



Issue Ten / June 2012
Published by local global, 5 euros
ISSN 1865-0597



Baden-Württemberg
Where ideas work.

Business Baden-Württemberg

ENERGY TURNAROUND

Minister Franz Untersteller on the challenges of energy policy

GREEN ECONOMY

Jeremy Rifkin on the third industrial revolution and future growth in Europe

SMART SOLUTIONS

IBM CEO Martina Köderitz on ICT solutions for sustainability

Living Lab

Baden-Württembergs researchers
working for smart industrial
products and a sustainable future





With more than 12,000 jobs, the environmental economy and solar industry in the region of Freiburg is an important economic and location factor.

[Cluster Green City FREIBURG]

Our Cluster Members:



Cluster **GREENCITY**
FREIBURG

www.greencity-cluster.de

Project Initiator:

Management
Marketing
FWTM
FREIBURG

Sponsored by:



Investition in
Ihre Zukunft!
Europäischer Fonds für
regionale Entwicklung

Baden-Württemberg
MINISTERIUM FÜR FINANZEN UND WIRTSCHAFT

Europäische Union

www.rwbefre.baden-wuerttemberg.de



Staatsministerium BW

Nils Schmid
Deputy Minister-President
and Minister of Finance
and Economics

Innovation as a Guarantor of Growth

In 2011 Baden-Württemberg's businesses again set a new export record. Goods and services worth 172.4 billion Euros were exported from our Federal State. That amounts to an increase of 12.4 percent compared with the previous year.

This success can essentially be attributed to businesses' ability to innovate as well as to the premium quality of their products and services. This has enabled Baden-Württemberg to further consolidate its leading position in Europe in terms of growth and employment.

Baden-Württemberg's economy grew by 4.4 percent in 2011 and manufacturing industry even grew by nearly 9 percent. Major drivers of this growth in 2011 were the vehicle manufacturing and mechanical engineering industries — two traditional sectors, whose product and process innovation skills helped to enhance their already strong positions in global markets.

However the State's pharmaceuticals, electrical engineering and chemical industries also achieved strong growth abroad last year.

Baden-Württemberg's companies are also this successful in export markets because they have geared up to meet global demand for sustainable products and smart system solutions in good time. Ambitious projects in emerging markets to facilitate environmentally compatible mobility, energy-efficient manufacturing and modernisation of infrastructure and health and welfare systems are generating new demand for products made in Baden-Württemberg.

How Baden-Württemberg is acquiring an international competitive advantage in these forward-looking fields of endeavour, is very clearly illustrated in this edition of Business Baden-Württemberg. The magazine demonstrates how closely the scientific community, major companies, SMEs and start-ups are working together in our industrial clusters. Our State is an attractive location from where your business can help shape the future of industry. I cordially invite you to come and talk with Baden-Württemberg. ☼

Business Baden-Württemberg

Content Issue Ten

Karlsruhe

ZKM-Exhibition: Franz Erhard Walther, Space Through Action
page 08
Smarter Cities:
Karlsruhe meets Pune
page 16
The Best of Two Worlds:
Karlsruhe Institute of Technology
page 30
Professor Dr. Eberhard Umbach Chairman of Forschungszentrum Karlsruhe on energy challenges
page 33
Future Power by
Female Power: Stefanie von Andrian-Werburg is Head of the Process Engineering / Steam Generator Unit at EnBW Kraftwerke AG.
page 44
edubiz discussed HR and qualification strategies for companies with operations abroad
page 58

Besigheim

Besigheim's KOMET Group gathering industrial partners to discuss global challenges
page 17

Ehningen

IBM Deutschland CEO Martina Köderitz on IT solutions for a smarter planet
page 46

Nagold

The "State Garden Festival" is getting a makeover in Nagold
page 62

Freiburg

The Green Flagship: Dr. Bernd Dallmann explains how Green City Freiburg became a synonym for a successful eco-cluster
page 15
Lifestyle of Health: Freiburg is addressing new segments of healthcare tourism
page 66

Mannheim

The Country Needs Engineers: Energy Sector Opportunities
New discipline at DHBW Mannheim
page 54

Juan Amador's Molecular Kitchen
page 6, 65

Heilbronn-Franconia

Heilbronn-Franken Meets Lombardia
page 12

Schwäbisch-Hall

MEXICANIDAD—Mexican art at the Kunsthalle Würth
page 62

Stuttgart

"Innovation as a Guarantor of Growth", Nils Schmid Deputy Minister-President and Minister of Finance and Economics
page 3
Deloitte: Managing the Energy Turnaround
page 21
The DLR Institute of Solar Research
page 34
The ZSW in Stuttgart is driving the energy turnaround forward
page 36
Global Minds: The International School of Stuttgart
page 56
Meeting Point for Exporters —Global Connect— the internationalisation forum
page 60

Ulm

Future Lab: The Centre for Solar Energy and Hydrogen Research
page 37
eLab Laboratory: En Route to the Super-Battery
page 38
Energy Turnaround Degree: International Energy Management and Energy Systems Engineering
page 52

Neckar-Alb

A region contributing to new forms of mobility
page 42

Herrenberg

SIBE assisting enterprises to find and to bind talents for global careers
page 50

Tettngang

Vaude CEO Antje von Dewitz explains why women belong in positions of authority
page 48

- 06 Impressions
- 10 Facts & Figures
- 66 Next Issue

CLUSTERS & INITIATIVES

- 12 The Export Miracle Continues
Baden-Württemberg expands
in new markets worldwide
- 14 International Initiatives
Jürgen Oswald appointed CEO of
investment promotion agency bw-i,
- 15 The Green Flagship
Dr. Bernd Dallmann explains the
Green City Freiburg concept
- 16 Smarter Cities
Strengthening ties:
Karlsruhe meets Pune
- 17 "We intend to set lasting impulses"
Ideenforum on China—Fresh ideas
from Besigheim's KOMET Group

ENERGY

- 18 Energy Turnaround
Minister Franz Untersteller claims a
leading role for Baden-Württemberg
- 21 Managing the Energy Turnaround
A sustainable approach involves many
helping hands, says Deloitte
- 22 "The third industrial revolution"
US economist Jeremy Rifkin's proposal
for a sustainable economy
- 25 "New growth for europe"
Interview with Jeremy Rifkin
on Europe's perspectives
- 28 Green Products at Greenr.biz
The 3D realtime and virtual event of
local global to start in September

LABORATORY

- 30 The Best of Two Worlds
Karlsruhe Institute of Technology
(KIT) combines the spirit of university
and research institute
- 33 "Full backing to implementing the
energy turnaround"
Professor Dr. Eberhard Umbach of
KIT on current energy challenges
- 34 Reliable Technology for the Energy
Turnaround
Solar-thermal power stations to play a
major renewable energies role
- 36 Fresh Ideas, Emergent Technologies
The ZSW in Stuttgart is driving the
energy turnaround forward
- 39 Window on the Future
Baden-Württemberg on its way to
becoming Europe's electromobility
hotspot
- 42 The E-Bike Region Neckar-Alb

GLOBAL PLAYERS, LOCAL HEROINES

- 44 Female Power
Among Germany's 25 most
influential women engineers
in Baden-Württemberg
- 46 The Issue of Sustainability
IBM Deutschland CEO Martina
Köderitz on changing the world
for the better and smarter
- 48 Well I've Made It — Women
in the Boardroom
Vaude CEO Antje von Dewitz
explains why women belong in
positions of authority

TEACHING & TALENTS

- 50 A Finger on the Pulse of the Times
SIBE offers its corporate partners
genuine added value
- 52 Energy Turnaround Degree
Energy Management and Energy Sys-
tems Engineering at Ulm University
- 54 The Country Needs Engineers
Energy Sector a New discipline at
DHBW Mannheim
- 56 Educating Global Minds
The International School of
Stuttgart expands its facilities

MEETING POINT

- 58 edubiz-premiere in Karlsruhe
HR and qualification strategies for
companies with operations abroad
- 59 Learntec 2013 Preview
The Karlsruhe hot-spot for e-learning
to attract more international exhibitors
- 60 Meeting Point for Exporters
It is round three of GlobalConnect
- 61 Intergest 40
The global service provider becomes
premium partner of GlobalConnect

AFTER WORK

- 62 A Different Kind of Holiday
Environmentally aware holidays made
in Baden-Württemberg
- 65 "We Think Cosmopolitan"
The Spanish Swabian Juan Amador
on the molecular gastronomy
- 66 Lifestyle of Health
Freiburg is addressing new
segments of healthcare tourism

IMPRINT

Published by
local global GmbH
Marienstr. 5
70178 Stuttgart
Germany
Phone: +49 711 225588-0
Fax: +49 711 225588-11
marketing@localglobal.de
www.localglobal.de

In cooperation with
Ministry of Finance and
Economics

Editor-in-Chief:
Hans Gäng

Managing Editor:
Daniela Sandmann

Translation:
Ralph Livesey-Wardle
LinguaKraft Language Services

Editorial Design:
Schulz-Hampanian
www.schulz-hampanian.de

Cover Photo:
KIT

Print: Gulde Druck
GmbH & Co. KG, Tübingen

Subscription / Sales:
Andreas Bergmaier
Phone: +49 711 225588-24
bergmaier@localglobal.de

Advertisements:
Phone: +49 711 225588-24
marketing@localglobal.de

Business Baden-Württemberg
ISSN 1865-0597


local global
business media



Baden-Württemberg

MINISTERIUM FÜR FINANZEN UND WIRTSCHAFT

Mutation

Changes are the result of many years of endeavour. The egg is a symbol of that. Given all the effort that molecular gastronaut Juan Amador puts in at his experimental kitchen in Mannheim. Landmark changes do not come about at the first attempt. Tenacity is the power behind innovations from Baden-Württemberg. It is all about perseverance.



Participation

Amplification resulting from a change in perspective. Viewing things from a different angle is already half the battle in developing a new relationship with them. Franz Erhard Walther's participatory works of art have redefined sculpture. The ZKM, the museum of modern art in Karlsruhe, is showcasing his work.



