest in its own staff by developing their competencies – each one a qualification certified by Steinbeis.

The thing about transfer is that it's not just science and academia that cross the river into everyday business. Transfer adds to the pool of knowledge and competencies. It prepares competencies acquisition for the future. Transfer makes competencies upgradeable. Transfer is by no means one-dimensional. It's a multifaceted network. There's more to transfer than meets the eye...

Prof. Dr. Werner G. Faix

Werner G. Faix is the Director of the School of International Business and Entrepreneurship (SIBE) at Steinbeis University Berlin (SHB).

To read about the successful career of one SIBE graduate, turn to page 4.

The success story of an SHB alumni

From naval officer to global manager

Staying closely focused on personal goals, having the courage to make major decisions, and striking out in new directions – these are just some of the reasons for the successful career of Orkun Buchholz, a GeneralMBA Growth Management alumni who studied at the School of International Business and Entrepreneurship (SIBE) at Steinbeis University Berlin (SHB). Orkun Buchholz is originally from Istanbul, where he studied industrial engineering in the Turkish navy. He knew early on that he wanted to follow this with an MBA – preferably abroad. Steinbeis University Berlin was the perfect choice. Orkun Buchholz explains: "I chose the SIBE because it had an interesting range of courses, a good reputation, and a strong international orientation. And of course, I also wanted to benefit from its global transfer network."

The aim of his two-year study project was to map out an optimal expansion course for the firm S&Y Balikci GmbH, who financed his studies. His task: to figure out how and where to expand, in what way, and to formulate a growth strategy from the results. No mean feat – Orkun Buchholz was responsible for everything from an in-depth analysis to planning and implementing the expansion concept. The results spoke for themselves: Orkun Buchholz transformed the company into the leading exporter in its industry. The firm rapidly grew from just four branches in the Rhine-Main area of Germany to 52 across the whole of Europe and Turkey. Company turnover boomed.

"The GeneralMBA Growth Management was exactly the right path for me to take, even though I found it difficult at the start because my German wasn't so good", Orkun Buchholz tells. But he battled on – for him, giving up is never an option. The positive atmosphere and support from lecturers and other students were a real source of strength for him. In fact, Orkun Buchholz' graduating class still meets up regularly, in addition to keeping up to date with developments via the alumni newsletter.

At the end of his first year, Orkun Buchholz successfully founded a management consulting firm – a great example of how interdisciplinary exchange between students can result in real entrepreneurship. With a fellow student, his former boss and a fourth partner, Orkun Buchholz set up the firm Caban AG, based in Switzerland, and opened a branch in Germany. Not only was Orkun Buchholz a partner in the firm, he ran the German branch himself.

After completing his MBA, he moved to Siemens, where he took up a new position working in oil and gas. "My understanding of both German and middle-eastern culture allowed me to act as a bridge between the two," he explains. Since then, the successful SHB alumni has been responsible for developing global strategies and objectives for end-to-end oil and gas solutions worldwide – a position that involves contact with 180 countries. Another aspect of his job: discussing new technology to meet the challenges of the next 20 years.

Orkun Buchholz' job requires nothing less than all-round management. Many of the skills he developed during his MBA are still essential today: working with people from different backgrounds, summarizing complex issues into key points, and winning over colleagues and superiors. As well as forging a new path in his career, his current priority is to maintain a good work-life balance – he became a father for the second time at the start of 2008. But yet more ambitious goals lie ahead: "A doctorate would be interesting. But I think I'll wait a little while first."

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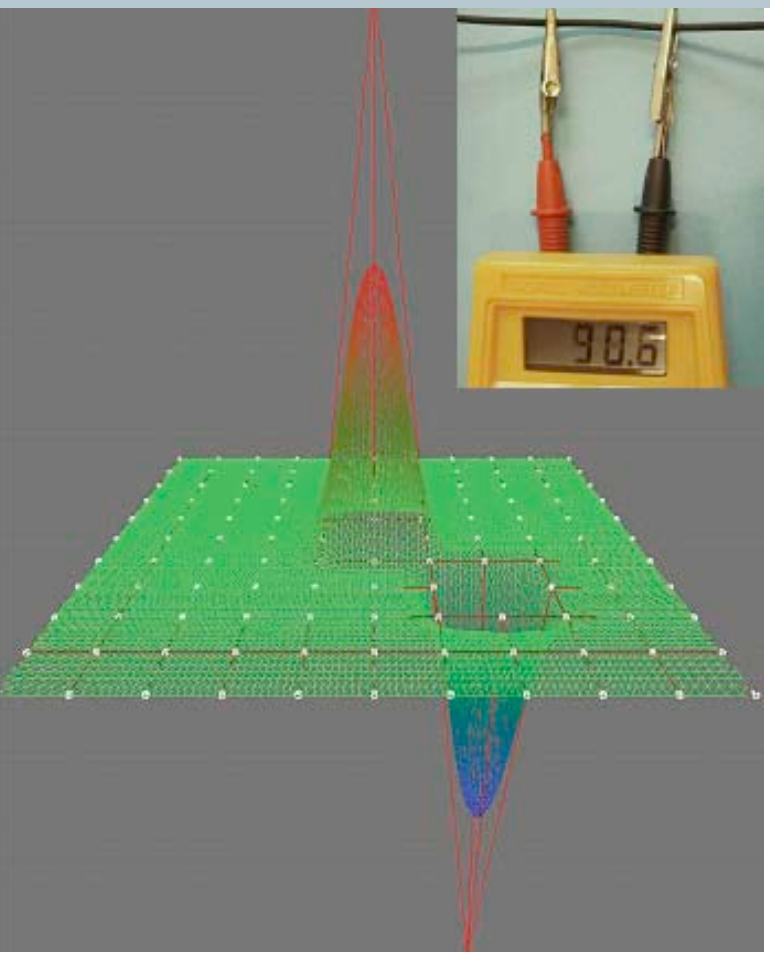

Graph showing the extension and changes in geometry of an extrinsically conductive plastic fibre. Above: measurement.

3D data capture with wireless signal transmission

New measuring sleeve keeps feet healthy

Keeping your feet in good health is key to day-to-day personal well-being. Around 98 percent of people are born with healthy feet – but less than half retain these into adulthood. The culprit? More often than not, poorly fitting shoes are to blame. Foot problems can have a negative effect on your overall joint mobility and posture. And although there are systems for measuring foot geometry, they normally have one disadvantage: they can only deliver 2D measurements – either indirect or static – of the foot at rest. The solution? An extrinsically conductive measuring sleeve, which the Steinbeis Innovation Center Application-oriented Material-, Production-, and Process-Technology is developing in cooperation with Sächsisches Metall Zentrum GmbH.

Current measuring systems do not yet account for changes in the geometry of the foot which occur when the foot leaves its rest position and becomes subject to changing dynamic load. And it's these very factors which are key to improved shoe comfort and foot health.

For this reason, Sächsische Metall Zentrum GmbH and the Steinbeis Innovation Center Application-oriented Material-, Production-, and Process-Technology in Zwickau are developing an extrinsically conductive measuring sleeve for 3D static and dynamic data capture with wireless signal transmission. It's part of a research project sponsored by the German Federation of Industrial Research Associations. These sleeve made up of electrically conductive fibers reinforce plastic change its the electrical resistance, when the foot changes position. This signal is recorded by measuring equipment, amplified, and displayed by software as a 3D graph. Initial experiments have shown that stretching extrinsically conductive plastic fibers results in a change of resistance which can be plotted.

To measure the signals under dynamic load and display them in three dimensions, extensive testing and investigation is needed. This is currently being performed by the Steinbeis Innovation Center in Zwickau. The results of these tests will help further optimize the measuring sleeve.

This technique makes it possible to statically measure foot geometries and create 3D images of the foot under dynamic load – useful when designing shoes with a closer fit or measuring foot positions before, during and after sport. As such, this new measuring system is indispensable in the manufacture development and production of footwear, as well as in sales support. This also includes many areas of the orthopedic footwear industry, including the entire field of prosthetics and orthotics, as well as custom shoe manufacture and insoles.

More over to this, there are a number of other conceivable applications for the technology, in areas as diverse as engineering, the automobile industry, and measurement.

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The 2008 Stuttgart Competencies Day

Competencies – the key to every transfer

Over 240 participants attended the first ever Stuttgart Competencies Day in the "Haus der Wirtschaft" – including students and company representatives from Steinbeis University Berlin. Johann Löhn, the university's president, spoke about the important relationship between academic study and participation in real-life company projects – something he has insisted on since the founding of the university in 1998, before the concept of "competencies" became so prevalent. All-round excellence is definitely expected from students at Steinbeis University Berlin – just as personal, social and practical competencies are needed alongside expertise to survive in today's workplace. Werner Faix, director of the university's School of International Business and Entrepreneurship (SIBE), outlined the day's theme in similar terms, describing "competencies" as the ability to deal with complex, forward-looking challenges independently in an organized, creative manner – a conviction probably shared by all the speakers.

Photo: aboutpixel.de/Birthe Gerlach

Facilitating the event, Werner Faix moved smoothly between topics, alternating between humor and seriousness. Merging a mixture of talks around a coherent topic, he described the current "war for talents" in plain terms: a battle for the best. For competencies, for the most capable – for the most talented. The winner of this war? Whoever has the best ways to find talent and help people unfold and grow. Competencies: a broad concept, but one vital to our future.

In his introductory talk entitled "What are competencies?", John Erpenbeck, Professor for Knowledge and Competencies Management at the SIBE, highlighted that the focus on competencies is nothing new. Humans have always needed competencies when encountering something new. However, the modern "competencies" movement, which began with White, Chomsky and McClelland around 1960, has taken on an unforeseen magnitude. This reaction is an attempt to understand an increasingly confusing, insecure and chaotic world, demanding more and more independent, organized, creative responses to extreme uncertainty. The very term "competencies" is in danger of becoming a meaningless buzzword if not qualified and defined in relation to specific actions. These days, even the ability to read and do basic math is discussed in terms of reading and math "competencies". What remains crucial is that the genuine acquisition of any skill entails internalizing a set of rules,

values and norms – in other words, learning through emotions and motivations. Competencies cannot be acquired without emotional uncertainty – mere education has very little do to with real skill development!

Nowadays, all large companies have their own competencies models, mainly used to appraise and train employees. But what about SMEs? Norbert Kailer, director of the Institute for Entrepreneurship and Organizational Development at Johannes Kepler University in Linz, Austria – well known throughout Europe – tackled this question and raised a few possible answers. Looking at the main findings, it was clear that despite significant time pressure, a small workforce and limited financial means, SMEs increasingly see competencies development as a vital issue. The response is often to provide on-the-job training – particularly when it comes to improving customer loyalty. On the flip side, companies sometimes think they're investing enough in competencies development by sending employees on seminars and courses. Kailer spearheaded a series of simple yet effective methods for systematic competencies development at a number of SMEs. His success proved the wisdom of his approach.

Annette Schulten from the Steinbeis School of International Business and Entrepreneurship at Steinbeis University Berlin explained how the school has made a point of integrating new insights from theory and practice into its degree programs. The aim? Not just to improve levels of expertise among students, but to assess and strengthen their competencies, too. The well-known KODE® and KODE®X systems play a crucial role here. The high number of students, their excellent final results, and the extremely high proportion who immediately obtain good jobs after graduation – all this proves the effectiveness of the Project Competencies course. Not only that: success here indicates how this approach could benefit other areas of study.

Assessing an employee's competencies isn't just about tests and scoring systems. It can – and should – focus on the people and their backgrounds. At least according to Thomas Lang-von Wins from the Bundeswehr University in Munich. Looking at employee backgrounds during skill appraisals is a reliable way to uncover individual strengths. It also stimulates proactive development. In short, this approach can be used to assess and develop employee talents. Lang-von Wins made his message loud and clear: simply hiring employees with different skill sets is a thing of the past. Today, the focus should be on fostering skill development, creating an environment supportive to learning, and opening up new learning opportunities – to support and encourage independent learning.

"Public authorities have often brought about (or prevented) more permanent change to society than rulers, politicians, diplomats or generals." Timo Meynhardt, director of the Center for Leadership and Values in Society at the University of St. Gallen, Switzerland, opened his talk with this surprising quote from Hans Meier, providing plenty of food for thought for the audience. In his talk entitled "Competencies versus bureaucracy?", he discussed the example of the German Federal Employment Office. Since its reorganization, it has focused on assessing and developing the competencies of its customers, using a custom version of the KODE® basic competencies system. This approach has shown focusing on competencies is vital during re-organizations, although by no means easy: instilling a culture focusing on competencies can take a long time!