Number One State

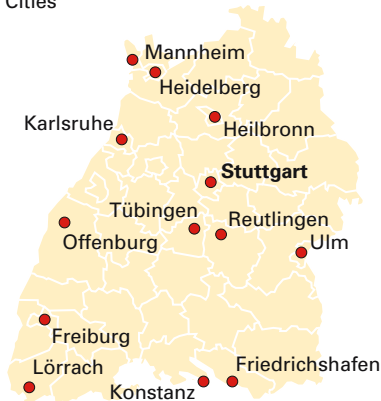
Facts and Figures about Baden-Württemberg



AREA AND POPULATION

- › Baden-Württemberg is one of the 16 states of the Federal Republic of Germany and among the third largest in both area and population
- › Area: 35,751 km²
Population: 10,745,000 inhabitants (both almost equivalent to all of Belgium)
- › Population Density: 301/km²
- › Population in proportion to Germany: 13.1%

› Cities



ADMINISTRATION

- › Foundation on: 25 April 1952
- › Campaign sticker: "We can do everything except [speak] standard German."
- › Parliamentary Elections of 27 March 2011 (Percent/Seats)
CDU 39/60
Greens 24,2/36
SPD 23,1/35
FDP 5,3/7
- › Government:
Minister president
Winfried Kretschmann (Greens)
Deputy Minister President and Minister for Finance and Economics:
Dr. Nils Schmid (SPD)
- › Baden-Württemberg is divided into 35 districts (Landkreise) and nine independent cities (Stadtkreise). Both of them are grouped into the four administrative districts:
Freiburg, Karlsruhe, Stuttgart, Tübingen
- › Neighbour Countries: Switzerland, France, Austria
Neighbour States: Bavaria, Rheinland-Palatinate, Hesse

ECONOMY

- › GDP: 361,746 billion euros (2010)
- › Baden-Württemberg is proud of supporting a number of well-known enterprises in the state, for example Daimler AG, Dr. Ing. h.c. F. Porsche, Robert Bosch GmbH (automobile industry), Carl Zeiss AG (optics), SAP AG (largest software enterprise in Europe)
- › Growth rate of GDP (2011):
4% (estimated)
Purchasing power 15,370 per inhabitant

› Top 5 Innovation Index of EU

Baden-Württemberg	71,7
Bayern	57,9
Île de France (FR)	56,7
Berlin	55,9
Schweden	55,0

Communication that hits the spot

To be able to compete effectively in global markets you need to be able to communicate with your target audiences in their language.

LinguaKraft enables you to get your message across in language that your customers can relate to.

- Translations + proof-reading
- Linguistic/cultural validation of your marketing concepts (e.g. brand name checks)
- Performance audit of your foreign-language media
- Telephone interpreting/conferencing



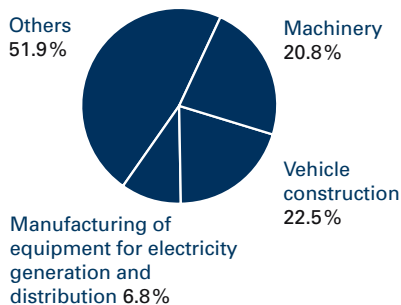
LinguaKraft Language Services
 Odenwaldstraße 17
 63303 Dreieich | Germany
 Phone +49 6103 2026533
 rlw@linguakraft.de
 www.linguakraft.de

FOREIGN TRADE

- › Industry: export rate 2009: 36.4 %
- › Total exports (in billion euros):
 1995 64.4
 2010 153.9

- › Ultimate destinations for exports: (in 2010 in million euros)
- | | |
|-----------|--------|
| EU 27 | 81,410 |
| USA | 13,618 |
| France | 12,625 |
| Switzerl. | 12,623 |
| Netherl. | 11,353 |
| China | 11,044 |
| Austria | 9,243 |
| Italy | 8,528 |

- › Industrial structure in 2009



LOGISTICS AND TRANSPORTATION

- › Baden-Württemberg has four airports. The international airport in Stuttgart is the sixth largest in Germany
- › Baden-Württemberg's railway system enfolds 3,400 km distance—equivalent to the diameter of the moon
- › Baden-Württemberg's rivers Rhine and Neckar are federal waterways. At their junction in Mannheim one of the most famous domestic ports in Europe is located

SCIENCE, RESEARCH AND DEVELOPMENT

- › Baden-Württemberg is at the unchallenged European forefront in research. Nowhere in Europe is more money spent on innovations by research and development departments
- › Expenses for research and development amount to 4.8 % of the gross domestic product (BIP) — 1.6 % through vehicle manufacturing
- › Domestic applications for a patent 2008: 15,081 (24.2 % relative to the whole of Germany)

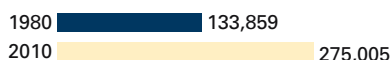
- › 500 patent applications are filed each year for every 1 million inhabitants



EDUCATION

- › Universities: Heidelberg, Mannheim, Karlsruhe, Freiburg, Konstanz, Tübingen, Ulm, Stuttgart, Stuttgart-Hohenheim plus eight DHBW-locations
- › Four of the nine German elite universities listed in the the national Competition of Excellence are located in Baden-Württemberg

- › Students in Baden-Württemberg:



Heilbronn-Franken Meets Lombardia

The Heilbronn-Franken region has given a pitch to more than 100 businesspeople from Lombardy—at the German-Italian Chamber of Commerce's Investors Forum in Bergamo in April. The objective of Dr. Andreas Schumm, the CEO of Business Promotion Heilbronn-Franken, was to highlight business location quality and investment opportunities in a region, which is home to so many global market leaders. Along with Alto Adige, Lombardy and its capital Milan boast Italy highest GDP per head of population. Together with Baden-Württemberg, Catalonia and Rhône-Alpes, Lombardy is a proactive member of the "Four Motors for Europe" organisation.

O&S 2012

**Resource-efficient, eco-friendly
surfaces are in demand**
12.06. - 14.06., Stuttgart

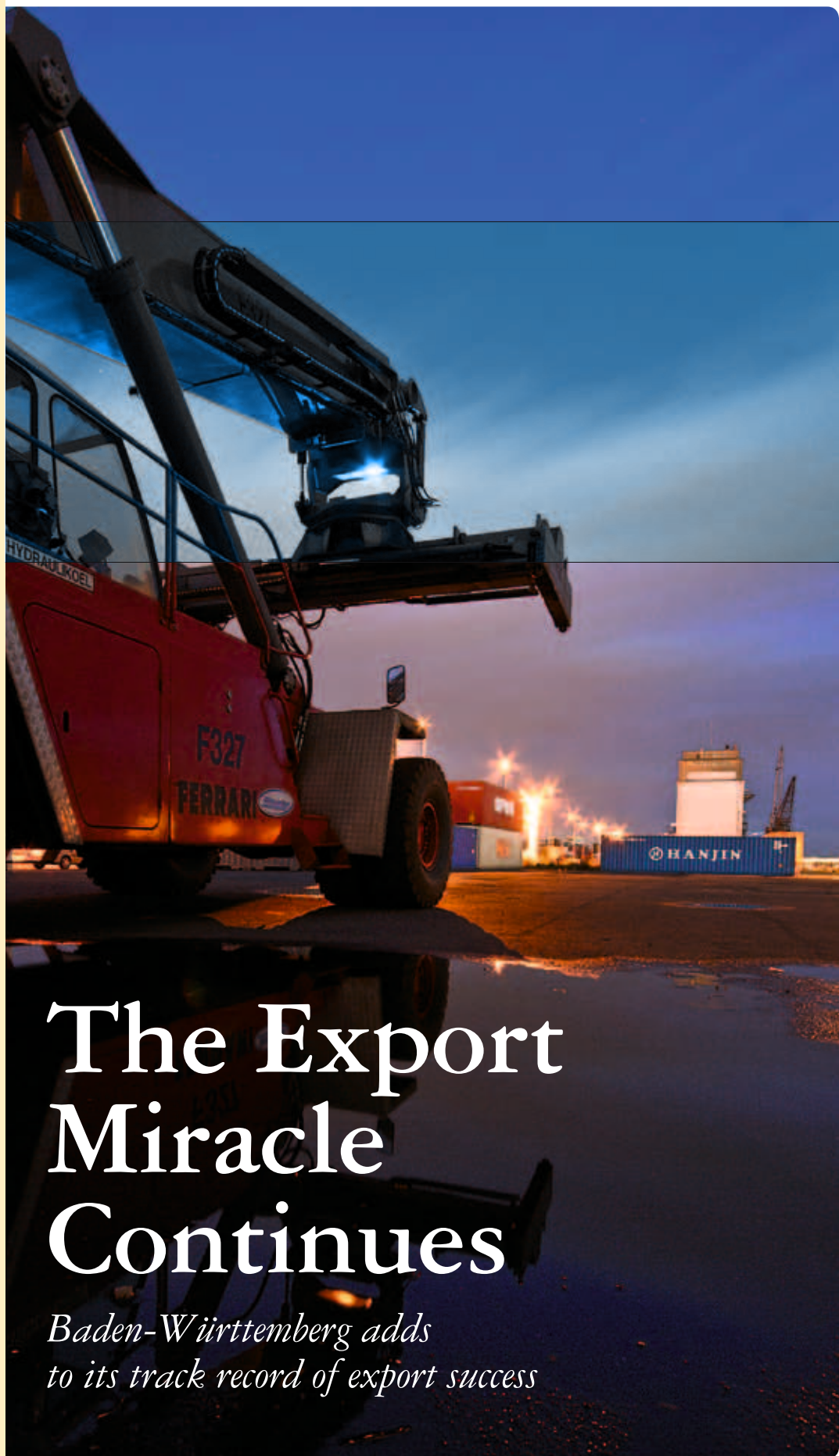
The development and use of environmentally sound products and processes in surfaces technology are the name of the game at O&S 2012. The international trade fair for surface treatments and coatings, taking place from 12 to 14 June at the Stuttgart Exhibition Center, highlights sustainable, resource-conserving technologies and solutions. The show puts a spotlight on the trend towards efficiency and sustainability.

www.ounds-messe.de

MANN+HUMMEL in China

The Ludwigsburg-based filtration specialist MANN+HUMMEL opened a new production site in Liuzhou in the south of China. The new plant will manufacture air cleaners, intake manifolds and engine cam covers for the automotive series production. It is the group's fourth production site in China.

www.mann-hummel.com



The Export Miracle Continues

*Baden-Württemberg adds
to its track record of export success*

MichaelTK@flickr

In Worldwide Demand

Following on from 2010, Baden-Württemberg's businesses have set a new export record in 2011—goods and services worth 172.4 billion Euros were exported from this Federal State—an increase of 12.4 percent compared with the previous year. This success can essentially be attributed to businesses' ability to innovate as well as to the premium quality of their products and services.

Companies doing business abroad make a significant contribution to growth in and securing the future of the State. Baden-Württemberg remains a leading exporter, thanks to the proactivity of its corporate citizens in foreign markets. Whilst exports from Baden-Württemberg, at 153.9 billion Euros in 2010, have largely managed to offset the decline experienced in the crisis year of 2009, 2011 on the other hand represents a new historic high. Exports rose by 12.4 percent to 172.4 billion Euros in 2011. Imports also increased—by 13.8 percent to 143.7 billion Euros.

In 2011 Baden-Württemberg exported goods worth around 16,000 Euros per head of population. The export ratio, exports as a proportion of GDP, is 46 percent. Compare this figure with the average export ratio for all the Federal States, which is 34 percent.