Four more real-life examples showed the resounding effect the subject of competencies has had in the workplace. According to Thomas Schrettle from the Swiss Research Institute of Small Business and Entrepreneurship in St. Gallen, modern efforts to maintain top-notch service via strategic management have underlined how this approach can help find new answers to an old question – "Why are some companies more successful than others?"

Claus-Peter Hammer from Siemens Professional Education explained in detail how the company has set up a new on-the-job competencies development scheme, run in cooperation with Steinbeis University Berlin.

August Musch from Steinbeis Beratungszentren GmbH reported on the development of a competencies test for consultants based on the KODE®X technique, established in cooperation with SAPHIR Kompetenz GmbH. The certificate acts as an endorsement of consulting competencies, thus giving holders an advantage in this highly competitive industry. It also makes for improved transparency and makes it easier opening the door to customers.

In a stimulating discussion peppered with interesting examples, Armin Trost from Furtwangen University introduced his approach to modern competencies management to Alfried Quenzler from Audi. "Talent Relationship Management" accounts for personal preferences and allows the company to pull suitable employees from clearly defined target groups. This means candidates can be individually introduced to the employer – in this case, Audi – and also makes it possible to put in place staff retention instruments. An engaging exchange with one clear message: competencies development is more than worth its price.

One thing's for certain: the 2008 Stuttgart Competencies Day raised great expectations for the future. Will these be fulfilled? We'll know by the time the next Competencies Day takes place on 25 November 2009. Competencies management has become crisis management. How will these developments progress? We can but wait and see.

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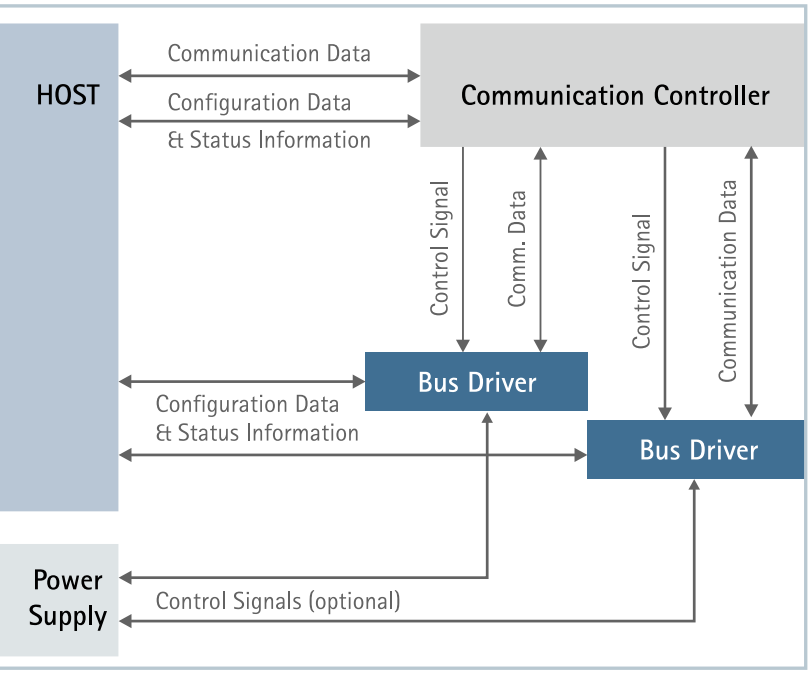

Structure of a FlexRay node

Drawing comparisons between bus systems

FlexRay and Ethernet

Rapid and real-time – the new FlexRay bus systems need to meet high demands, not just in vehicles, but also in telecommunications. Based in Stuttgart, Germany, the Steinbeis Transfer Center ExpertCom has been investigating FlexRay and Ethernet bus systems with the Technical Academy of Esslingen, looking into similarities and differences. The results were presented and discussed at a two-day public event in December 2008.

The increasing complexity of electronic control systems in automobiles means powerful bus systems are needed for rapid, reliable communication. These bus systems connect electronic and mechatronic control units to a network of sensors and actuators in the vehicle. The two main competitors, now and in the foreseeable future, are Ethernet and FlexRay. The functions of both are structured hierarchically: one layer – the physical layer – processes device-related functions. Above this, the second layer – the MAC layer – handles functions controlling access to the bus.

Looking at the physical layer, Ethernet is characterized by its many optional and hardware-dependent sub-layers, meaning it can serve an extremely wide range of applications in communications and information technology. The FlexRay protocol is designed for applications in control engineering, so does not require this variety and thus does not support it. However, the physical layer of the FlexRay bus is available in both fiberglass and copper versions. These different transmission methods are supported by different bus drivers.

The FlexRay bus is a deterministic system, in which data is transmitted synchronously between the ECU and the sensors via time slices. In contrast, the Ethernet bus is event-driven.

Comparing the FlexRay concept with an Ethernet LAN, similar requirements are handled on the MAC layer rather than the physical layer – such as collision-free Duplex connections, priority control and flexible bandwidth requirements. Full Duplex point-to-point connections are established via an additional switch in the network.

The MAC layer of FlexRay is a frame structure containing a header, reference data and a checksum trailer. The header contains frame information such as the frame type, number and length. The reference data (max. 254 bytes) does not contain any further FlexRay protocol data. The Ethernet MAC layer uses a similar frame system, but with sender and recipient addresses – in FlexRay, the recipient address is implicitly replaced by the time slice system for bidirectional data transmission.

Choosing between the two competing bus systems means taking the technical, operational and economic criteria of the project into account. For example, Ethernet is advantageous in areas of automotive and control engineering which combine control and communication applications. FlexRay is best used in areas of control engineering and mechatronics requiring high safety, reliability, and speed. A third possibility? Use the two bus systems together, allowing the advantages of each to benefit different applications.

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Evaluation of the pump-down curves of a glow discharge source

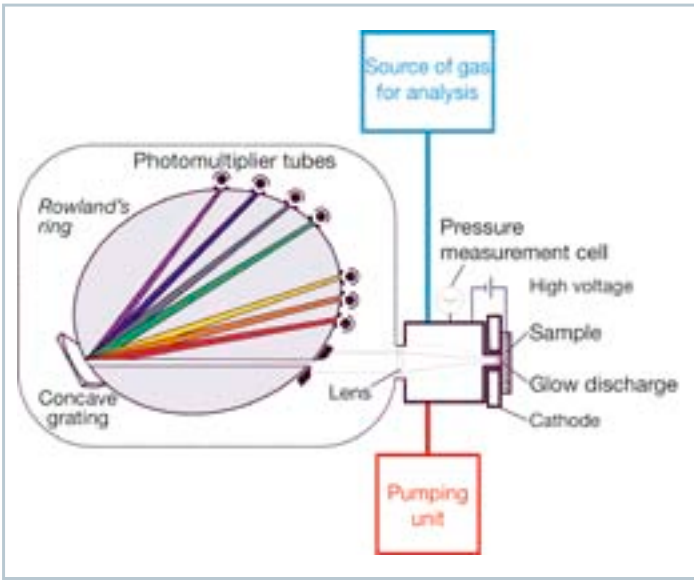
Quality control in spectral analysis

Chemical analysis using modern Glow Discharge Optical Emission Spectrometry (GD-OES) devices are now commonplace in R&D labs for quality control in as well as industry and manufacturing. The reason for this widely spread application is the short net analysis time of two till five minutes between inserting the sample and receiving the results. One way to optimise this technique is to reduce the pumping time. The Steinbeis Transfer Centre for Vacuum Science and Technology and the Leibniz Institute for Solid State and Materials Research Dresden have turned themselves to this challenge – with interesting results.

In a GD-OES device the sample to be analysed is placed in a sample chamber. This is evacuated and filled with a discharge gas (mostly the noble gas argon) up to a certain pressure (≤ 10-3 mbar). Then the a glow discharge is ignited in the source by applying a voltage between two electrodes. The noble gas ions formed in the discharge collide with the sample surface gradually stripping it by sputtering. The liberated sample fragments enter to the glow discharge and are excited to light emission. This light penetrates through a lens into the analysis chamber, where it is analysed by a spectrometer. Special sensors (photomultipliers) convert the intensities of the different wavelengths into electric signals, which are amplified and automatically analysed by computer. The wave length of the lines in the light spectrum correspond different elements and their intensities are proportional to the quantity of these elements in the sample. Determining these values it is possible to analyse the chemical composition of the sample. In thin film analysis it is possible to determine the concentration profile in dependence of the depth. The total time required for analysis mainly depends on the time required for pumping the source, whereas the reliability of the spectral analysis mainly depends on the purity of both the source gas and the surface of the source chamber – particularly when analysing thin layers (thickness < 100 nm).

The project was a co-operation between the Leibniz Institute for Solid State and Materials Research Dresden and the Steinbeis Transfer Centre Vacuum Science and Technology in Freiberg. Its aim: to improve a commercially available GD-OES device by reducing the pumping time, increasing the reliability of the analytical results, and setting up a system that updates the operator on device status, indicating the reliability of results and possible faults in the vacuum system.

We reduced the pumping time by improving the pumping unit and the process control (optimising the used tube sizes and seals and optimising the pre-treatment in the process chamber).



Schematic diagram of a GD-OES instrument

Evacuating the chamber the pressure drop depends on the leak rate, the surface contamination of the source or the sample, or problems with the vacuum pump reducing the effective pumping speed. Therefore, the pressure vs. time curve during evacuation of the source was used to check the reliability of the analysis. This was done by recording the pressure vs. time curve at the device's source and simultaneously calculating of the same curve for current source volume and effective pumping speed.

To fit the calculated pressure vs. time curve to the measured curve the effective pumping speed, the leak rate, and the outgassing rate must be varied so that the calculated curve matches the measured one as closely as possible. By this the effective pumping speed, the leak rate, and the outgassing rate during the current experiment can be determined. These values are immediately received before applying the discharge voltage respectively starting the analysis. They can be used to allow the start of the analysis or to warn the operator against any errors. Because analytical equipment of this kind include always powerful computers for the automatic process control and spectra analysis, these computers can be used too to record and evaluate the pressure vs. time curve.

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We meet Prof. Dr.-Ing. habil. Eberhard Kallenbach

"Helping people to help themselves"

This year, the Löhn Award jury chose Eberhard Kallenbach, head of the Steinbeis Transfer Center Mechatronics in Ilmenau, to receive the 2008 Award of Honor from the Steinbeis Foundation. The jury honored his outstanding achievements, as well as his dedication to practical technology transfer from science to business. TRANSFER talked to Professor Kallenbach about locations, magnets in mechatronics, and what the future holds.

Professor Kallenbach, we'd like to start by congratulating you on winning the 2008 Löhn Award. Back in 1991, your Steinbeis Transfer Center was one of the first Steinbeis institutions to be founded in former East Germany. What motivated you to take this historic step?

Scientists from the Instrument Engineering department at Ilmenau University of Technology were running research projects in mechatronics more than twenty years ago – developing fast-acting solenoid actuators, automatic die bonders and alignment devices, just to name a few. These involved mechanical, electrical and control systems working closely with one another, creating innovative new products with unique selling points. After reading about us, leading companies such as Bosch, Bürkert and Mahle began working together with us in Ilmenau in the early 1990s.

Professor Löhn established the Steinbeis model for Transfer Centers – and Lothar Späth brought it to the state of Thuringia. Steinbeis gave me the chance to set up a business, in addition to my teaching and research activities as a university professor. Now we could develop products based on our research, sell them to industry, and use the money to fund new jobs – desperately needed at the time, because of the industrial restructuring of former East Germany. It was an excellent way of helping people to help themselves, which I and many of my colleagues were all too glad to make the most of. The Steinbeis Transfer Center for Mechatronics in Ilmenau now has 17 full-time employees dedicated to the development of innovative mechatronic products.

Location is a key issue currently on everyone's lips. This isn't something that seems to have worried you and your colleagues in Ilmenau: you're firmly rooted in the region. What makes the Ilmenau area so special?

Ilmenau was definitely the right choice. We work closely with Ilmenau University of Technology, as well as the SMEs which have sprung up around the university campus. The advantages more than compensate for any negative factors. The support we receive from Steinbeis headquarters in Stuttgart is crucial, and has helped us avoid mistakes. The Steinbeis name alone has opened a lot of doors to

companies throughout former West Germany, not just in the state of Baden-Württemberg.

Magnets are central to your work – in areas as diverse as drive technology and materials technology. What makes magnets so useful in mechatronics?
Electromagnets and solenoid actuators continue to form the backbone of our business. We have years of experience in this area – and are gaining more all the time. Drive engineering is being decentralized – meaning cars and machinery require more and more solenoid actuators. For us, this is good news. Another focus of our work is characterizing magnetic materials and actuators.

When it comes to supporting young people setting up their own business, your center sets a wonderful example. In 2001, you helped to found Innomas Innovative Magnetsysteme GmbH. How has the company fared since then?
Innomas, of which I am a partner, has moved on in leaps and bounds. The company took off rapidly and has become highly active, independent, and successful with little in the way of government subsidies. All of our projects are in the field of industrial predevelopment – everything from compiling task breakdowns to delivering test versions of products. So far, our customers have been very satisfied, and all of our projects have been within schedule.

As well as your work at Ilmenau University of Technology and running the Steinbeis Transfer Center, you're also head of VERDIAN, a collaborative enterprise sponsored by the Federal Ministry of Education and Research. What are its aims?
VERDIAN is a network for growth, a long-term partnership to ensure new companies receive the research and development support they need for the next 15 years. By bundling expertise, we put things in place for companies from the Rennsteig region to become leading global providers of linked magnetic direct drives. We unite top regional graduates from Ilmenau University of Technology. The network now includes 8 cutting-edge companies and 2 research institutes, and had above-average growth of 11% in its first two years.

A good 30 employees now work in the Steinbeis building in Ilmenau. Now you plan to defy current economic trends and create more jobs. What exactly are your next plans?
The Steinbeis building is getting crowded. We have 30 full-time employees, not counting the many part-time students and doctorate students. Four firms now share the building – STC Mechatronics, STC Quality Assurance and Image Processing, STC Spring Technology, and Innomas GmbH. My staff and I are convinced that there will still be high demand for high-performance solenoid actuators, especially ones that offer high dynamics and low energy consumption for quick integration into a wide range of applications. So we're planning a new building with support from the state of Thuringia. This will allow us to take on more highly qualified staff, and ensure our solenoid actuators continue to live up to our motto – "Motion by innovation".

Eberhard Kallenbach is the director of the Steinbeis Transfer Center Mechatronics at Ilmenau University of Technology, which he founded in 1991. The center works primarily on electrical actuators, special electromechanical actuators, and electronic and magnetic technology. In the words of the Löhn Award jury, Eberhard Kallenbach "[...] has not only built bridges between science and business, but between east and west – stimulating the regional economy via transfer projects and his research and teaching work [...]". He has created tremendous opportunity for qualified young people in the region – not to be taken for granted these days. In addition to his work at the Steinbeis Transfer Center, Eberhard Kallenbach is also a university professor, doctoral supervisor, the author of several textbooks, a consultant for the German Research Foundation, and a member of the German Academy of Science and Engineering and its branch for the state of Saxony. He first won the Löhn Award in 2004 for a transfer project his center carried out with the firm MAHLE International GmbH.

The Löhn Award
The Löhn Award recognizes outstanding transfer projects in fields using competitive technology along with knowledge transfer between science and business. The jury pays special attention to transfer projects achieving above-average results in carrying out and completing the transfer process. The award is open to Steinbeis Enterprises and customers (companies, institutes and their employees) who have been involved in a transfer project. The hallmark of successful transfer is quality, expediency, economic viability and a good working relationship between the transfer partners. Transfer potential and transfer success are reflected in the usefulness of the project to each party involved – tantamount to commercial success for both the "know-how provider" (the Steinbeis Enterprise) and the "know-how recipient" (the customer). The Steinbeis Foundation first announced the introduction of the Löhn Award in 2004, in honor of the unique achievements of Prof. Dr. Dr. h. c. mult. Johann Löhn, who restructured Steinbeis in 1983 and remained at the company's helm until 2004. In addition to the unique Löhn Award sculpture, a prize of up to 60,000 euros is awarded to companies or researchers involved in the transfer project. Prize winners are chosen by a jury made up of members of the Steinbeis Foundation Board of Directors and the Chairman and Honorary Trustees of the Steinbeis Foundation Board of Trustees. The jury can also award one or several special prizes for projects, services or achievements of high merit. Prizes are bestowed during the annual Steinbeis Day.

A software tool for calculating satellite constellations

Help from space: optimizing satellite analysis

Special satellites are being developed to monitor the Earth from orbit. Typical applications include weather and environmental monitoring, mapping and geology. In partnership with the firm OHB-System AG in Bremen, the Steinbeis Research Center for Optimization, Control and Adjustment Control has developed a mathematical software tool to optimize resource planning for these satellites. Both partners were honored with the Löhn Award 2008 for the project – one of three to receive the award this year.

Prof. Dr. Christof Büskens (left, Steinbeis), Prof. Dr.-Ing. h.c. Manfred Fuchs (right, OHB-System AG)

OHB-System AG in Bremen is an SME specializing in astronautics and security. It is probably most famous for its radar reconnaissance satellite system SAR-Lupe, developed and manufactured in Bremen. Small satellites are used for civilian purposes to monitor the environment, recording volcanic eruptions, floods, and shipping accidents, or directly measuring water, soil and air quality.

Optimizing satellite constellations and operating times is vital to every successful mission. The sort of parameters that have to be optimized mathematically include photography schedules and satellite orbits around target areas, as well as communication schedules with ground stations and data relay satellites.

In partnership with OHB-System AG, the Steinbeis Research Center for Optimization, Control and Adjustment Control in Bremen has developed a software program which uses innovative mathematical techniques to analyze and optimize satellite constellations used in global monitoring. The software optimizes each satellite's orbit in a constellation with respect to different target areas. This takes a variety of factors into account, such as different sensors' field of vision, communication with ground stations, and the differing needs of each target area. The system also optimizes satellite operating schedules based on mathematical factors such as target area priorities, monitoring modes, time lags between photography and ground station contact, ground station positions, and multiple activation and deactivation points per orbit. Limiting factors include the finite amount of photographic memory, the position of the sun, limited battery power, and restrictions in reactivating the satellite. No product on the market is able to automatically optimize satellite constellations and operating schedules. The new software is the first to automatically determine the precise maximum observable area. Previous

2004 – 2008: 5 years of the Löhn Award

The Löhn Award celebrated its fifth anniversary in 2008. Since its foundation in 2004, the award has been bestowed on eleven company projects, and five individuals have received Awards of Honor.

2004:
Steinbeis Transfer Center Mechatronics, Ilmenau/MAHLE International GmbH: **Air cycle valves improve engine performance and eco-friendliness**

Steinbeis Transfer Center In-Vitro Pharmacology and Toxicology, Konstanz/Charles River GmbH: **Replacing animal testing with in-vitro pyrogenic testing**

Steinbeis Transfer Center New Technologies in Traffic Engineering, Ulm/Voith Turbo GmbH & Co. KG: **Intelligently simulating the transmissions of service buses**

Steinbeis Transfer Center Quality Assurance and Image Processing, Ilmenau/Carl Zeiss Industrielle Messtechnik GmbH: **ViSCAN: a precise measurement technique using light**

Steinbeis Transfer Center Industrial Data Processing and Automation, Karlsruhe/dm-drogerie markt GmbH & Co. KG: **dm-drogerie markt goes online to keep shelves stocked**

In recognition of his outstanding accomplishments and services to technology transfer: **Prof. Dr.-Ing. Walter Kuntz,** Steinbeis Transfer Center Microelectronics and Systems Engineering, Furtwangen/ Steinbeis Transfer Center Medical Electronics, Freiburg

methods often took weeks or even months to arrive at an acceptable solution.

Not only is the new solution more user-friendly, it is 200 times faster at performing calculations and optimizing satellite schedules online. It thus significantly outperforms Satellite Tool Kit, American software already used worldwide. Mathematicians at the Steinbeis Research Center successfully applied special strategies to measure precise areas and run simulations, combining overlaps to form complex polygons. They also used sequential quadratic programming methods to optimize the non-linear problems.

One thing is clear: both partners can expect financial success. GMES (Global Monitoring for Environment and Security) is a joint initiative of the European Commission and European Space Agency. The European network provides analysis and forecasting services in the areas of emergency management, land monitoring and ocean monitoring. Vital to this work? Usable data.

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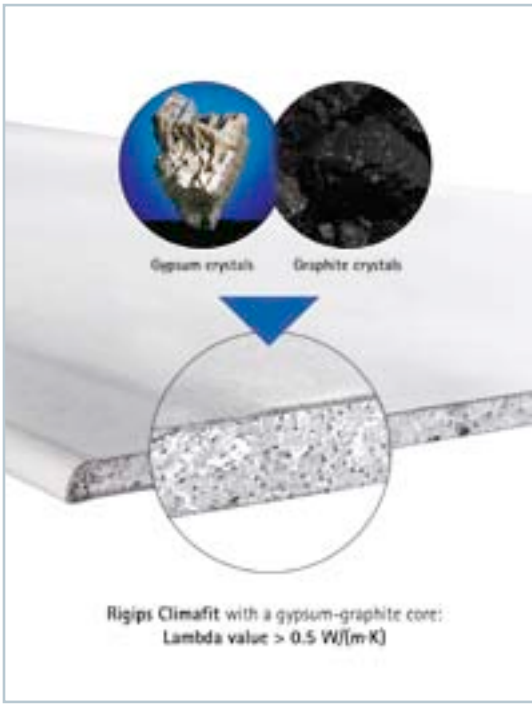
Graphite and gypsum shield against electromagnetic radiation

The perfect combination: plasterboard with radiation protection

Around eight billion square meters of plasterboard are used annually in building services engineering. The trend has been growing for years: plasterboard is a crucial building material. Why? Its simple, energy-saving design, superb surface quality – ideal for walls and ceilings – and air-conditioning properties. The 2008 Löhn Award has been bestowed on a project which developed a new type of plasterboard shielding against electromagnetic radiation (EM).

The use of plasterboard in radiant heating systems is limited by its very low heat conductivity and lack of EM shielding. In partnership with SGL Technologies in Meitingen, Germany, and Saint-Gobain Rigips in Bodenwerder, Germany, the Steinbeis Transfer Center for Plastics and Composites Technology in Naila, Germany, has developed a new generation of plasterboard which marks an international milestone in heat conductivity and EM shielding.

The three partner firms arrived at these improved properties by combining two materials known for over 100 years: graphite and gypsum. Over a three-year development period, the Steinbeis-led team discovered how to combine natural, anthracite-colored graphite from the SGL Carbon Group with white gypsum from Saint-Gobain Rigips. The result: plasterboard with a unique black



Close-up of the gypsum-graphite plasterboard

2005:
Steinbeis Transfer Center Production Technology and Waste Handling Logistics, Dresden/Koenig & Bauer AG: **Complex rationalization in factories (analysis, assessment and planning of the product–technology–factory complex)**

Steinbeis Transfer Center Biomedical Engineering and Applied Pharmacology in Ophthalmology, Rostock/Heidelberg Engineering GmbH: **Confocal laser scanning microscopy of the front of the eye using the Rostock Cornea Module (RCM) and the Heidelberg Retina Tomograph (HRT II)**

2006:
Steinbeis Transfer Center Medicinal Biophysics, Heidelberg/Sensovation AG: **Miniature fluorescent measuring modules for medical diagnosis**

In recognition of his pioneering accomplishments in the field of technology transfer and technical consulting:
Prof. Dr.-Ing. Eberhard Birkel, Steinbeis Transfer Center Technology Consultancy at Esslingen University of Applied Sciences

2007:
In recognition of his outstanding accomplishments and projects: **Prof. Dr.-Ing. Jürgen van der List and the Steinbeis Transfer Center Microelectronics in Göppingen**

In recognition of his personal commitment to Steinbeis:
Senator E. h. Dr.-Ing. Wilhelm Schmitt

Werner Guckert (SGL Technologies GmbH), Prof. Dr.-Ing. Christian Kipfelsberger (Steinbeis), Dr.-Ing. Winfried Spickermann (Saint-Gobain Rigips GmbH) (from left to right)

and white graphite-gypsum core and highly unusual properties, without compromising on all the advantages of conventional plasterboard.

At around 0.52 W/mK, the heat conductivity of the new plasterboard is similar to water. EM shielding efficiency is around 60 dB, depending on the wavelength of the radiation. This reduces EM waves to a millionth of their original strength. The plasterboard is also extremely energy efficient thanks to its high heat conductivity – allowing it, unlike other types of gypsum plasterboard, to be used in buildings with all kinds of heating systems. For instance, when laying copper or plastic meander-shaped windings, pipe distances can be up to 35 per cent greater with this new plasterboard than with boards – with the same performance per unit area and equal isothermal heating and cooling. This eradicates the problems associated with secondary energy sources such as geothermal and solar thermal energy.

The high level of EM shielding makes it possible to build low EM homes and workspaces, as required in schools, nurseries, public buildings, and research centers. Users can effectively protect their homes – especially living areas and bedrooms – against EM exposure.

The new plasterboard with added graphite lowers energy costs for end users – and significantly reduces EM levels.