Baden-Württemberg's track record of international business success continues, even under challenging Eurozone circumstances. Since the mid-1990s exports have increased exponentially. They have almost trebled since 1989 and doubled since 1999. During this entire period Baden-Württemberg has achieved a constant trade surplus. Successful internationalisation is an essential feature of Baden-Württemberg's economy.

Manufacturing Drives the Growth

Boasting nine percent growth in manufacturing, Baden-Württemberg is one of Europe's most economically dynamic and competitive regions. Considerable momentum was provided in 2011 by two traditional sectors, whose product and process

innovation skills helped to enhance their already strong positions in global markets. Sustainable vehicle manufacturing and mechanical engineering industry products and solutions accounted for 44 percent of Baden-Württemberg's total exports. Each sector tips the scales at around a 22 percent share of the State's exports. The automotive industry posted growth of 11.7 percent to 39.2 billion Euros. Mechanical engineering grew 15.5 percent to 37.6 billion Euros. The State's pharmaceuticals, electrical engineering and chemical industries also achieved strong growth abroad in 2011.

Baden-Württemberg's companies are also this successful in export markets because they have geared up in good time to meet global demand for sustainable products and smart system solutions. Ambitious projects in emerging markets to facilitate environmentally compatible mobility, energy-efficient manufacturing and modernisation of infrastructure and health and welfare systems are generating new demand for products made in Baden-Württemberg. Industry in Baden-Württemberg is thus acquiring an international competitive advantage in these forward-looking fields of endeavour.

More Exports to Europe, the USA and to Emerging Economies

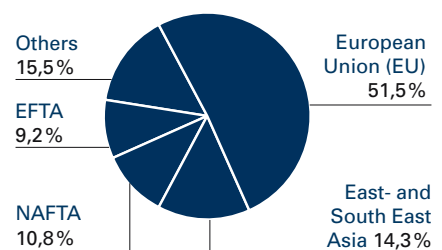
Europe remains by far Baden-Württemberg's most important export market. Two-thirds of the State's exports go to other European countries. Despite continuing debate about the Euro and significantly lower rates of growth in southern European economies, exports increased dramatically. Across Europe as a whole they grew by 12.6 percent, in the European Union by 10.8 percent and in the Eurozone alone by 8.8 percent. Exports to the Eurozone, as a proportion of Baden-Württemberg's total foreign trade volume, declined only marginally from 37.7 to 36.3 percent.

At an export growth rate of 15.9 percent, the USA was able to consolidate the lead position that it acquired in 2010 as Baden-Württemberg's most important trading partner. At 15.8 billion Euros, the

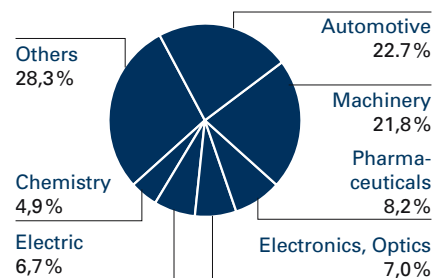
“Baden-Württemberg's track record of international business success continues, even under challenging Eurozone circumstances.”

FACTS EXPORTS

Why Europe still matters: Destinations of Baden-Württemberg's export in 2011



Automotive and machinery are contributing nearly 45 percent of Baden-Württemberg's exports in 2011



› USA leads the State's neighbours, Switzerland (14.7 billion Euros) and France (14.1 billion Euros).

The proportion of Baden-Württemberg's exports represented by emerging economies continues to grow. Exports to China once again increased above-averagely by 20.1 percent to 13.3 billion Euros. The People's Republic now ranks as Baden-Württemberg's 4th most important export market. What is also striking is how exports to the Russian Federation have increased by one-third to a total of 4.9 billion Euros. At 21 percent, exports to Turkey also posted exceptional growth. In 2011 the booming economy on the Bosphorus purchased goods from Baden-Württemberg worth nearly three billion Euros.

Imports Provide Growth Momentum in Europe

Not only exports from Baden-Württemberg but also demand for imports in the South-West increased in 2011. Imports were valued at 143.7 billion Euros, or 13.8 percent higher than the previous year's level.

However Baden-Württemberg does not just purchase agricultural products, raw materials or consumer goods from abroad. It is also a major consumer of industrial goods. Baden-Württemberg's businesses ordered 17.6 billion Euros worth of machinery from abroad. That amounts to growth of 7.8 percent. At 12.3 percent, machinery accounts for the largest single item of total imports. Vehicle and vehicle component imports increased by 18.1 percent to 12.3 billion Euros. Imports of electrical equipment and chemical products rose by 15 percent and 16.7 percent respectively.

Baden-Württemberg is thus stimulating industrial growth in Europe in particular and helping its neighbours to increase their exports. Imports from the EU increased by 16.6 percent to 83.8 billion Euros — that still represents 58 percent of Baden-Württemberg's total imports. Both exports and imports reflect the high degree of internationalisation of Baden-Württemberg's economy. Asia's importance as a procurement market continues to grow. ☼



bw-i

International Initiatives

Jürgen Oswald appointed CEO of bw-i

Focus on Small and Medium-sized Businesses

Baden-Württemberg's agency for inward investment, internationalisation and innovation to strengthen its presence on growth markets

Jürgen Oswald was appointed CEO of bw-i, the State's inward investment, internationalisation and innovation agency, at the beginning of the year. He manages this organisation, in which both the State of Baden-Württemberg and numerous business associations have a stake, together with Executive Board members, Herbert Bossinger and Ulrich Mack. In future bw-i aims to forge closer relationships and network with a number of different business development agencies, including the four technology-driven state-funded institutions — BIOPRO, e-mobil BW, MFG and Umwelttechnik BW. "bw-i's range of services will focus more on the needs of and increase its appeal to the business and scientific communities", Oswald explained.

bw-i organises and conducts events abroad to enable the State's medium-sized

businesses to access growth markets. These include the major Baden-Württemberg Mechanical Engineering and Automotive Sub-Contracting Forums in April in Russia and in October in China. bw-i is also partnering with e-mobil BW to organise an R&D symposium on e-mobility in China. bw-i showcases Baden-Württemberg at leading international trade fairs in Germany, such as CeBIT, Hannover Messe, Intersolar, Expo Real and Medica. bw-i was represented on five shared stands (featuring around 100 exhibitors) at HANNOVER MESSE 2012, which showcased sub-contracting, e-mobility, lightweight design/construction, wind power/renewable energies as well as research and technology. bw-i also markets Baden-Württemberg as a first-class university and research location at more than 40 events worldwide. ☼

The Green Flagship

*Dr. Bernd Dallmann explains
how Green City Freiburg became a
synonym for a successful eco-cluster*

Green City Freiburg

Dr. Bernd Dallmann is managing director of Green City Freiburg—the business network for environmental and renewable energy industries in Freiburg and the region. 12,000 jobs in 2,000 companies in these sectors represent an important economic component for the region between Rhine and Black Forest.

INTERVIEW: Daniela Sandmann

Green is not a device that Freiburg use to attract the punters. What is the core of the sustainability brand that the city has created?

Freiburg is quite rightly regarded as one of the birthplaces of the environmental movement. Sustainability and environmental awareness have been part and parcel of the city's attitude to life for decades and there is broad support for these issues from both the political, scientific and business communities and the civic population. The 'Green City' label represents a mix of many ideas in a wide range of different domains. These ideas complement each other to create a seamless municipal environment and climate protection policy. The 'Green City' brand is therefore genuine and really is translated into action. And it is a formula for success—Freiburg is not only a leader in championing and using alternative energies, in public transport and bicycle infrastructure. The city is also a leading light in

terms of population development, new employment and visitor numbers.

What role do research and education play in green cluster development?

Science and business are working hand-in-hand to promote technical innovation. The Green City Cluster is a platform and network that enables innovative small and medium-sized businesses and centres of research excellence based in Freiburg to communicate with each other. Freiburg is home to a number of first-class research organisations, such as the Fraunhofer Institute for Solar Energy Systems (ISE), Europe's largest solar research institute, four more Fraunhofer and two Max Planck Institutes as well as the 'Ivy League' University of Freiburg. Their research and investment activities all play a major role in giving Freiburg a sustainable future.

How does this interface with healthcare as an area of expertise?

An intact environment and good health are mutually dependent and therefore major factors in the Freiburg Region's high quality of life, which attracts a large number of clinic patients and healthcare tourists from Germany and abroad.

This interaction is particularly reflected in increasing utilisation of the premium medical services provided here and in growing demand for active, resource-efficient healthcare holidays in the region. People are increasingly prepared to invest in preventative healthcare, in early detection of health risks and in medical treatment and rehabilitation. That is exactly what our new "Healthcare & Economy" cluster initiative is intended to build on, champion and develop by focusing on and specialising in two complementary, forward-looking economic segments.



FWTM

To what extent will Freiburg therefore become a German and European hub for greentech activities by companies from abroad?

Markets of the future are green. By focusing early on this issue Freiburg has gained substantial international competitive advantage. Around 12,000 people are now employed in the environmental and solar sectors. Freiburg hosts and organises international trade fairs and specialist conferences, in particular Intersolar in Munich, San Francisco, Beijing and Mumbai.

Freiburg's environmental sector benefits above all from the excellent global reputation that the city has acquired in terms of environmental expertise and skills. Green City-specific tourism has also increased steadily in the last few years. A total of around 25,000 special-interest tourists visited Freiburg last year, ranging from groups of schoolchildren and students via urban planners, architects, project developers and business representatives through to high-ranking international politicians and business delegations.

Freiburg is regarded in many Asian countries particularly China, South Korea and Japan, as Europe's flagship green city. And the eco-tourists, who set off on the "Solar" bike tour of Freiburg armed with a solar city map, are often pioneers, who can open business location doors. ☼

For further information
www.fwtm.freiburg.de

Smarter Cities

Karlsruhe meets Pune

A Great Deal of Interest

Further strengthening Karlsruhe and the "Technologieregion" in an international sense, too, is a plan that Karlsruher Messe- und Kongress-GmbH (KMK) and the business development agency are jointly pursuing in Pune in India, particularly in view of the fact that some 220 German companies have already set up business in and around Pune, a city with four million inhabitants. This in itself has considerably boosted Indian citizens' interest in Germany.

Knowing markets, creating framework conditions, and providing networks: a formula for success and a plan that is regarded with favour in India as well. "A promising beginning," emphasises S. K. Jain, vice president of Mahratta Chamber of Commerce, Industries and Agriculture (MCCIA) in Pune, "for Karlsruhe and Pune have

a lot in common, providing a base we can build on—and a task that is to be gone into in more depth in Karlsruhe, too, on a forthcoming trade delegation's trip to Germany."