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2008:
Steinbeis Transfer Center Quality Assurance and Image Processing, Ilmenau/WAFIOS AG: **Innovative image processing systems for spring winding machines**

Steinbeis Transfer Center Plastics and Composites Technology, Naila/SGL Technologies GmbH, Saint-Gobain Rigips GmbH: **Graphite-gypsum plasterboard**

Steinbeis Research Center Optimization, Control and Adjustment Control, Grasberg/ OHB Orbitale Hochtechnologie Bremen-System AG: **Mathematical optimization of satellite technology**

In recognition of his outstanding accomplishments and services to technology transfer: **Prof. Dr.-Ing. habil. Eberhard Kallenbach,** Steinbeis Transfer Center Mechatronics, Ilmenau

An image processing system for quality control in production

An instant reaction: top quality spring production

Springs are all around us, keeping mechanical parts moving smoothly in all sorts of applications, from tension springs in drawers to compression springs in push-button light switches, the types found in stairwells. The average car contains around 8000 springs. So uncompromising quality and reliability are crucial in spring production. In partnership with the Steinbeis Transfer Center for Quality Assurance and Image Processing in Ilmenau, engineers from Wafios AG in Reutlingen have developed an innovative, user-friendly image processing system to ensure one hundred per cent quality control in spring production. Both project partners were rewarded with the 2008 Löhn Award.

Wafios specializes in wire processing machines. Innovative image processing systems which intervene in a machine's control loop during production help keep error rates low. The Steinbeis Transfer Center builds small batches of cameras for custom applications as diverse as mains power supplies and sensor boards, sometimes complete with special casings for use on heavy machinery. The cameras are used to monitor processes.

Volker Kalkau (Wafios), Dr. Uwe-Peter Weigmann (Wafios), Prof. Dr.-Ing. habil. Gerhard Linss (Steinbeis), Peter K. Waiblinger (Wafios), Dr.-Ing. Peter Brückner (Steinbeis), Margita Linss (Steinbeis), Steffen Lübbecke (Steinbeis) (left to right)

So how does this work? A special camera is mounted on a spring winding machine. Images from the camera are used by the image processing system to inspect the geometry – such as the length or diameter – of up to 600 springs per minute. Each spring is photographed just before it is cut. As the spring falls, the special software has around 50 milliseconds to measure its visual properties and compare them with control limits and tolerances.

CNC-controlled FUL25 spring winding machine with image processing system

For instance: if a spring is too long, the software interrupts the process and automatically corrects the spring length, ensuring the next spring has the correct length. The faulty spring is ejected through a gate.

Although highly specialized, the system is easy to use. The operator simply presses the analysis button to start a new inspection plan for each new spring geometry – without having to understand the image processing system.

Integrating hardware and software into Wafios machinery was another challenge. Production moves at a fast rate, placing high demands on image processing. Disruptions such as vibrations, spring reverberation, wear, dirt, and even breakage also need to be taken into account.

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Managers receive training at Steinbeis University Berlin

"These are times of constant change"

Engineering firms simply can't find the staff they need. But moaning gets you nowhere. You have train the people you have. So SMEs like Elektror now train their own staff in partnership with the Steinbeis Career Center at Steinbeis University Berlin.

Turning training into one of Elektror's key business strategies: (left to right) Pia Eberspächer, Aleksandra Ljubinkovic (Elektror), Patricia Kuppinger, and Stefanie Sigloch (Steinbeis)

Business can be fascinating. Employees at Elektror Airsystems experience this first-hand every day. Whether in the firm's own staff training academy, specially designed by an occupational psychologist. Or in the management accounting department, where a Steinbeis University Berlin graduate is setting up new sales divisions. Or in the after-sales department, run by another employee who is soon to receive his Masters of Science from Danube University Krems. The common factor here? Promising projects and bright prospects – for the company and people's careers.

Clear goals and high expectations: Elektror, which manufactures industrial radial fans and side channel blowers, has made training its people a way of life. Staff are rewarded for their personal development. The next generation of managers can select from a wide range of degrees and certificates offered by the Steinbeis Career Center (SCC) in partnership with Elektror. Like the modular St. Gallen Management Seminar. Or part-time bachelor's and master's degrees. Or even a PhD.

Whatever titles staff gain and whatever they choose to study, it has to be useful to the firm. Human resources manager Pia Eberspächer explains: "Their qualifications are always relevant to the skills needed by the company – and to the person's job". There's no pressure – staff don't have to enroll. And the program isn't restricted to young employees at the start of their career. Patricia Kuppinger, Director of the SCC, highlights this: "Elektror's oldest graduate on the St. Gallen Management Seminar was 53. This really demonstrates how the scheme caters to individual requirements." Students taking the St. Gallen Management Seminar work through a series of case studies to prepare them for different managerial challenges. The course spans ten modules, each lasting two days. As the students come from different fields, a particular emphasis is placed on thinking outside the box. "The course allows relationships to develop between the students, which can benefit the companies too," continues Kuppinger. A great opportunity – education and networking in one.

No surprise, then, that the "talent management" scheme at Elektror is a real motivator. The annual budget set aside for further education – currently around 200,000 euros – is a clear indicator of the initiative's popularity. A good dozen employees have graduated from the St. Gallen Management Seminar course so far, and around the same number have earned a master's degree. All the more impressive when you consider the company only employs 210 staff.

Based in Esslingen near Stuttgart, Elektror's headquarters will soon be moving to nearby Ostfildern – while production is based in Waghäusel in the Rhine valley. There, in the former state of Baden, managing director Ulrich W. Kreher has launched a new integrated production system. Workflows are analyzed and optimized continually. Productivity and turnover are growing steadily. And administration will soon to be optimized too. The aim? Lean, waste-free workflows. Pia Eberspächer explains: "Earlier, staff just did as they were told to. Now they're part of the process, and can contribute." Working with continual change is part of Elektror's corporate culture – something almost all staff embrace. "Our employees enjoy being part of change, having their own say, and contributing with their own creativity," explains Eberspächer. "It takes a lot more than professional competence and technical ability to drive a company forward." Social skills

After optimizing production, Elektror is now optimizing its office processes. The key? Highly qualified staff. Photo: Elektror

and the ability to lead are vital – but what does this all boil down to? Entrepreneurial thinking.

It's skills like these that the company will need when it moves to its new headquarters near Stuttgart Airport. Pia Eberspächer looks forward to the day when Kaizen moves to the new office to optimize workflows there. "It'll be a great opportunity for all of us to develop our skills – and make our jobs more fulfilling," she enthuses, summarizing the benefits. In her view, process-oriented thinking is increasingly important: "In a few years' time, we won't work in departments any more, but in processes." The new HQ will allow the company to test future plans. Although Elektror will still have its old departmental structures – at least initially – the move will allow the firm to switch the focus to processes. Key processes will be tested and analyzed: their development, their workflow, and how well they integrate with other processes. One key area examined in workshops was the firm's contract workflow. Value streams were analyzed and modeled as a process. Improving areas like these is what motivates the Elektror team.

The aim of these latest organizational and educational moves is to strengthen the firm's standing in Germany – and ensure Elektror remains attractive to talented employees. Staff turnover at Elektror is almost zero, apart from older staff entering retirement. Just another sign that the firm has the right approach to organizational learning. Here, the key management skills that Steinbeis has taught Elektror staff have been invaluable: "perfect for SMEs and companies of our size", says Pia Eberspächer. Elektror has now been working with the SCC for over a decade – just one of around 5000 SMEs the center maintains contacts with, notes Kuppinger. She adds that Elektror's staff training system places the firm "in the highest levels of organizational learning".

Small firms often struggle to afford upscale staff training – but Elektror's management is paving the way for them to do just that. The engineering firm has set up its own academy in partnership with the SCC. Staff from other SMEs will study learning processes and learn practical ways to drive business forward. Elektror's roomy new headquarters – an elegant, contemporary steel and glass construction – makes for the ideal location. This further education academy will become a separate line of business in the summer of 2009.

Pia Eberspächer wants to grow the academy into a broad-based educational platform, focused on the needs of smaller firms. The St. Gallen Management Seminar offered by Steinbeis will be key in doing this – along with BBQ, a non-profit educational institute, and the Münchner Management Forum, a coaching and executive development firm from Munich. The more partners, the better. Eberspächer's dream is nothing less than an all-encompassing, multidisciplinary academy for further education – providing exactly what businesses require. So a wide range of courses will be vital.

Lofty goals – but they haven't just been plucked out of thin air. So where did it all begin? Managing director Ulrich W. Kreher is the role model for his staff when it comes to staff training. Having studied at Steinbeis himself in the mid 1990s, he is paving the way for others to follow. Coming from a technical background, he broadened his outlook by studying business administration and management – highly relevant to his job – and completed a bachelor's degree and a master's degree on the St. Gallen Management Seminar. After graduating, one thing was clear: he wanted his employees to have the same opportunities. His aim: to build a cohesive team, with everyone pulling in the same direction – allowing "networked thinking" to develop. SCC Director Patricia Kuppinger has no doubt: "It was this inspired vision that brought Elektror and Steinbeis together."

Dietmar Kieser
Source: Industrieanzeiger 12/2008

Top management expertise in St. Gallen
The St. Gallen Management Seminar teaches relevant areas of contemporary business economics and management to entrepreneurs and managers of SMEs. The course is split into 10 modules held over 10 months, with each module lasting two days – Friday and Saturday. Successful completion of the course grants students admission to the Bachelor of Business Administration course. Courses are run by the Steinbeis Career Center in partnership with the University of St. Gallen.

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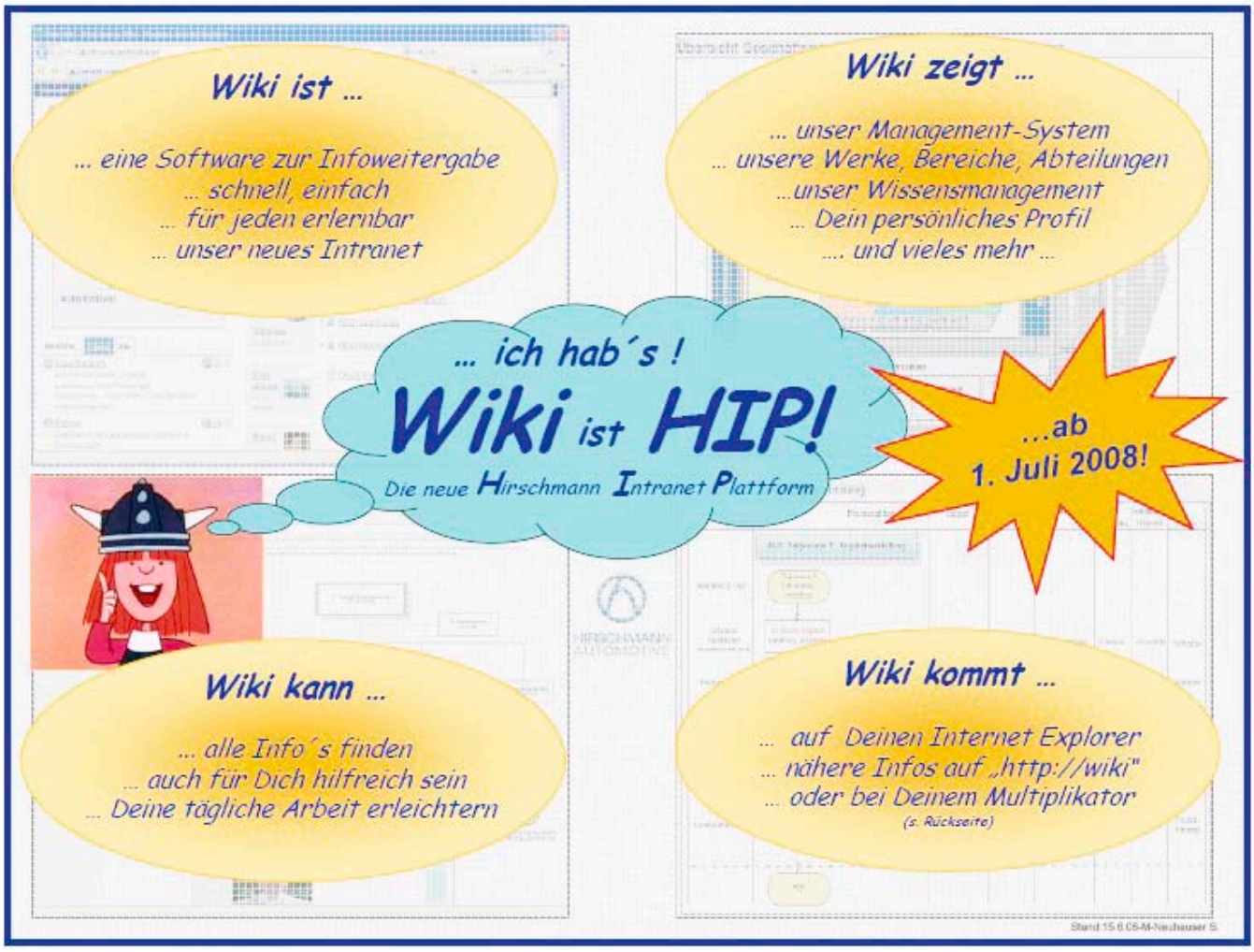
Using a wiki to exchange information more quickly and directly

Management System 2.0: wiki leads the way

At the start of 2008, Hirschmann Automotive, an automotive supplier with headquarters in Rankweil, Austria, launched a partnership with the Steinbeis firm TQU International GmbH. The aim? To restructure its integrated management system in line with the international standards ISO-TS 16949:2002 and ISO 14001:2004. Hirschmann now has a dynamic management system, popular and well used among employees. The secret: wiki technology – allowing all users to edit pages.