"Indian interest is enormous," says Klaus Hofmann, managing director of KMK, ranging from basic input for new ideas and questions on imports to companies looking for a representative office in Germany and those on the lookout for partners for customised IT solutions: the spectrum of enquiries was huge. "Great stuff," commented a very pleased Dr Hans-Dieter Roth of "Baden-Württemberg International", the state's business development agency. "Excellent work by Karlsruhe!"

Business Meets Business

A wide range of first beginnings are recognisable for joint projects. "I am certain that we will have established good links

and networks in the shortest possible time," said Jain. "This networking generates very good framework conditions for both sides and promotes better understanding as well," explains Dr Leopold-Theodor Heldman, German Consul General in Mumbai: "the intention is to get people enthusiastic about Germany—beyond machines and business, too. Karlsruhe can find the right partners here." Particularly since Germany is a very important partner for Indian companies. Whether local public transport, private transport, energy, IT, or cars: the range of subjects about all aspects of Karlsruhe aroused a lot of attention. As the Chamber also covers the agricultural sector and the subject of water resource management is a central issue in the Pune region, a great deal of interest was shown in the KMK's integrated water resources management convention "IWRM Karlsruhe" in November—the Chamber is planning to have a delegation attend it.

High-tech and innovation that gets across to people—especially in and around Pune. "Connecting ideas," the KMK slogan couldn't be more apt in this context. "First-class cooperative efforts between the two cities are already in the making," said S. H. Kopardekar, senior manager of the MCCIA. "It's essential that we continue to pursue them because many future issues such as intelligent mobility and internationalisation are the same challenges," added Ralf Eichhorn of the Karlsruhe business development agency. Some first contacts have already been established, said "Nextmotive" boss Avinash Belgamwar. ☼



istockphoto



Karlsruhe meets Pune (v.l.): Martin Wacker, Anant Sardeshmukh, Klaus Hofmann, Dr Leopold-Theodor Heldman, S. K. Jain, Ralf Eichhorn, S. H. Kopardekar

Karlsruher Messe- und Kongress-GmbH

“We intend to set lasting impulses”

Fresh ideas from Besigheim's KOMET Group

A Global Perspective

Pushing innovations, mapping the future and, above all, entering into a dialogue—this is the motto of the IDEEN-FORUM+. Why the renowned expert event enjoys a high inter-branch standing and why the KOMET GROUP as organizer took up the subject of “China as key market” this year is revealed by CEO Matthias Heinz, manager of the KOMET GROUP, in the interview.

The IDEEN-FORUM+ stands for innovation. Which goal do you pursue with the event?

As an internationally active technology leader in the field of innovative cutting tools, we want to give ideas, show prospects and develop visions in a dialogue with experts. Our goal is to join theory and practice—that is, rousing impulse-giving talks are on the agenda in the morning, and in the afternoon, stimulating specialist talks follow, accompanied by extensive product exhibitions and cutting demonstrations.

This year, you take up the subject “Key market of China—German enterprises in the field of tension between sales market and competition”. To which aspects may the visitors look forward?

Our event this year, taking place in the IDEEN-FABRIK+ in Besigheim from May 9th to 10th, offers our visitors a varied and fascinating agenda. China's economy has been growing continuously in the last few years, and Chinese enterprises have long since developed from cheap workbenches

into serious competitors for Western enterprises. Thus, there is the question if the balance of power within the world trade has shifted through the rapid economic growth in China. We are pleased to take up such an internationally significant subject together with top-class experts from economy, science and industry such as Prof. Dr. Wolfgang Franz (chairman of the Council of Economic Experts), Dr. Eberhard Sandschneider (Otto-Wolff director of the German Society for Foreign Policy) and our retired Federal Foreign Minister Hans-Dietrich Genscher.

Which role does China play for a medium-sized company like the KOMET GROUP?

We have been represented in China since the end of 2004 and see an increasing demand for our products. The sales of KOMET CHINA have increased almost tenfold since 2004. The products are manufactured there according to German quality standards. We are particularly proud of the fact that more and more product innovations come from KOMET CHINA and are implemented for the German market. ☀

“Our goal is to join theory and practice — that is, rousing impulse-giving talks are on the agenda and stimulating specialist talks follow.”

Matthias Heinz,
CEO of KOMET Group
☐ KOMET



Intersolar in China

12.-14.12.2012, China National Convention Center (CNCC) Beijing

The international solar industry is meeting at Intersolar China for the second time this year. In no other Asian country has the market for solar energy developed so dynamically over the last year as in China. Last year, Intersolar China became part of the worldwide network of international Intersolar exhibitions and conferences, which also includes global events in Munich, San Francisco and Mumbai. This year, around 250 exhibitors are expected to present their latest products and services from the areas of photovoltaics and solar thermal technologies across an exhibition space covering 11,000 square meters.

www.intersolarchina.com



Forschungszentrum Jülich

Zeppelin Put to Climate Research Use

A Friedrichshafen-based Zeppelin NT in the service of European climate research. Under the aegis of Jülich-based atmospheric researchers, it is spending around ten days measuring atmospheric composition in and around Rotterdam. The campaign is part of the major EU research project, "PEGASOS", in which 26 partners from 14 European countries plus Israel are researching into the relationship between the chemical composition of the atmosphere and climate change. The Netherlands flight will be followed from June onwards by further measurement-data-gathering flights around the Alps to Italy and in 2013 in Northern Europe to Finland.

www.fz-juelich.de

Energy Turnaround

Franz Untersteller claims a leading role for Baden-Württemberg

Green Ambitions

The State government wants to make Baden-Württemberg a leading energy conservation and climate protection region. By the year 2050 the aim is to have reduced CO₂ emissions by 90 percent, compared with the year 1990. In order to achieve this, electricity and heat generation as well as transportation need to be converted almost entirely to emissions-free alternatives.

energy reduces emissions of greenhouse gases and dependency on imports of raw materials from abroad at the same time. By the year 2020 we want to generate around 38 percent of our electricity using renewable sources of energy. Whilst this is a very ambitious objective, it is nevertheless achievable!

My top priorities for Baden-Württemberg as an industrial location are environmental and economic compatibility as well as energy supply reliability. For this purpose we have agreed a continuous process of dialogue with industry associations with a view to monitoring costs and security of supply.

What action can the State take to advance and safeguard the energy turnaround?

The State government plans to refocus its energy and environmental policies by laying new statutory foundations and pass a climate protection law that includes mandatory CO₂ reduction targets. An integrated energy and climate protection concept is being drafted in conjunction with this climate protection law and it is designed to answer the key energy policy question of how a secure, cost-effective and environmentally compatible energy supply system can be designed to meet the needs of the future.

The concept will contain a wide range of measures relating to the expansion of renewable energies, energy efficiency and to power grids and storage, including funding programmes as well as an immediate-action programme to expand CHP facilities. We also need a more efficient stock of buildings, and our goal is to have predominantly energy-self-sufficient residential buildings by 2050 that do not consume thermal energy for air-conditioning purposes. The State will act as a role model as far as its own stock of buildings is concerned.

Baden-Württemberg wants to play a leading role in the energy turnaround in Europe. What goals have you set for the State? How realistic are these goals?

Sustainable energy supply is only feasible if energy is used more efficiently and less of it is consumed. For that reason energy efficiency and energy savings potential needs to be exploited as much as possible and end-use energy consumption in the State needs to be reduced significantly. The State government bases its objectives in this regard on the EU's goal of reducing end-use energy consumption by the year 2020 by 20 percent, compared with 2005. Whether this objective can be achieved is ultimately dependent on the implementation of administrative action that the European Commission has announced.

The State government regards the expansion of renewable energies as a cornerstone of the energy turnaround. Power generation based on renewable sources of

“We want to highlight what a fantastic opportunity the energy turnaround is for a technology and innovation centre like Baden-Württemberg.”

Franz Untersteller, Baden-Württemberg
Minister for Environment and Energy

 KD Busch

How can Baden-Württemberg rapidly clear its renewable energies action backlog?

In order to maintain this expansion of renewable energies momentum, we have more than doubled the funds available from 9.5 million Euros in the 2011 Budget to well over 20 million Euros in 2012. We are establishing four “Centres of Energy Excellence” in our regional councils and a central “Centre of Wind Energy Excellence” at the ‘Landesanstalt für Umwelt, Messungen und Naturschutz Baden-Württemberg (LUBW)’ and we have commissioned a market potential analysis focusing on power generation using renewable energies for the whole of Baden-Württemberg.

Furthermore the revised State Planning Law is about to be passed by the State Parliament. This is designed to create the conditions to enable us in a few years’ time to generate ten percent of our electricity using wind power. The draft law envisages that regional planning authorities can in future only specify priority areas as locations of regional importance for wind turbines and not exclusion zones. Outside of the priority areas, municipalities will also be given the opportunity to specify locations for wind turbines as part of their planning powers. At the same time the Wind Power Decree, which my Ministry has taken a leading role in drafting, is now in the finishing straight. It provides the relevant authorities and planners, communities, investors and the civic population with a coherent legal basis that will facilitate the planning and construction of wind turbines.

As far as the use of solar energy is concerned, I am convinced that more than eleven percent of power generation will be ›





Baden-Württemberg

Congress on Resource Efficiency

27 and 28 September 2012

Among the speakers are:



Winfried Kretschmann Mdl.
Minister-President,
State Government of Baden-
Württemberg



Dr. Nils Schmid Mdl.
Deputy Minister-President
and Minister of Finance
and Economics, State
Government of Baden-
Württemberg



Franz Untersteller Mdl.
Minister of the Environ-
ment, Climate Protection
and the Energy Sector,
State Government of
Baden-Württemberg



Jeremy Rifkin
Founder and Chairman,
Foundation on Economic
Trends

www.ressourceneffizienzkongress.de

ty of information. For this purpose we are planning a communication and acceptance campaign. In the course of this campaign we also want to highlight what a fantastic opportunity the energy turnaround is for a technology and innovation centre like Baden-Württemberg, coupled with a high degree of added value at municipal level. Besides, municipalities and the civic population will be able to invest, for example, in the construction of wind parks and wind turbines (“civic energy cooperatives”, “civic wind turbines”), which will certainly increase acceptance of these decentralised plants and the required power grids and storage facilities.

As far as the energy turnaround is concerned, the State is dependent on the Federal Government and on the EU. What is your message to Berlin and Brussels?

The Federal Government must stop jeopardising the energy turnaround—it has to cease its tug-of-war vis-à-vis responsibilities and needs to put proper parameters that facilitate long-term planning in place, which it has so far failed to do. For example, it is unacceptable that the much-needed upgrading of photovoltaic facilities, a genuine renewable energies success story, is being stalled because of disagreements between the Environment and Economics Ministers. We also need a system of incentives for flexible and highly efficient gas-fired power stations. To this end I have unveiled a report featuring the key term “capacity markets”. Implementing this idea is however the responsibility of the Federal Government. Finally what is also important is upgrading the power grids, so that electricity generated offshore in particular can reach the south of Germany, where it is needed.