"Our old QM system just wasn't practical any more," explains Samuel Neuhauser, "wiki officer" and head of management systems at Hirschmann Automotive. Only a handful of users actively used and maintained it. On the hunt for a new software solution to document the certified QM system, Neuhauser stumbled across an article about TQU International and their Management System 2.0 – a new form of dynamic wiki-based management system. "The wiki idea really appealed to me – and was much better value than a standard software solution. It was time for our 'wiki adventure' to begin," remarks Neuhauser.

The company wanted a management system it could shape and maintain itself, without external help. The answer? A combined task force, including TQU staff on hand to provide initial technical help and assist in project controlling. In several training sessions over a four month period, Hirschmann staff learned how to get the new QM system up and running, and how to work with wiki. These training sessions – which included staff from other firms – were tailored directly to participants' needs.

Hirschmann staff were dedicated to the project from day one, constantly voicing new suggestions for the redesigned system. They enjoyed working on the documentation, realizing its value to the company. One key aim was to create a system which could be maintained by all plants – a multilingual platform covering all three Hirschmann sites, central yet decentralized. To help realize this, a "wiki admin day" was held for

staff from all three plants. "After the training, everyone knew it was 'our' system, not something imposed on us by headquarters," Neuhauser explains. This created a strong community – with key influencers attending workshops so the wiki management system can be improved day after day.

A single platform offering an all-round solution: not only does Hirschmann now possess a dynamic, redesigned QM documentation system, in July 2008 the wiki also completely replaced the old company intranet. By then, the knowledge management pages were complete too. Staff are now more familiar with quality management workflows than ever – and take a much more active role in implementing and improving them.

The success of the Hirschmann wiki is in no small part thanks to the clear goals laid down by management, and their unwavering support for the project. Key questions were asked – such as 'What do we want? When do we want it? What don't we want? And what else do we want?' – and detailed answers were provided in return.

But that's not all. There are a multitude of reasons for the project's success. The clear roles assigned within the team. The project manager's exemption from other tasks to concentrate solely on Management System 2.0. The ideal makeup of the core team. Great teamwork between the IT and management system staff. The list goes on and on: excellent project marketing, expertly coordinated communication and information management, high employee participation, and the task-splitting between several team members – not to mention the creation of "key influencers" (one or two wiki officers per department who received thorough training in advance).

The wiki management system was divided into three areas:

- QM manual – existing documents were added to the wiki, in the form of wiki pages wherever possible
- Department pages – an overview of each department, listing roles and responsibilities, as well as organizational charts and department photos
- Personal areas – employees who wish to can create a personal homepage about their work or life

A clear structure, ensuring improved ease of use – helping projects on their way to a successful outcome.

Support from experts at TQU was also key to the success of the Hirschmann "wiki adventure". And staff benefited from working with other companies in the Management System 2.0 task force, giving firms the chance to learn from each other.

Management System 2.0 seems the ideal way forward – for TQU International as well as Hirschmann Automotive. The figures confirm this: on the first day of the wiki, staff made over 150 page edits, and over 50,000 page views were recorded in the first month. Samuel Neuhauser agrees: "All things considered, we feel well-prepared to face future challenges head-on – both with the wiki as well as the automotive market. The wiki is an excellent information platform – it's quick, easy and direct." As you can see, at Hirschmann, wiki is on everyone's lips!

Opportunities

- Using a wiki can change corporate culture – the willingness to involve staff in an operative quality system often forces a rethink. Staff become more motivated and assume more responsibility.
- The management system is everyone's responsibility and is transparent. Staff have a better understanding of content and structure. The management system is maintained collectively, meaning individual users identify more strongly with it.
- Rapid reaction – pages can be edited quickly and easily
- Wiki documentation is always up to the minute. Constructive changes can be made very quickly

Threats

- Too much time testing the new system and technology – particularly at the start
- In cases like Hirschmann where few user access restrictions are wanted, clear rules and responsibilities for pages need to be laid out and observed
- Don't get carried away and start putting absolutely everything in the wiki – this endangers the real purpose of the system
- This type of system means some certifying officers will be forced to rethink their approach for the better

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Staying successful by developing employee skills

Turning staff potential into financial gain

Given their full potential, over 80 per cent of employees in Germany are underchallenged. Two thirds of HR managers report that staff potential remains untapped. Johannes Klingele, a student at Steinbeis University Berlin (SHB) and the head of purchasing at valve drive maker Mahle Ventiltrieb, plant Zell i.W., decided to investigate this for his bachelor's thesis. Using a modified Balanced Scorecard alongside key performance indicators, he evaluated how well staff potential was being used in the business.

Johannes Klingele presents the project results at the HRM Expo

Failure to capitalize on employee talent is money down the drain – which holds a company back in the market. This becomes particularly apparent during a crisis when all the company can do is use existing staff skills. Klingele's project demonstrated exactly why companies need to prioritize their skills development strategies – and ensure employees are living up to their full potential. Every employee can be worth more to a company.

Klingele's results prompted Dr. Wolfgang Nauendorf, head of the faculty for Organisational and Personal Development at Steinbeis University Berlin, to follow up the thesis with a research project. This was conducted at a Mahle plant in Zell im Wiesental, Germany.

Just how much does staff skills training affect company success? To answer this question, the Steinbeis team developed a model tailored to company goals. Relevant variables were determined via field work in different departments of participating companies. The team developed and validated ways to measure these variables, using them as indicators to assess levels of skill transfer. Finally, a detailed cost-benefit analysis was used to quantify the effect of skills training and "talent tapping" on company business.

This model for making the most of employee talents provides a range of solutions to a number of key questions: how can measurement systems like these be integrated into existing corporate cultures? How do different skill levels affect employee behavior? What different stages does each project go through? How can we encourage staff to strive to be more than just "average"? How can we manage when each measure takes effect? And last but not least: how much added value will employees offer – in figures – if their potential could be put to better use?

The project was presented at HRM Expo in Cologne, Europe's biggest trade fair for HR management. Taking the stand were Johannes Klingele, Dr. Wolfgang Nauendorf, and Nina Kessler, an MBA student at Steinbeis University Berlin. The presentation met with plenty of interest, which in turn led to action: several companies got in touch afterwards to hear more about implementing and assessing methods for maximizing potential.

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Rethinking communication in the era of information overload

Making (and seeing) innovation work

Thousands of innovative ideas are developed and put into practice in Europe each year – everything from precision surgery tools to ingenious service concepts. But only a handful become as widely known as the great inventions of our time – like the combustion engine, digital camera, or mobile telephone. There's a good reason for this – at least according to Anna Falduto, head of the Steinbeis Transfer Center IKU – Seminars for Innovation, Communication and Companies: the more new inventions, the more skeptical consumers and the media become. Of course – who wouldn't want to call themselves a critical consumer?

Given the situation, companies which develop innovative new products, technologies, and services need to prove in a credible manner that their inventions really are, well, inventive. PR experts have spotted a niche here – developing inventive marketing concepts of their own to solve the problem. Their aim is clear: to make innovations understandable, so company stakeholders can see what the invention means to them – recognizing personal benefits and opportunities, whatever their background.

Instead of advertising to the emotions, Innovation PR focuses on convincing stakeholders in practical terms, taking their skepticism over empty promises very seriously indeed. You can't just claim something is a new invention – you have to prove it. In a way that's understandable and credible – whatever world the target group lives in. Engineers, developers, marketers, company spokespeople, journalists, presenters, customers, and consumers – all living in vastly different worlds which need to be integrated into communications. They need to understand each other.

You always have to tread carefully with the mass media: company spokespeople should be included in the innovation and development process at an early stage. This helps them understand exactly what needs to be communicated. Sadly, this is far from standard practice in many companies. But the benefits are obvious: clear, factual information material can be compiled, and journalistic queries can be answered directly and knowledgably by the firm's own communications team. Not only does this improve information flows – journalists will be happy to come back to the company again. Good communication speaks for itself.

All journalists appreciate reliable contacts. The key? Clear, understandable press releases and communications – tailored to the target group. Print, radio, and online journalists need to be approached exactly the right way, with information on relevant topics in an appropriate style. Professional writing, tailored to the reader, coupled with a perfect choice of pictures and captions. By doing this, companies can save journalists a lot of work – an important step in seeing things eye to eye.

The same applies to the internet. An informative press section, vivid image trailers and product sequences, moderated blogs – key tools that allow companies to demonstrate just how good they are at communicating. All backed up with professional corporate publications and innovation presentations.

One thing is crucial: whatever PR methods companies adopt, they must be part of an integrated communications strategy. Because when innovations work, not only does this trickle down to the bottom line, it's reflected throughout the town where the company is based – acting as a standard bearer for the entire economic area.

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A personnel services company invests in employee training

epengineer – certified by Steinbeis University

It's the big day: 13 October 2008. And the first graduates of the "ep-academy" in Ulm are receiving their certificates. They are now official "epengineers". It's not every day a company providing personnel services sets up its own academy for employees and customers. With its new ep-academy, "engineering people" (ep), a technology institute for engineering, testing, project management and IT, now acts as a lighthouse in the hotly contested market for talented engineers.

Photo: ©photocase.com/biloba

The ep-academy project was started in 2007. The starting gun was fired by Winfried Keppler, director of ep, after winning over other managers in the company. The aim was to provide academically recognized qualifications in different stages through three degree programs, each building on the previous one. It was no mean goal, requiring detailed knowledge and experience of employee training and the processes involved in academies. To get this right first time, ep decided to work together closely with Steinbeis.

To pave the way in organizational terms and provide support during the degree program, ep called in a Steinbeis Enterprise – TQU Business GmbH. With Steinbeis University Berlin (SHB), they then laid down the curriculum, defining degree content and workloads of the executive programs (participants work while studying for their degree). This was all captured in examination rules, thus ensuring that the ep-academy's offer fulfilled both the project skills principles and the overarching SHB examination rules. With the academic framework in place, the Steinbeis Transfer Institute for Business Excellence at Steinbeis University Berlin supervised academic aspects and headed up the examination board while another Steinbeis Enterprise – TQU Akademie GmbH – looked after administration.

Working in close partnership and clearing every stage with Steinbeis University Berlin was important to ensure epAcademy graduates gained credit points recognized by the European Credit Point Transfer System.

If students go on to study for a postgraduate degree, qualifications and grades obtained at the ep-academy will be recognized, shortening the length of their new studies. This motivates graduates, as one explains: "Even if I don't yet know if I'll ever go on to use it, it's good to have."

The epengineer degree is certified by Steinbeis University Berlin. This acts as confirmation from the University, represented by the Institute for Business Excellence, that the examination regulations are being fulfilled. Apart from running seminars relevant to the workplace and asking students to carry out a complex project related to their work, a strong emphasis is placed on developing the personality of the young engineers. And there are fun bits too: the participants also passed a test to use leisure craft on Lake Constance.

The clients also like the program. The HR director of a major international company based in Heidenheim an der Brenz sums up why: "A personnel services provider that makes it possible for young engineers to gain good qualifications? That's an excellent service – one we're more likely to call on."

The successful graduation of the first group of ep-academy students confirms that Winfried Keppler did the right thing. It was also a bittersweet experience to see five of his graduates poached by other companies to work as highly-paid project managers. But as he sees it, "That's precisely why this is a good investment in long-term business relationships."

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Steinbeis helps industrial supplier translate ideas into actions

Profit from well managed ideas!

The Stuttgarter Steinbeis Transfer Center for Management Quality helped launch idea management at Wilh. Wissner, a traditional supplier to the clothing industry based in Göppingen (near Stuttgart). One of the most important aspects for the company was to leverage the creative potential and rich pool of ideas thought up by staff through continuous improvement processes (CIP).