As far as the EU is concerned, we support its efforts to up the energy efficiency pace by tightening up the Energy Efficiency Directive. On the other hand we cannot accept the position taken by European Commissioner Oettinger, who questions Germany’s nuclear phase-out and our system of funding renewable energies. ☼

› accounted for by solar sources by the year 2020. There are more than enough suitable sites in our State to locate photovoltaic systems, particularly on the roofs of buildings. However the changes to photovoltaic subsidies, which the Federal Government decided upon at the end of February, are likely to arrest or even halt the positive and much-needed trend towards generating electricity from renewable solar sources and hit the high-tech business location of Baden-Württemberg, where a large number of photovoltaic industry systems and components are manufactured, particularly hard. In order to avoid the additional year-end capacity peaks that we have seen in the last few years, I am committed to lowering the reimbursement rates more frequently yet more moderately in future compared with the past.

Besides we are addressing the issue of tapping existing hydropower reserves, by producing analyses of potential, for example. Optimised use of previously untapped biodegradable and organic waste recycling potential is also a major concern of ours. Just recently we published guidelines on this subject. And in relation to geothermal energy we have drafted quality assurance guidelines as a consequence of the regrettable cases of damage in Leonberg caused by drilling in the summer of 2011. Furthermore we have been able to negotiate signifi-

cantly improved insurance cover that also includes no-fault liability.

The necessary infrastructure upgrade, the construction of efficient gas-fired power stations or the exploration and provision of sufficient energy storage capacity are all issues that we are focusing on.

How do you view acceptance by the civic population of Baden-Württemberg of new technologies, such as gas-fired power stations, wind and solar power?

It is clear that the energy turnaround can only succeed if the population backs it. Several referendums in favour of wind power last year make me very optimistic that the civic population of Baden-Württemberg will accept the new technologies. For example the population of Gaildorf supported the construction of a green electricity storage facility, a combination of wind turbine and pumped-storage hydroelectric power station. And the civic populations in both Münstertal and Glottertal, regions that are heavily dependent on tourism, have come out in support of building wind turbines.

Are stakeholders in Baden-Württemberg geared up for energy supply decentralisation? What action needs to be taken?

What is crucial is that we involve all stakeholders at an early stage, enable them to participate in the process and provide plen-

Managing the Energy Turnaround

A holistic and sustainable approach involving many helping hands is crucial, says Deloitte

Facing the Challenges

While Germany is reworking its energy policy and pushing alternative energy supply, companies involved in the energy sector face tremendous challenges—technically as well as economically. In addition, the meltdown in Japan caused national governments and utilities to reexamine and ultimately end their nuclear power programs with remaining CO₂ emission targets unchanged.

Especially Baden-Württemberg with its large innovative manufacturing industry requires electrical energy supply that is both affordable and reliable in order to remain globally competitive. In this situation, Baden-Württemberg is forced to install a modern power supply infrastructure and to ensure safe and efficient decommissioning of its nuclear power plants.

Many Changes and Even More Challenges!

After working for several utilities for many years, we at Deloitte understand that energy clients have specific needs which can only be addressed through experienced experts. In response to this, we have built our Energy & Resources practice which has proven its experience and knowledge in many projects and developed unique approaches to move our clients to the next level of well balanced efficiency and security within their organization. Our Deloitte

office in Stuttgart is the core of those services and provides a wide range of services to local companies. Our services for utilities comprise an overall or partial redesign of business models or operations including assurance to comply with legal obligations. Our projects create business value in the energy sector.

Smart Grids — One Key Factor for Success

Decentralized, renewable energy supply from wind or photo voltaic facilities is naturally variable or intermittent. Smart Grids are considered an essential component in solving these technical difficulties and are used to enhance the reliability of energy supply, to reduce peak demands or to lower total energy consumption. However, implementing Smart Grids requires large capital investments in infrastructure and technology. Beyond that, companies have to ensure regulatory compliance, for example with the EnWG (Energiewirtschaftsgesetz) or the EEG (Erneuerbare-Energien-Gesetz). All this requires enormous efforts and good partnership between private and public organizations. Our services to design investments or strategies for the development of local or regional power grids, to prepare and support approval processes with authorities and to manage complex projects open the door to a new era of intelligent energy grids.

Decommissioning of Nuclear Power Plants

Germany has decided to switch off all national nuclear power plants by the year 2022. Operating nuclear power plants safely and efficiently is truly a complex task.

A secure, reliable, efficient and affordable source of energy is the basis of every modern economy and sustainable business

 Deloitte



Decommissioning nuclear power plants is even more complex and requires specialists in a wide range of professions. Decontamination and dismantling of plants, demolition of buildings and the management of waste belong to the new range of tasks. To build a basis to master those challenges, we assist nuclear utilities in transforming their current organization from an operating into a decommissioning mode. This means that structure and processes are designed in a way that the decommissioning goals and the regulations for operating nuclear power plants are met simultaneously. Our decommissioning concepts and tools enable management to plan their resources and to remain informed in every stage of the long lasting and complex decommissioning process.

In order to succeed in the energy turnaround many helping hands are needed. A holistic and sustainable approach that involves both internal and external stakeholders is crucial. We at Deloitte are prepared to work hand in hand with you to manage these challenges. ☀

Contact

Deloitte
Andreas Herzig
Phone +49 (0)711 16554 7160
Dr. Andreas Langer
Phone +49 (0)711 16 554 7289

**A Blueprint for Ushering
in a New Age**

In his new book the economist and “professional visionary” Jeremy Rifkin formulates a blueprint for ushering in a new age that dispenses with nuclear and carbon power. It involves combining renewable energies with Internet technology to create the infrastructure for a “Third Industrial Revolution”.

TEXT: *Conrad Lay*

“The Third Industrial Revolution”

Decentralisation will characterise future energy production

Jeremy Rifkin gives the transition to a post-nuclear and post-fossil age distinct contours. The American sociologist is formulating nothing less than a blueprint for ushering in a new age that dispenses with nuclear and carbon power. Rifkin calls this new economic paradigm, which he has packaged as a comprehensive social and economic vision, “The Third Industrial Revolution”. Rifkin writes: “My research led me to realise that the major economic

revolutions during the course of history were determined by the convergence of new communication technologies and new energy systems.” If Rifkin is to be believed, we are once again at a major economic watershed. This time it involves combining renewable energies with Internet technology to create the infrastructure for a “Third Industrial Revolution”.

Jeremy Rifkin: “In the 21st century hundreds of millions of people will generate

their own green electricity in their homes, in offices and factories, and they will share it with others via smart, decentralised power grids, so-called “Internetworks”, just like people today create their own information and share it with others online.” Unlike the first industrial revolution in the 19th century and the second in the 20th century, which was characterised by assembly lines and mass production, the “Third Industrial Revolution” will no longer feature

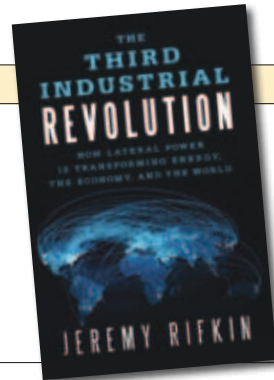


The third industrial revolution is the result of a combination of new communications technologies and innovative energy systems

EnBW/Weltenangler

ABOUT THE AUTHOR

Jeremy Rifkin is one of the most well-known social thought leaders of our time and a globally acknowledged adviser to governments. His books, which have been translated into more than 30 languages, encapsulate the major economic and political issues related to the future.



THE BOOK

Jeremy Rifkin:
"The Third Industrial Revolution: How Lateral Power Is Transforming Energy, the Economy and the World".
Palgrave MacMillan,
304 pages, \$ 27.00
ISBN: 978-0-230-11521-7

to Rifkin, five key features characterise this future economic system:

Five Key Features

- › The switch to renewable energies.
- › The conversion of existing buildings on all continents to micro power plants that generate renewable energies on site.
- › The use of hydrogen and other energy storage formats in all buildings to store irregular amounts of power.
- › The use of Internet technology to transform the power grids on every continent into an energy-sharing network, a so-called Intergrid.
- › The conversion of transport fleets to plug-in electric and hydrogen fuel-cell vehicles, which can buy and sell electricity via a smart, interactive, continental power grid.

According to Rifkin this ambitious programme takes a step-by-step approach with each step supplementing the previous one, so that overall a new energy and communications system evolves. Rifkin has pursued the idea of a smart power grid from an early stage — it was the key theme of his book "The Hydrogen Economy" published in 2002, and he consequently worked closely together with companies such as IBM and Cisco Systems. Yet Rifkin has now taken another step forward. Modern-generation Internet and information technologies have now reached the stage where they are shifting the balance of economic forces away from the old, centralised sources of energy to new, decentralised renewable energies. Rifkin paraphrases his scenario as follows.

"The energy corporations will surrender a portion of their previous hierarchical control over the supply and distribution of electricity, in order — at least partially — to become part of a power grid featuring thousands of small energy producers. The role of the utility companies as suppliers of electricity will recede into the background, to be replaced all the more markedly by the role of service providers. Utility companies will become managers of an energy internet"

Mobile Micro Power Plants

Just as the nature of the power grid is expected to change completely, Rifkin also wants to convert passenger vehicle and truck fleets. He envisages electric and fuel-cell powered vehicles as "mobile micro power plants", which can hook up with the interactive power grid and can discharge any unused power back into the grid. So these are extensive visions that the in-demand consultant has in mind. Rifkin has outlined the objective of a new energy and communication system clearly and unequivocally. He knows what he is driving at. That is perhaps this book's greatest merit. The next — not insignificant — issue is whether such a system can be implemented. And on this point Rifkin does not seem to acknowledge the difference between grandiose declarations of intent and actual political implementation.

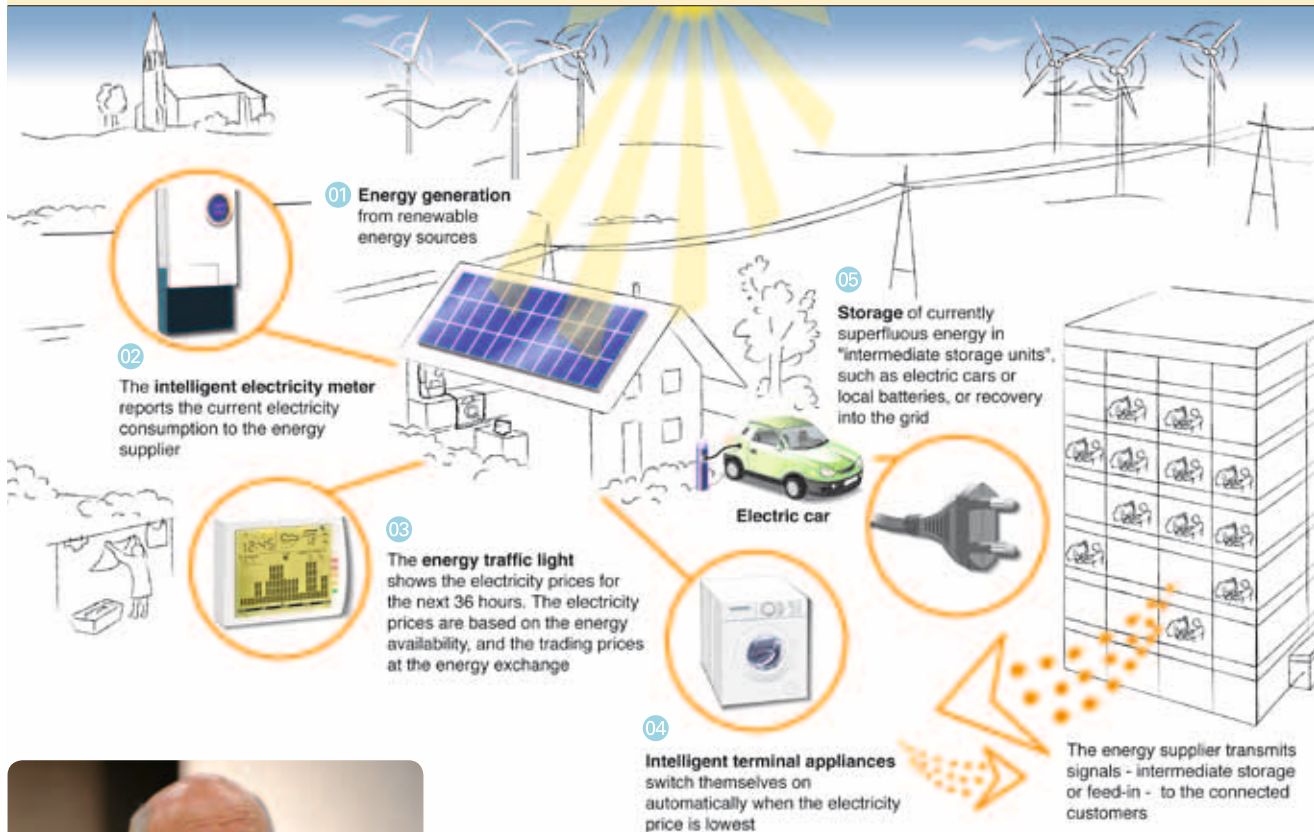
The Vision: a Nuclear- and Carbon-free Age

He summarises the expectations he has of ›

hierarchical working environments and the centralised structures of major companies, instead it will be characterised by decentralised relationships and horizontal networks. Rifkin visualises energy consumers simultaneously as energy producers, who communicate with other energy consumers via the Internet and buy/sell energy from/to them. The existing power grid would need to be converted to an information-energy-network or "Energy Internet". According

Intelligently linking
electricity consumption
and generation
EnBW

DIAGRAM THE SMART GRID



"An age that dispenses with nuclear and carbon power."

Jeremy Rifkin, Conference: Countdown to Copenhagen, 2009

Stephan Röhl

› the European Commission, to whom he acted as a consultant for many years, in the following sentence. "The European Commission is practically the only "government" worldwide that is tackling the major issues of the future viability of our species on this planet." If that is indeed the case, then it is nothing less than tragic that whilst the EU is tackling the major human issues of climate change and remodelling the energy and communication system to achieve a green economy, it is defeated in its intent by such "trivia" as the sovereign debt crisis in various member states.

No, as in 2004 when his book "The European Dream" was published, Rifkin's chorus of praise for Europe is wide of the mark. He actually wants to point out to his fellow Americans that switching to a green economy is feasible and he often uses Eu-

rope as an all too shining example. When it comes to formulating the major objectives of a green economy, the author presents cogent and persuasive arguments. However, as far as implementation of these objectives is concerned, the book is imprecise and sporadically even garrulous. Overall it is apparent that Rifkin's actual examples of a "Third Industrial Revolution" — whether from Texas, Monaco or Italy — are relatively weak. That shows that the last decade was a period in which little real progress was made to achieve Rifkin's goals. However he retains his optimism, which you have to give him credit for, and continues to champion the vision of a nuclear- and carbon-free age. In this book he has persuasively portrayed what the grand strategies to achieve this objective could look like. Now comes the hard graft. ☼

“New Growth for Europe” The US economist Jeremy Rifkin recommends greening the global economy

Visions for Sustainability

The US economist, sociologist and internationally respected government advisor, Jeremy Rifkin, is championing the growth impetus provided by the “third industrial revolution”—a conversation with Christian Rabhansl in Deutschlandradio Kultur.

Around five years you were an advisor to the EU, when it set itself the so-called 20-20-20 objectives. These are 20 percent fewer greenhouse gas emissions, 20 percent of the energy mix accounted for by renewable energies and 20 percent more energy efficiency by the year 2020. But we are now stuck in the middle of the financial and sovereign debt crisis. And that seems to be consuming all available political resources and not to mention vast sums of money. Has Europe forgotten your warnings?

I think the time has come when the EU needs to understand that the 20-20-20 formula represents its gateway to a new future. Let's take a closer look at the nature of this crisis. The actual crisis started in July 2008, when the oil price reached 147 US Dollars per barrel on the global market. When that happened supply chain prices just rocketed, because everything is derived from or dependent on oil—fertilisers, pesticides, building materials, pharmaceutical products, power, heating, transport, light—everything.

So when oil traded at 147 US Dollars per barrel, prices exploded and people stopped buying and any economic dynamism just came to a grinding halt. That was an economic shock of seismic proportions. The collapse of the financial markets sixty days later was just an aftershock. So we need to understand that we are currently at the peak of globalisation.

We have reached the endgame of the fossil-fuel-based industrial revolution—at around 150 US Dollars per barrel of oil.

But why is that so? When China and India, between them accounting for a third of the global population, became economic forces to be reckoned with, they put enormous pressure on the supply of oil. So when these countries boasted growth rates of 10, 12 and even 14 percent, the price of oil shot up, as did the prices of everything else and purchasing power crashed.

I believe we have reached the final round. If we attempt to kick-start economic growth again as prior to 2008, oil prices will just keep rising and therefore all other prices will follow suit and purchasing power will decrease, especially because so many new developing countries have come on the scene. That is exactly what is happening now.

Every time we attempt to reinvigorate the economy, this is followed by an economic collapse—boom, bust, boom, bust. This sequence will be completed in intervals of less than three years in each case. Historically speaking this is a very dangerous period. Furthermore we are currently experiencing climate change in realtime.

That is having a dramatic impact on agricultural yields and is damaging infrastructure. So the question has to be asked as to what we should do. What we need now are new, post-fossil-fuel economic ideas, which can be implemented quickly within 30 years and which will create several million new jobs and thousands of new businesses. The 20-20-20 formula is just the beginning. Now we need to initiate a third industrial revolution.

That is a very broad-ranging concept that you have developed—away from oil towards a carbon-free society, towards renewable energies. When you say that the current crisis is actually one to which we have not hitherto paid sufficient attention, is your advice to the politicians: forget the sovereign debt crisis—that is of secondary importance?

Governments—in Germany, the EU and throughout the world—now need to devise responsible austerity programmes, in order to trim budgets in a responsible manner. In parallel new and very appealing economic

paradigms need to be generated to reactivate the economy, to create millions of new jobs and to guide us into a flourishing yet sustainable future. Both courses of action need to be taken.

The third industrial revolution is therefore a paradigm shift. It is based on five mainstays. The European Union officially endorses a five-pillar plan that is designed to guide us towards this new paradigm. And Germany is playing a lead role in this revolution. I had the honour of developing this plan for the EU. And this is what it looks like.

First pillar—20 percent renewable energies by the year 2020. Germany has already achieved this objective ahead of schedule; 20 percent of its electricity is now generated from renewable sources and it is aiming for 35 percent by 2022.

Second pillar—how do you source renewable energy? Renewable energy sources are to be found everywhere—the sun, wind, geothermal energy, waste, everywhere you care to look. So the intention of the second pillar is to transform every single building—every home, every office, every factory—in the European Union into a micro power plant, so that electricity can

“The actual crisis started in July 2008, when the oil price reached 147 US Dollars per barrel on the global market. That was an economic shock of seismic proportions. The collapse of the financial markets sixty days later was just an aftershock. So we need to understand that we are currently at the peak of globalisation.”

“The infrastructure is on a drip. We do not want it to collapse, we have to keep the second industrial revolution alive. But what we need to do is use private- and public-sector investments to create a new infrastructure, which can generate millions of new jobs and thousands of small and medium-sized businesses...”

› be generated on site. Solar panels on roofs, wind power generation directly on site, geothermal energy and power generated from waste etc.

To date that has been an expensive environmental hobby—a thermal pump in the basement or solar panels on the roof. How can this be funded on such a massive scale?

Just let me finish listing the five pillars and then we can talk about funding, because this can definitely be funded. Pillar No. 2 will give the construction industry a huge boost—Transforming every building into a micro power plant requires massive manpower and will therefore create millions of new jobs. That means that massive sums of money will be injected into the economy. That generates economic growth.

The third pillar is energy storage. The sun does not always shine in Germany, the wind does not blow constantly. This is where hydrogen comes into play, to enable us to store this energy and ensure reliability of supply.

The fourth pillar involves dovetailing the energy and the communications revolutions. We take Internet technology, we

take Europe's power grid and turn it into an energy internet. In this way millions of buildings can absorb renewable energies on site, store them using hydrogen and then convert these renewable energies to electricity, which in turn can be sold throughout Europe via an energy internet, if it is not consumed on site.

The fifth pillar involves rechargeable electric vehicles. Fuel cell vehicles will be incorporated into the system, thereby creating a completely seamless logistics system that does not involve carbon technology. These five pillars are the basis of a new technological revolution. Viewed individually, they are just components. So they need to be combined to generate synergies. If that does not happen there will be no economic revolution. So how do we fund all this? Gross domestic product is generated both in good and bad times—even in an economic depression. And a certain percentage of that GDP will be used for new investment. Money is invested even in bad times. The issue now is where these investments are channelled.

Do we want to invest in an old system, in the 20th century's second industrial revolution? Do we want to subsidise sources of energy that are drying up? Do we want to continue backing technologies that are well past their shelf life?

The infrastructure is on a drip. We do not want it to collapse, we have to keep the second industrial revolution alive. But what we need to do is use private- and public-sector investments to create a new infrastructure, which can generate millions of new jobs and thousands of small and medium-sized businesses...

You have now highlighted where money should be invested. One more question—from which industries should money be withdrawn?