Corsage materials made by Wilh. Wissner (Göppingen)

The company decided to launch idea management not only to improve performance, but also profitability, product quality and service mentality in all departments. The introduction followed clear steps and criteria: Will my idea improve something? How can I submit my idea? What happens when the idea has been submitted? Why are some ideas discounted? When will I receive a bonus? This was all part of the innovation culture – which only really took shape once everyone had become involved by taking part in workshops and meetings. The company set up an incentive scheme with various control loops. Ideas were assessed and rewarded according to an internal points system.

The company appointed an Idea Manager to act as a lighthouse for staff and link into senior management. His job is to manage communication in both directions, reporting on updates and final outcomes. Idea management has become a management tool providing the company with direction, changing behavior, establishing parameters for generating ideas, structuring innovation processes, and motivating staff. It began with an idea development process called Discovery Stage for thinking up, assessing and evaluating ideas. Evaluations were based on a points system. Each idea was assessed using key indicators, ranked, and presented.

The inventive ideas thought up by staff injected new momentum into the company. Around 50 per cent of ideas and improvements related to existing products and line extensions, the rest were for cutting costs and improving processes. Idea management has given the company's innovative flair a welcome boost.

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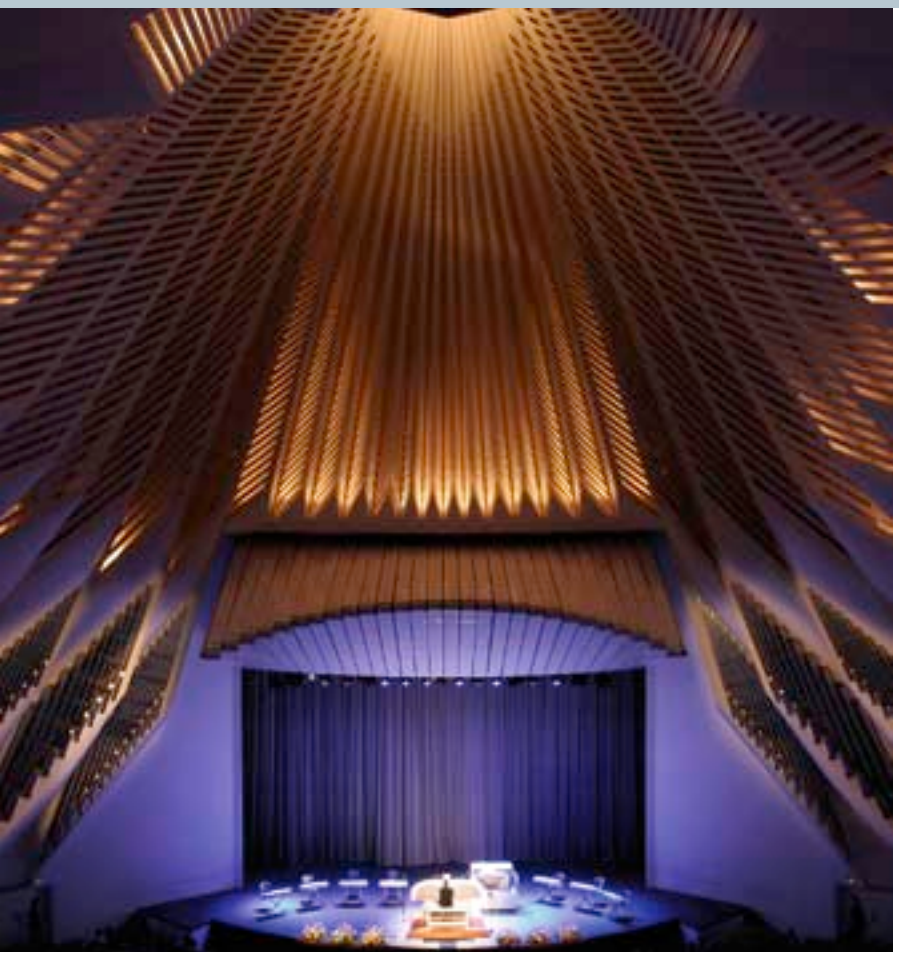

Organ built by Blancafort (Spain)
©Auditorio de Tenerife-Jordi Verdés

Adjusting pipe organs to spatial acoustics

Innovation in a traditional craft

The research group for musical acoustics at the Fraunhofer Institute for Building Physics has been investigating the acoustic interactions between rooms and pipe organs for many years, developing technological solutions for organ builders. The Steinbeis-Europa-Zentrum (SEZ) helped the Fraunhofer Institute and the Orgelbau Mühleisen GmbH – a leading European organ builder from Leonberg – to acquire EU subsidies. The SEZ was also carrying out the project management. By working with external research partners, organ builders now have access to innovative technological solutions.

Pipe organ building is a traditional industry in Europe – and an important part of Europe's cultural heritage. The sound quality of pipe organs is a major factor for the competitiveness of small and medium-sized organ builders. And this quality is always affected by the space in which the organ stands. What you, the listener, hear, depends on both the pipe organ and the spatial acoustics. State-of-the-art acoustic techniques have yet to be applied in the organ building industry. The reason? Acousticians and organ builders have completely different approaches – and terminology.

Adapting a pipe organ to the acoustic qualities of a church or concert hall can be a major challenge. Ten organ building firms from across Europe have joined forces with the Fraunhofer Institute for Building Physics to meet this challenge head on – in the project INNOPIPEORG. One of the aims of this EU project is to build a bridge between the fields of spatial acoustics and organ building.

As well as addressing problems of mutual understanding – which are more or less subjective – the team looked at the objective difficulties of applying spatial acoustic methods to pipe organ measurement, developing standard acoustics methods for pipe organs and documenting the sound power of the organ pipes.

As a result of the project, some innovative measuring techniques and systems were created, resulting in a new scientific basis for measuring and adapting pipe organs to the acoustic properties of a church or concert hall. A first in the long tradition of organ building.

The European Commission awarded the project 350,000 euros of subsidies over 28 months. The Steinbeis-Europa-Zentrum helped the participating firms apply for funding and did the project management. The SEZ does already support the project partners in a new project receiving funding by the European Commission: the EU project "INNOSOUND – Innovative Methods and Tools for the Sound Design of Organ Pipes" will address the design and construction of organ pipes.

Support by the SEZ covers the following areas:

Before starting the project:
- selecting a suitable support program
- support in defining the project, formulating the project bid and finding partners
- analyzing strengths and weaknesses via an innovation audit
- estimating the likely success of the project bid
- support in forming a consortium

During the project:
- Project and knowledge management
- Organising and facilitating meetings between partners
- Coordinating reports and communication with the European Commission
- Budget allocation and control
- Technology watch and foresight
- Consulting on intellectual property rights

At the end of the project:
- support in reusing technology and publishing the research results
- stimulating the innovation process

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Banking careers for specialists, managers and project managers

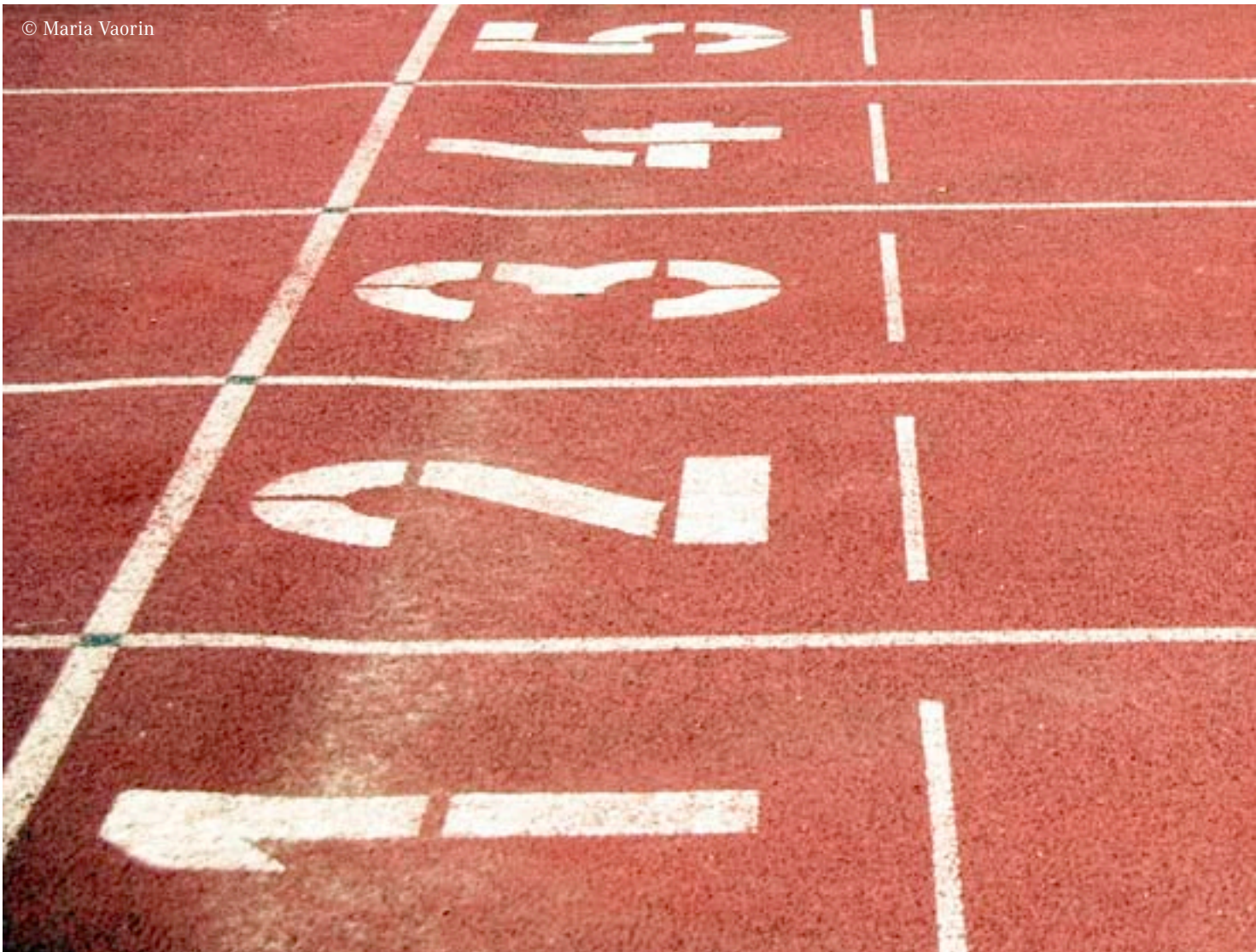
Careers, not fixed tracks

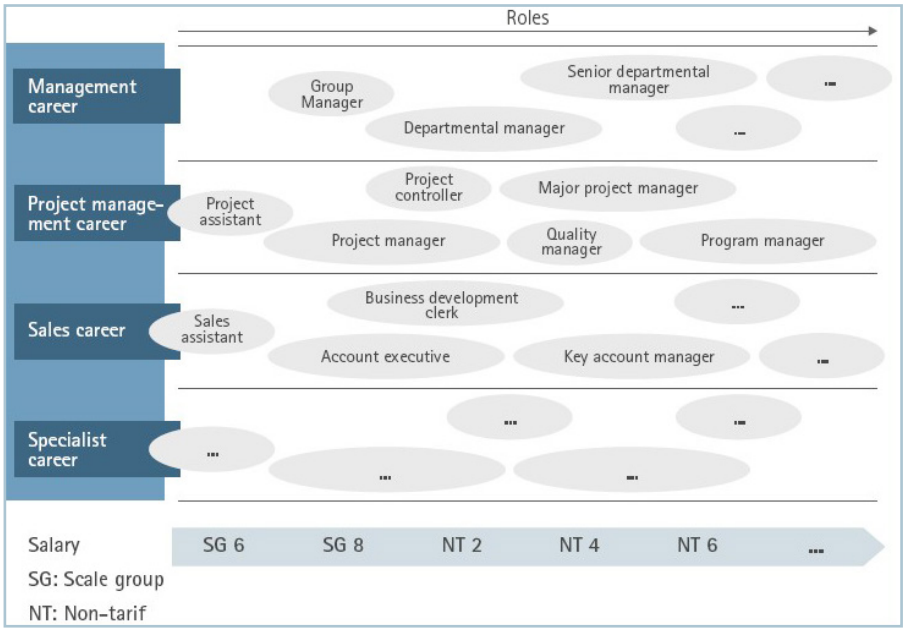
Adding value as a business was freed from the shackles of formal hierarchies a long time ago. More and more businesses have introduced specialist units, staffed by highly qualified experts organized temporarily into project teams – even, dare we say it, working outside traditional organizational structures such as top and bottom. The problem is, the value chain still does not place enough value on project managers, specialists, analysts, accountants and many others. If you want a successful career, you'll probably have to climb the career ladder to top management – managing ten people, then fifty, then one hundred...

This model is a far cry from the modern approach to adding value found in business. It was this realization that motivated the client of Steinbeis Transfer Center Technology – Organization – Human Resources, one of the large German high street banks, to put its entire career planning and remuneration system under the microscope. The result: a completely new business model, linking transparent and flexible career paths for thousands of people inside and outside Germany to market-based payment levels.

It was a challenging project that, more than anything, would involve quickly sitting everyone around one table – specialists and managers – and moderating project meetings, methodically, stringently and tactfully. Why? Because this project would involve a variety of people talking about career models, there could be no room for misunderstandings, inconsistencies, or different interpretations – whether fundamentals or details. Especially important given that the results would feed into personnel systems, processes, HR data systems and related IT systems.

To make sure the new model slots smoothly into existing systems and is understood and





A map of the new career model

accepted by employees, a number of key criteria had to be taken into account:

- The new career model would primarily reflect the bank's business model and value chain (private banking, corporate banking, central departments, etc) – in other words, the organization and departments of the company should be clearly recognizable in the career model.
- In the "new world", remuneration and HR development should be intrinsically linked: the concept would set the goal posts for job class, salary scales, responsibilities and areas of responsibility, HR development and training.
- All career paths should be considered equal (specialists, managers and project managers) – this equality should be reflected in job titles, remuneration, benefits and perks (company pensions, company cars, etc) and many other aspects.
- There may be – and should be – several parallel career paths for specialists, managers and project managers (a major improvement on previously discussed possible and actual systems). Only this way would it be possible to capture processes and structures throughout the whole organization.
- When launching the new system, a way should be found to avoid repeating the current system – with all its in-built inconsistencies and faults. Instead the focus should be on defining and achieving aims of future processes and HR instruments. If necessary, changes can still be made, to come into effect in the middle term.

The launch of the new career model paved the way for new remuneration models and HR development. Given the volatility of the market, it was important to set up a system that would be reliable and sustainable in the medium term, yet still flexible enough to cushion the effects of market changes, changes in the organization, or shifts in the labor market. In essence, it was and still is about achieving a healthy balance between stability and change.

Even though the German banking sector is expected to be much less dramatically affected by future demographic changes than many people maintain, it was important to create a system that would pick up quickly on demographic shifts in bank personnel and come up with practical solutions. As the new concept would be largely based on different seniority levels (from juniors to principals), in the future this would be possible at the click of a mouse.

Another issue to think about was the attractiveness of the bank as an employer, crucial for some segments of the labor market. For a company to keep recruiting the right people, potential employees must be convinced that highly qualified specialists working in the field of product development, due diligence or risk analysis have a genuine opportunity to forge a career without immediately being pulled into managing other people or taking on management responsibility. This was pivotal in convincing the customer of the Steinbeis Transfer Center Technology – Organization – Human Resources that it should go ahead with the planned system.

Then came financial factors: as salary studies prove, the new model would allow the company to match market salary trends, including all variable and optional elements of remuneration packages. This provided an template for addressing the typical sort of questions that used to come up such as "What's the going market rate for people in similar jobs or with similar qualifications?" – making it possible to put people into salary bands and work out remuneration levels.

"We value people who add value" – this has become the new maxim at the bank when it comes to HR development, careers and pay. The project has also already resulted in a much more systematic and professional approach to personnel management – thanks to the support of Steinbeis!

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Recognizing a flair for innovation and quality in Baden-Württemberg

Award-winning innovation

Companies throughout Baden-Württemberg are being invited once again to demonstrate their innovation skills and quality standards – and their ability to achieve world-class business performance. The Baden-Württemberg "Kompetenzpreis" – or Competence Prize – for innovation and quality will be awarded again in 2009 to manufacturing and service companies. The Competence Prize is an initiative of the Steinbeis Foundation, trade fair services company Schall and TQU Business GmbH from Ulm.

Companies are evaluated on a series of criteria relating to key innovation prerequisites, implementation standards, and ongoing success. Applications in 2008 covered a wide variety of topics. Apart from product developments, innovations were pinpointed in terms of business processes as well as how well companies converted existing technology into new types of products. The jury places particular emphasis on how companies deal with the sometimes conflicting issues of innovation and quality.

The award has been structured to reflect the underlying philosophy of the EFQM Excellence Model which was introduced throughout Europe: innovative business processes translate into implementation excellence with long-term benefits to the bottom line. In particular, a company's ability to solve the conflicting needs of innovation and quality through exemplary operation is decisive in choosing the winners, explains Prof. Dr. Heinz Trasch, Chairman of the Steinbeis Foundation Board and member of the 2009 jury.

The innovation processes taking place at each company can be highly varied, ranging from the restructuring of an entire company hand-in-hand with its business fields to a sharper focus on employees to "set the innovation ball rolling." The award looks at new technologies as well as ways existing technology can be transferred from one sector of industry to another. Central to the jury's deliberations are the role of the customer, be this through involvement in panels, cooperation with scientists, or joint product development. There should be a distinct link to the policies and strategy of the entire company, paving the way for other areas of the company to adopt these processes as best practice.

Winners of the Competence Prize for Innovation and Quality must not only demonstrate a proven ability to innovate and translate their breakthroughs into everyday business – this must run over at least three years with a positive influence on a variety of key criteria: achieving business goals and holding one's own in the market.

The Baden-Württemberg Competence Prize for Innovation and Quality will be awarded this year for the second time and will coincide with the trade fair Control 2009 in May. The 2008 prize was won by Paul Hartmann AG for its Duo Sensor Technology, which provided the company with a unique edge over its competitors. The application of the technology in new products demonstrates clearly how qualitatively superior innovations have a proven effect on market success.

To find out more, or submit applications, please contact
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Left to right: Werner Neumann (Deutsche Bank Bremen), Prof. Detlef Rahe, Ralf Nagel (Senator for economics)

The i/i/d is given two reasons to celebrate

Double hit

On 17 October 2008, Bremen-based Steinbeis transfer center i/i/d (Institute of Integrated Design) celebrated its tenth anniversary. The same day, it was designated a selected location for sustainability under a German innovation scheme rewarding "365 Landmarks in the Land of Ideas."

Going by a twin motto – "10 years future – night of innovation" – the ceremony took place in the main auditorium at Bremen University of the Arts in the presence of around 300 guests from politics, trade and industry, banking, academia and research.

Professor Detlef Rahe, founder and head of the i/i/d, received the trophy from Werner Neumann (Director of Deutsche Bank in Bremen) along with a certificate signed by the German President, Horst Köhler. "We are extremely proud to have been chosen as a landmark in the 'Land of Ideas', and are delighted at the recognition of our people and our work," announced Rahe, accepting the award. "It's especially nice to have this coincide with our 10th anniversary."

In a speech praising the i/i/d, Werner Neumann stated that "by dovetailing theory with practice, the institute has provided fertile ground upon which new ideas can flourish. Its innovative flair and drive to forge new paths are helping write a new chapter in the future success of our economy."

The i/i/d was founded in October 1998 as part of Rahe's appointment as Professor of 3D Design at the University of the Arts in Bremen, partly thanks to the active support of the Senator for Economics in cooperation with the Department of Science. In his official speech, Ralf Nagel, the current Senator for Economics and Ports, congratulated Prof. Rahe and his team, highlighting the strong standing the i/i/d has gained over the last decade, and wishing them "at least one good idea a day."

Professor Rahe emphasized that "success would never have been possible without the support of so many people along the way, and especially the backing of Steinbeis as

Steinbeis convention: Energy – Efficient utilization and conversion

In 2007, Steinbeis embarked on a series of "applied technology" conventions aimed at broadening the outlook on current issues, with talks from leading business and science figures on future technology and developments. In 2007 the theme of the symposium was production and component properties. On 1 April 2009, experts will convene in the Stuttgart House of Commerce (Haus der Wirtschaft) to discuss a variety of energy efficiency issues. The convention is aimed at key decision makers in engineering and automotive firms working in the fields of production technology, factory planning, and process engineering.

No energy, no industrial production. Energy prices have shot down recently, but this does not affect one of the biggest current and future challenges facing society: the economic, reliable and sustainable supply of energy.

As we use more and more fossil fuels – especially coal – higher energy consumption stokes carbon emissions. Is there a solution to this global energy conundrum? What influence does this have on industrial production? What viable options exist to solve issues affecting energy supply and efficiency? In cooperation with the energy company Shell (London/Hamburg), and the F.A.Z. Institute, the Steinbeis Technology Group is joining forces with innovation partners to stage an Energy Efficiency convention on 1 April 2009. Its aim: to discuss all of the above issues.

Apart from examining the implications of economic, reliable and sustainable energy supplies, leading authorities from industry and science will look at key issues relating to energy efficiency and resource preservation. After the main speeches, the one-day event will split into two panels, which will make presentations on and discuss how to strike the right balance between resource utilization and adding value.

the main sponsor of the institute." He then looked back over the ten years: 133 projects, for 99 clients, carried out by more than 118 creative colleagues. "I think the numbers are really quite impressive," he said, adding with a twinkle in his eye: "We're currently looking for our hundredth client."

The i/i/d is an interdisciplinary transfer center that designs and helps manage innovation and development processes, thus helping focus quickly on the needs of users and markets. The center supports its clients – which range from the very smallest companies to major internationals – with the design of products and services matched to different target groups, and corresponding communication processes.

Its methods of integrated design draw on the interaction of creative industry expertise on an interdisciplinary level, linking this to the specific development processes of each client. In short: design for entrepreneurial success.

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This will involve investigating and examining product development and production processes in complex manufacturing set-ups, and machine availability, based on the principle of "avoid rather than use" (functional materials, lightweight construction, product and process substitution, hybrids and near-net-shape processes etc). Also under consideration: different approaches to conventional and alternative energy generation and use (fossil, wind, solar, geothermal, etc).

To find out more go to
www.stw.de

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Professor Pleitner Award

A social dimension to entrepreneurship

2008 the Steinbeis Career Center at Steinbeis University Berlin awarded for the first time the from now on annual awarded Professor Pleitner Award to an MBA student who has shown particular social engagement during his studies, and who has gone beyond the call of duty to help those less fortunate. In 2008, the award was bestowed to Lutz Frischmann, managing director of plastics firm Frischmann Kunststoffe GmbH. For his degree project, he founded a children's hospice in the Thuringian Forest.

Lutz Frischmann "[...] is the ideal entrepreneur, embodying the true potential of a social market economy," praised Hans Jobst Pleitner at the award ceremony in Berlin in November. Turning to Frischmann, he continued: "As long as we can count on people like you, we needn't worry about the future of our economy and our society – and the local value of entrepreneurship."

Both a successful entrepreneur and an upstanding citizen, Lutz Frischmann is characterized by his strong social conscience and sense of responsibility. As well as applying his dynamic personality to managing his company, a traditional middle-sized family firm now in its fourth generation, he's also a local councilor, a lay judge in the local labor court, and an active member of the German Association for Small and Medium-sized Businesses, the "Made in Germany" academy and the Bertelsmann Foundation.

But it was his commitment to the new children's hospice in the Thuringian Forest that convinced the jury to honor his efforts with the first ever Professor Pleitner Award. The institute is a "life hospice," a home for terminally ill children requiring long-term care. Since no public funds are available, Lutz Frischmann set himself the target of raising five million euros to build the centre and cover running costs for the first few years – and he didn't limit himself to just asking for donations.

Besides the honor of winning the award, Lutz Frischmann also received 2500 euros and a specially commissioned sculpture made of basalt (black) and olivine (green). Materials typical of the island of Lanzarote in the Canary Islands, where artist Bastian Widera lives and works. The sculpture shows an abstract figure reaching skywards, locked in a protective embrace around a smaller object.

(from left to right) Prof. Dr. habil. Hans Jobst Pleitner, Lutz Frischmann, Carsten Stehle

Prof. Dr. Hans Jobst Pleitner was named Director of the Swiss Research Institute of Small Business and Entrepreneurship in 1975. Ten years later, he was appointed Professor for Business Management with special emphasis on SMEs and entrepreneurship at the University of St. Gallen, Switzerland. After becoming an emeritus professor in 2000, he took up a new role as Professor for Entrepreneurial Management at Steinbeis University Berlin. Throughout his career, Professor Pleitner has focused on working with entrepreneurs and managers in SMEs, dealing with both theory and practice.

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SEZ becomes partner in Indian-European "European Business and Technology Center"

The European Business and Technology Center (EBTC) promotes research and business ties between Europe and India and is partly funded by the European Commission. Its focus is on environmentally friendly technologies used in the fields of energy, environment, transportation and biotechnology. The services of the center are provided by 17 partners from ten European countries offering a rich pool of expertise. An office in Delhi acts as a local contact point in India. The Steinbeis-Europa-Zentrum (SEZ) is also a partner in the network.