Those industries that will be successful are included in these five pillars—our future lies in the renewable energies industry. Fossil fuels have no future. Renewable energy technologies that can generate and store power are definitely the key to our future.

Pillar No. 2—these small, medium-sized and large businesses that focus on converting buildings into micro power plants will earn a lot of money.

Pillar No. 3—that is a niche, yet it will require a large number of small and medium-sized businesses to create specific energy storage options.

Pillar No. 4 is a major domain. Imagine transforming the entire electricity grid into an energy internet. That will cover a period of twenty years during which new businesses are established, new technologies and innovative applications are developed, in which the Internet will be enhanced to enable the electricity grid to be operated remotely.

Pillar No. 5 is a huge sector, which involves logistics, transportation, an intelligent transport and logistics system that is linked to the electricity grid, that generates green electricity and can sell it—this creates a whole new logistics paradigm. If you combine these five pillars, the investment opportunities are staggering. It creates a new infrastructure. And it can begin straightaway—as soon as municipalities of all sizes start to invest in these points of intersection, new jobs are created and businesses established that can work on putting this infrastructure in place...

The third industrial revolution is non-hierarchical. Everybody generates their own power. Energy is now in the hands of the people—it has been democratised. In future millions of people will produce their energy locally. That is unavoidable. Why? Sunshine is free of charge, the wind is free of charge, geothermal energy costs nothing and your rubbish belongs to you.

These new technologies—e.g. photovoltaic systems, wind technologies, geothermal systems—that generate and store this energy from a range of renewable sources will become cheaper. And within 15 years they will be so inexpensive (the cheapest mobile phones ever were already on the market after 15 years) that everybody can afford these technologies and will be able to “harvest” these no-cost renewable energies locally. ☼



FORUM FOR EXPORTS **AND** INTERNATIONALISATION

OPENING UP INTERNATIONAL MARKETS!



Trade fair

GlobalConnect congress

International consultancy days (IBT)

Cooperation exchange

GlobalConnect award

Conferences of trade associations

Guest congresses



14 – 15 November 2012

Messe Stuttgart

www.global-connect.de

01

Global reach:
Focus on international
markets

 Hyperfair

02

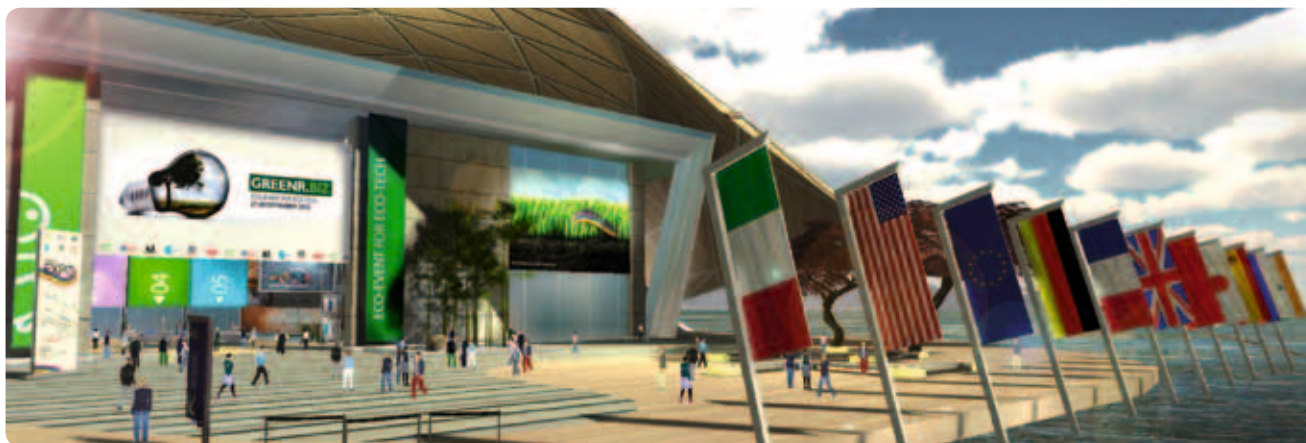
Meeting
opportunities in
3D halls

 Hyperfair

03

Personal
interaction instead of
database research

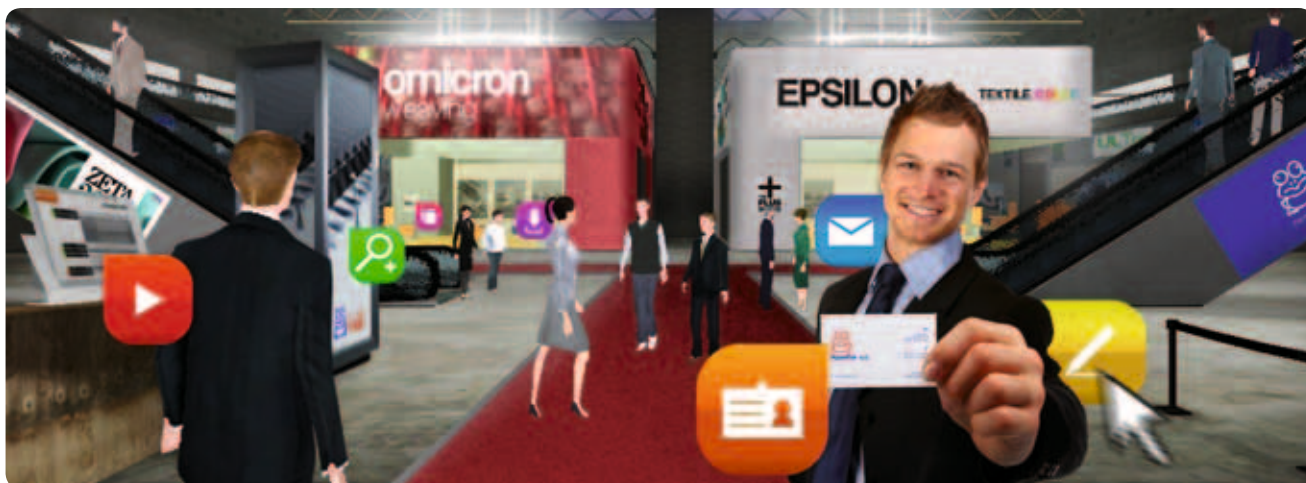
 Hyperfair



01



02



03

Green products at Greenr.biz

*A 3D realtime trade fair—local global's
virtual platform for ecotech*

European Cooperation

Stuttgart-based media company, local global, is championing an environmentally compatible virtual trade fair concept—Greenr.biz. Italian startup Hyperfair is partnering with local global when the event premieres on 27 and 28 September 2012.

local global is well-established at Hannover Messe and in other market places. The media company partners with the organisers of top international events providing media solutions and conference formats. Founder Hans Gäng is now actioning a proprietary project—Greenr.biz—engineering and solutions for environmentally compatible industrial production, presented in an online trade fair format.

Visualization Matters

Vendors are able to showcase energy-efficient, resource-efficient and low-emission manufacturing methods on this new virtual trade fair platform. Long gone are the days when the quality and the benefits of industrial solutions and components could be deduced from the exhibits alone. As far as integrating technology modules into complex manufacturing processes is concerned, digital media are at any rate playing an increasingly important role in illustrating the options available. 3D-visualisation has long been one of the most important elements of participation at conferences and trade fairs at venues between Shanghai and Hanover.

But how can web-based digital communication be combined with the personal interaction you would encounter at a trade fair? local global has now struck it lucky in Italy as far as Greenr.biz is concerned. The Milan-based start-up, Hyperfair, delivers a 3D representation of products, trade fair halls and stands that facilitates genuine

brand communication, including customised stands, which can be set up within a matter of minutes and modified at any time. Access to the trade fair does not require additional software, just a browser and a password. What is particularly important is realtime communication. "Nobody interacts with a screen or a database", says Hyperfair's founder, Marco Campanari. Exhibitors and visitors make their way around the exhibition site as avatars that represent real people and interact live and in realtime by chatting or using Skype. Fast, simple functions enable people to access product/solutions information and videos.

Hyperfair is a spin-off from a project at the Politecnico di Milano, Italy elite technical university. This start-up business is now represented in Silicon Valley. "We are delighted that such an experienced company as local global has chosen to partner with Hyperfair in developing the key German trade fair market", says Campanari.

Making Worthwhile Contacts

The debut virtual trade fair has now been scheduled for 27 and 28 September—in parallel and concomitant to the State of Baden-Württemberg's Resource Efficiency Conference in Karlsruhe. Gäng is confident that Greenr.biz will show how much pioneering spirit the Baden-Württemberg entrepreneurs have. "The cost-benefit ratio of a virtual stand at a global event makes a persuasive case." Saving on travel expenses and the effort and aggravation of erecting a stand, and yet still putting on an effective show and making worthwhile contacts—that alone is worth the very real stand fee at Greenr.biz. Stand fees for two virtual trade fair days, which also include communication via the print and online

media platforms that local global operates, are priced at 1.500 Euros. As partner to the debut event, the Nuremberg-based greentech-specialised consultancy, Eco2business, provides exhibitors with additional services to enable them to optimise their international sales and marketing activities.

Best Preparation for Real Events

Greenr.biz enables potential buyers from around the world to access specific information and to establish new contacts effectively. "Buyers will of course continue to travel to get a real handle on a potential supplier's business and their production and R&D capabilities", says Gäng. And that is why a visit to a leading trade fair such as Industrial Greentech in Hanover, IFAT or Intersolar is still a must. Exhibitors' technical sales forces will also continue to visit customers in person, in order to gain a better understanding of installed applications and to undertake substantive negotiations on site. Gäng advocates effective virtual preparation for actual exhibitions and standard contact formats such as partnership search forums and business delegations. "The actual objective of Greenr.biz is to initiate the process of personal dialogue effectively and to replicate this on the Internet in an environmentally compatible manner."

What Gäng regards as key is that tonnes of paper and rubbish do not have to be disposed of and laboriously erected stands do not have to be dismantled and transported away after the trade fair. They just remain in place ready for the next event. "As far as Greenr.biz is concerned, what matters most is a really clean carbon footprint." ☼

For further information
www.greenr.biz

World Green Building Council

18.06. - 20.06., Stuttgart

The world's most influential green building leaders will be in one place—the World Green Building Council's Congress in Stuttgart, Germany. This year Congress is being merged with the DGNB's Consense, one of Europe's leading green building conferences and expos. The conference brings international speakers sharing new visions, insights and strategies, and engaging discussions with best-in-field thinkers and experts.

www.dgnb.de



siedlungswerkstatt

Improved Testing of Photovoltaic Modules

ZSW research institute constructs test rigs in Spain and launches new PID test. Extended test conditions for modules in sunny Girona. New at ZSW: The combination of two methods facilitates the evaluation of possible potential-induced degradation (PID). Solar module manufacturers, plant installers, banks and insurance companies can now make use of improved testing facilities at the Zentrum für Sonnenenergie- und Wasserstoff-Forschung Baden-Württemberg (Centre for Solar Energy and Hydrogen Research, ZSW). In March, the research institute opened a new photovoltaic testing facility near Girona, Spain.

zsw-bw.de

The Best of Two Worlds

Karlsruhe Institute of Technology (KIT)

The Top Flight of International Research

The application could only be printed on the afternoon of the submission deadline. And to make absolutely certain, two drivers were commissioned to deliver the application in person to the DFG (German Research Foundation) in Bonn before midnight on the 20th April 2006, travelling by separate routes.