India has one of the fastest growing economies in the world, with annual growth rates of somewhere between eight and ten per cent. If the forecasts are anything to go by, India will have grown to become the world's third largest economy by 2032. It is already an important trading partner to the EU: European products already account for 20 per cent of the Indian market. With more than one billion inhabitants, India is an attractive location for European companies and research bodies.

Despite this, the country poses a variety of difficulties to companies, especially small and medium-sized ones: from the quagmire of bureaucracy to the difficulty of finding suitable local partners. This is where the newly founded center steps in, acting as the main port of call for companies from Europe – especially SMEs – and research institutes looking to start operating in India. With the help of its office in Delhi, the EBTC is promoting European partnerships in India.

The Steinbeis-Europa-Zentrum is involved in setting up the center and running services based on years of experience in international technology transfer and the results of its work in the 'Enterprise Europe Network'. According to Steinbeis-Europa-Zentrum's Heike Fischer, "Especially for Baden-Württemberg's small and medium-sized companies and research bodies, the EBTC provides an avenue for forging initial contacts with potential partners in India and benefiting from local support. The Steinbeis-Europa-Zentrum provides practical support in entering new markets, even beyond the borders of Europe." Over recent years, the Steinbeis-Europa-Zentrum has already run a number of partnership projects with India.

The center places a particular emphasis on environmental issues: as the Indian economy has boomed, the countryside and people have been subjected to severe pollution. The country is a long way off using environmentally friendly technology. This is an opening for companies; for India, it is an opportunity to counteract climate change with the use of new technology.

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How the Steinbeis-Network came into

The Ivy League universities have been doing it for years: running organizations for ex-students to keep in touch, forge business relationships, and maintain career momentum. For nearly a year, the GeneralMBA has been following their successful example with its own alumni organization. In the summer of 2007, the School of International Business and Entrepreneurship (SIBE) at Steinbeis University Berlin set up the Alumni GeneralMBA Transfer Institute.

The number of SIBE students and alumni continues to rise rapidly. As past students climb the middle and senior management ranks in Germany, the name Steinbeis University Berlin is becoming a quality endorsement in itself. Which means an alumni portal can play an important role. Rather than list services, the aim of this "digital yearbook" is to allow MBA graduates to shape the platform to match their needs. The project is supported by SMAN, the SteinbeisMBA Alumni Network, that already counts many active alumni among its members. Alongside its social and entertainment value, one of the main aims of SMAN is to enhance commercial use to graduates from a variety of disciplines, areas of expertise, industries, and positions – and the forum helps members pinpoint simple solutions to everyday business problems. Other ideas being worked on include a business register to search for partners, suppliers and service providers, plus a mentoring program for new or current students. Apart from expanding services and encouraging more students to become involved, the network also organizes activities and events. Some examples: the annual university football tournament, discussion forums with leading people from business and politics, and regional

MBA Alumni being

evening get-togethers with other people from Steinbeis.

SMAN works on the principle of "for alumni, by alumni" – especially important given the new world of digital networks and the need to be able to trust people. Having all shared the MBA degree experience, this trust is already established – but for a variety of other initiatives to get off the ground, input is needed from alumni to design the website and put it to good use. To support this process and emphasize the exclusivity of the network, a leaf has been taken out of the American book and soon there will be a membership fee. All graduates and students currently studying for a master's degree are eligible to join the network, after registering at www.steinbeis-alumni.de.

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Steinbeis recognized for its use of renewable energy

Last October, EUROSOLAR, the European Association for Renewable Energy, awarded its 2008 German Solar Prize in Bonn. The prize was handed over by EUROSOLAR President Hermann Scheer, Alternative Nobel Prize winner. Among the prize winners was Prof. Dr.-Ing. M. Norbert Fisch, Head of the Stuttgart Steinbeis Transfer Center for Energy, Building and Solar Engineering.

Hermann Scheer (second from right), Univ. Prof. Dr.-Ing. M. Norbert Fisch (right)
Source: Eurosolar

The ceremonial speech was held by Ronald Feisel, chief editor at public broadcaster WDR (Westdeutscher Rundfunk). One of his key points was the example all prize winners provide to others in shifting energy use away from fossil fuels and nuclear energy toward renewable energy. "The fact that this is not only possible but is actually already happening has not just been proved by these award winners, but also by the huge number of applications – people who also found classic and original ways to achieve the energy turnabout," said EUROSOLAR President Hermann Scheer at the award ceremony.

Norbert Fisch attracted particular praise for setting up solar settlements with long-term thermal storage and planning and introducing energy supply systems for housing estates. According to the jury, Fisch's research and his initiatives in a variety of solar construction areas have significantly aided the shift towards carbon-neutral energy supply systems for buildings and housing estates.

Norbert Fisch started looking into the use of solar energy in buildings as early as 1984, during his doctorate at Stuttgart University. His commitment to the use of renewable energy in building construction has been unbroken ever since. Until 1996, Fisch was the head of department for the Rational Use of Energy and Solar Technology at the Institute for Thermodynamics and Thermal Engineering at Stuttgart University. He was later appointed by the TU (Technical University) in Braunschweig, where he still works today as director in the faculty of architecture at the Institute of Building Services and Energy Design.

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Steinbeis Consulting Centers launch updated website

The website of the Steinbeis Consulting Centers (SCC) – spanning a variety of advice centers with an emphasis on business consulting services – has been sporting a new design since October 2008.

The previous website was due for an overhaul – today, the site features all-new programming, content, and navigation. Every element now fits closely with the corporate design of the overall Steinbeis website. The new site – www.stw-beratung.de – appeals more to clients, partners and consultants, providing a quicker overview of the services each center offers.

Users can now locate information on individual consulting centers and the SBZ consulting portfolio much more easily. Within a few clicks, you can identify the right specialist consultant with experience in certain industries or a certain consulting field. Apart from information on the centers, visitors can find plenty of details about the services provided through the umbrella organization, such as consultant support in the form of business coaching, short consulting sessions, and Steinbeis Certified Consultant certification – a quality award for qualified professionals. The website also provides access to official forms and documents.

To find out more visit
www.stw-beratung.de

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Degree in Education Management launched

In the small Black Forest spa-town Bad Duerrheim a new era began in October 2008 with twelve students: By now, unlike other European countries kindergarten teachers in Germany do not need any university degree to be allowed to work with children and youths. In partnership with Steinbeis University Berlin and supported by Permira (Private Equity) the Institute for Pedagogic Management (IfPM) wants to clearly raise this standard in education by offering a part-time undergraduate program for pedagogues without A-level, but with work experience. The students will graduate with a "Bachelor of Business Administration" after three years.

Annette Schavan, Federal Minister for Education and Research, is the patron of the Institute for Pedagogic Management (IfPM). Markus Seidel, the institute's director, explains its background: "We set up the institute for experienced teachers who want to prepare themselves for future professional challenges by studying 'Pedagogic Management' at university level." The new degree is one of many offered by Steinbeis University Berlin, allowing people to study alongside their job. The 'Pedagogic Management' course accepts students with sufficient job experience, even if they lack a traditional university entrance qualification. The degree covers a range of areas, including educational science, management and communication skills.

At the opening, the scientific director of the IfPM, Professor Dr. Volker Reinhardt, announced a master's degree course to follow the three-year bachelor's degree. The students – not all from Black Forest and some from as far away as Cologne and Munich – were happy to be welcomed as a part of this course. The next course group will start next autumn, Markus Seidel announced: "We've already had initial enquiries."

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New releases from Steinbeis-Edition

It's always a pleasure for us to introduce readers to some of the latest publications from the Steinbeis-Edition – and in 2008, we even had our own stall at the world-famous Frankfurt Book Fair. If you would like to read more about our publications online, please visit www.steinbeis-edition.de.

Lean Production für KMU des Maschinenbaus
Editor: Uwe Dittmann; Authors: Marco Niebling and Marcus Westerwald
ISBN 978-3-938062-68-5, German

Do lean production principles also apply to small and medium-sized engineering companies? A good topic for the authors to delve into, drawing on a case study at the Ditzingen-based company Trumpf. In doing so, they explain the principles of lean management using specific applications relating to business issues. Many of the methods outlined can be translated easily into practice, making them useful to companies of any size.

Streamlined manufacturing has the potential to save huge amounts of money and makes companies more transparent. Given increasingly cut-throat competition and globalizing markets, the insights in this book could be invaluable in business.

Erfolgshonorare für Rechtsanwälte – Formen, Kalkulation und betriebswirtschaftliche Umsetzung
Stefan Winter with the support of C. Pooch, C. Schwab and H.-Y. B. Tang
ISBN 978-3-938062-22-7, German

In July 2008, solicitors in Germany were allowed to enter into commission-based contracts with their customers under certain conditions. Prior to the new law, the pros and cons of success fees were the subject of detailed discussion in legal publications. Yet until now, there has been no guidance on the business side of the story to show legal experts what forms success fees can actually take and how they can be used in practice.

Interkulturelles Forschungsmanagement – Ein Wegweiser für die internationale Projektarbeit
Editors: Jonathan Loeffler and Sabine Preusse
ISBN 978-3-938062-67-8, German

This manual came about as a result of the increasing amount of international research taking place, outlining the fundamentals of professional management in safeguarding the success of R&D projects. In doing so, the book takes into account intercultural factors that need to be kept in mind, as they play a pivotal role in the success of international projects.

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 August 2008:

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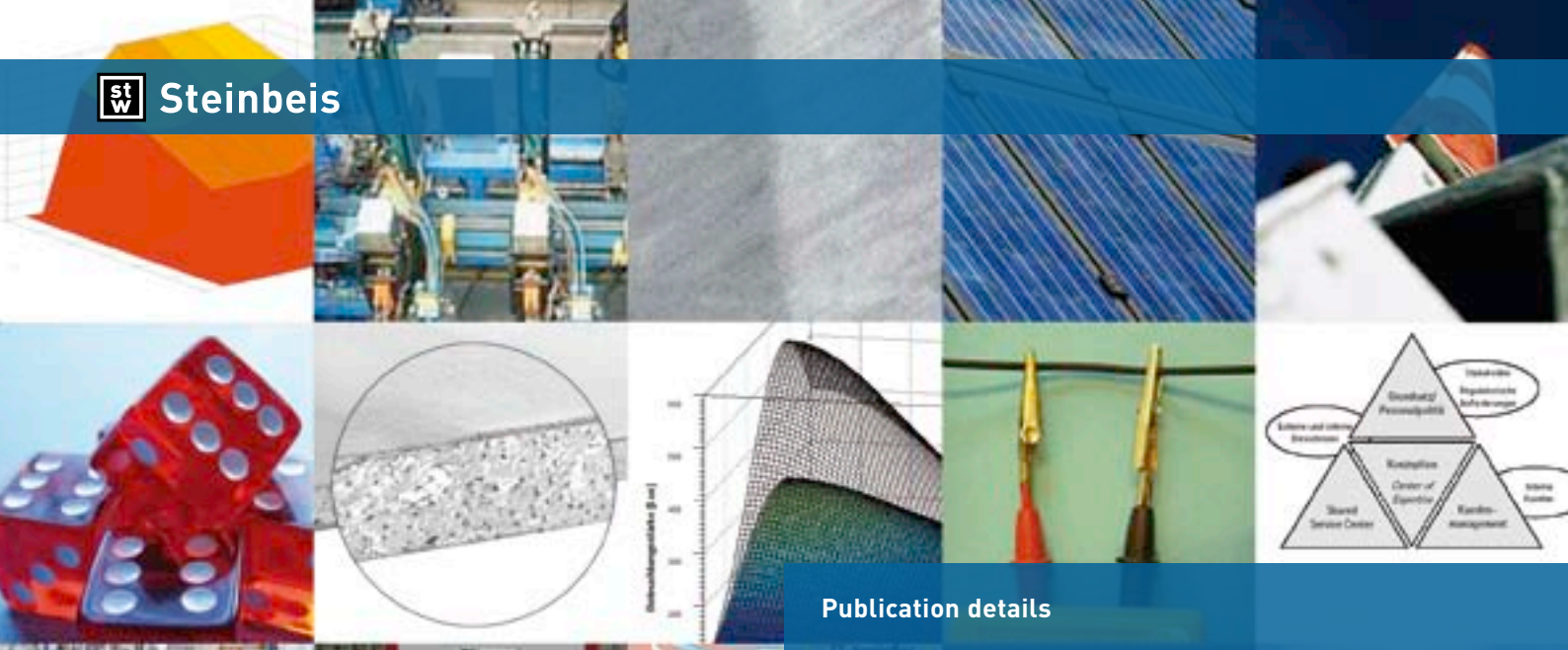

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