"The application" was for admission to the first round of the Excellence Initiative, launched in 2005 by the German Federal and State Governments and jointly managed by the DFG and the German Council of Science and Humanities, which aims to promote and facilitate top-flight research. Presumably none of those involved at the time were even aware that their application would set a mini-revolution in motion. Universität Karlsruhe was proposing nothing less than a merger of the university with the Helmholtz Association's Karlsruhe-based research centre. Established in 1825 as the Polytechnic Institute, Universität Karlsruhe was Germany's oldest technical university.

Whilst not ranked amongst the largest universities at the start of the 21st century, at only around 18,000 students, it nevertheless excelled in research and focused on natural and engineering sciences. Besides the university, a second research organisation with an equally outstanding reputation had existed in Karlsruhe since 1956—For-

schungszentrum Karlsruhe. Since its establishment as "Kernreaktor Bau- und Betriebsgesellschaft mbH", Forschungszentrum Karlsruhe had steadily progressed beyond its original remit to become one of Germany's leading multi-disciplinary research organisations.

KIT was born on 1 October 2009. KIT is an institute with a dual mission—that of a state-funded university focusing on research and teaching and that of a Helmholtz Association research facility conducting programme-focused provident research—and has three functions: research, teaching and innovation. KIT employs just over 9,000 people, including some 5,300 in research and teaching and has an annual budget of around 700 million Euros. KIT also has a student headcount of around 22,500 and employs nearly 500 trainees.

Excellence in Research

Employing almost 4,000 people, the research centre was the Helmholtz Association's third-largest facility and it dealt with a whole raft of natural and engineering science topic areas, ranging from astroparticle physics via various energy-related issues, climate research and grid computing to

"KIT is the vehicle that ensures our entry into the top flight of international research and positions us amongst the world's major research organisations."

Professor Horst Hippler,
President of the Karlsruhe Institute of Technology

LABORATORY
KIT

KIT in Karlsruhe is attracting
researchers with an inspiring
environment for projects

 KIT



KIT CENTRES

- › Elementary Particle and Astroparticle Physics
- › Climate and Environment
- › Mobility Systems
- › Energy
- › NanoMicro

KIT FOCUSES

- › COMMputation
- › Optics and Photonics
- › Humans and Technology
- › Anthropomatics and Robotics



KIT

research on nanostructures and biosystems. Each having a budget of around 300 million Euros (2007, including third-party funds) and each employing some 4,000 people, both the university and the research centre were very similar both in terms of scientific focus and size. Successful partnerships in a range of subdomains since the 1950s have resulted in a series of joint academic appointments and even jointly-managed institutes.

In the opinion of its “originators” the merger of the university and the research

centre, located some 10km further north, provided both institutions with substantial benefits—increased international visibility, development and implementation of a joint research strategy, a common appointments policy, mutual use of infrastructure, improved access by the research centre to talented young scientists and involvement of research centre scientists in training up students.

A Revolution

KIT was indeed intended to combine the separate legal entities of university and research centre to form a single institution. This proposal represented nothing less than a revolution in Germany’s scientific community. The core element of the KIT vision was a shift in perspective, which no longer focused on scientific disciplines or faculties but rather on domains and fields of research. The objective was then to transform the project from an elite undertaking by the management boards of both institutions into an integrative concept involving as many employees as possible. The KIT Office was set up quickly, consisting of 20 coordinators and 120 employees di-

vided into task forces. The President’s Office at the university managed within a few months to draft a comprehensive plan for the establishment of KIT, including a detailed implementation roadmap, in collaboration with the task forces and supported by the Boston Consulting Group as part of a pro bono project. The objective was now to marry the differing cultures of a decentralised state-funded university and a centrally-managed public-sector research institution, which existed within KIT, into a new entity. “The objectives of the ‘The Foundation of KIT’ vision of the future”, says KIT President Horst Hippler.

“Meanwhile the way KIT is organised and the integration of research and administrative structures are well-advanced”, adds Eberhard Umbach, who is also President of KIT. Both presidents are proud of the fact that structural changes in the research, infrastructure and service units have now been successfully completed to a large extent. The merger has provided a great deal of “added value”. ☀

For further information
www.kit.edu

“KIT is an unparalleled model, demonstrating how one can design the entire research and education environment to be more effective, more flexible and more versatile.”

Professor Dr. Eberhard Umbach, President of the Karlsruhe Institute of Technology

Professor Dr. Eberhard Umbach of KIT on The Challenges of the Energy Turnaround

What are the major challenges for energy turnaround?

The energy turnaround is a done deal — implementing it, however, represents an enormous challenge. To achieve the objectives of the energy turnaround — greater energy efficiency and a higher proportion of renewable energies — requires a radical reorganisation of the infrastructure, innovative technologies as well as creative approaches to planning, management and adaptation. Therefore to integrate renewable energies into the energy system, the grids urgently need to be upgraded and extensively reorganised. A major challenge of the energy turnaround will be the need to put decentralised distribution structures, which are separately controlled, interlinked and equipped with suitable measurement and control facilities, in place within a very short space of time. However we need to bear in mind that we still lack the information technology to enable us to manage these decentralised grids. If, within the next ten years, we manage to make some progress towards developing IT systems for decentralised, quasi-autonomous grids that are absolutely secure against outside intervention, we would be in a very good place. Another problem that we have to solve is the issue of grid stability, in order to cope with voltage fluctuations in an increasingly decentralised grid, for example.

What are the objectives and what is the reality like? Does Baden-Württemberg have an alternative energy supply?

We at KIT are giving our full backing to implementing the energy turnaround and our research will help all those involved to master these enormous challenges. We need to realise that, as far as the energy turnaround is concerned, we are still at the very beginning, and there is also a lot of research work to be done. The State of Baden-Württemberg has set itself some very ambitious targets in terms of developing renewable energies. Thus, for example, ten percent of the State's energy needs are to be met by wind power by 2020. However that also means that if we opt for wind power on a



KIT

Designer Fuel Made of Straw Tailor-made bio-fuel

Researchers at the KIT Institute for Technical Chemistry are attempting to pull off a feat of chemical engineering. They want to turn plant waste of all kinds into any kind of required fuel. Fuel made from biomass is what the politicians want and a KIT-developed process enables premium, diesel-and-petrol-engine-compatible designer fuels to

be produced from biogenic waste materials, such as straw. The plant will go into operation at the beginning of 2013. "The introduction of bio-fuel is an important step on the road to using renewable raw materials for mobility purposes", emphasises KIT Vice President, Dr. Peter Fritz. "However significant reductions in emissions of the green-

house gas, carbon dioxide (CO₂), can only be achieved with the aid of second-generation bio-fuels." Therefore bioliq® is opting to use straw and other biogenic waste materials, according to Fritz. The benefit of these materials is that they are neither suitable for use as food nor as animal feed nor do they take up additional acreage.

large scale, we need to accept that electricity will be more expensive over the long term in Baden-Württemberg (a major industrial location) than in Lower Saxony, for example. This is because wind power yield is four to five times less in Baden-Württemberg, and if high-pressure weather conditions prevail, there can be weeks with no wind. A major problem is also the storage of electric power. An interdisciplinary team of scientists at KIT is pioneering urgently needed high-performance battery systems.

More than 1,100 staff members at the KIT Energy Center in Karlsruhe are researching into pioneering methods of energy supply, which includes working flat out on smart electricity and gas grids. We deem it necessary to optimise the entire energy system and not just portions of it. For this reason the KIT Energy Center is taking a broad-based approach, which factors in all the relevant energy sources and applications as well as how these are embedded in society and the economy. ☼

In solar-thermal power stations the sun's rays are concentrated with the aid of mirrors and converted into thermal energy and this energy is therefore also

referred to as Concentrating Solar Power (CSP). Whilst the sun's rays are being concentrated, temperatures reach between 400 and 1200 degrees Celsius. This

thermal energy can be used to generate electricity as in a conventional steam power station or with the aid of a heat/thermal energy-powered Stirling engine.

THIS IS HOW A SOLAR-THERMAL POWER STATION WORKS

Stabilising the Power Grid

Solar-thermal power stations are a reliable technology that can play a key role in switching the power grid over to relying on renewable energies. In contrast to other renewable sources of energy, they supply power as needed and can thus help to stabilise the grid. This is the key finding of a study by the EASAC (European Academies Science Advisory Council), which was conducted by a team of leading European scientists headed by the German Aerospace Center (DLR).



Desertec

Reliable Technology for the Energy Turnaround

Solar-thermal power stations to play a major renewable energies role

In the future solar-thermal power stations may play an increasingly important role in switching the power grid over to renewable energies. This is the key finding of a study conducted by the EASAC to mark its tenth anniversary. It describes the potential role that solar-thermal power stations could play in securing a sustainable energy future.

"Because these power stations can provide power at any time, they can compensate for fluctuations in the supply of power from a range of renewable sources and thus help to stabilise the power grid. Electricity from such power stations therefore has a value that exceeds that of the kilowatt-hours that are fed into the power grid", emphasises Prof. Robert Pitz-Paal, Head of the Study Team and Co-Director of the DLR Institute for Solar Research. "What is important is that the market launch of a wide range of innovations makes rapid progress, so that the price of supplying electric power, so-called electricity generation costs, decreases rapidly", says Robert

Pitz-Paal in summary. According to the study, electricity from solar power stations currently costs the same as power from offshore wind plants and is two to three times more expensive than electricity generated at conventional fossil fuel power stations. The study's authors anticipate that electricity generation costs will decrease by 50 to 60 percent in the next ten to fifteen years as solar power stations progressively come onstream and as the relevant research and development is undertaken. At the current rate of technological progress and in light of fossil fuel price trends, the researchers also anticipate that electricity from solar power stations will be able to compete with electricity from fossil fuel power stations sometime between 2020 and 2030.

Sunshine is Turned Into Electric Power

The researchers paid particular attention to the comparison between solar-thermal power stations and photovoltaic systems,

where the sun's energy is converted directly into electric power. Considerable price reductions in the photovoltaic (PV) segment caused by increasing competition have attracted attention during the last few months.

"In the absence of base-load-compatible solar-thermal power stations, converting our global energy systems will prove to be a very difficult undertaking", is however the opinion of Robert Pitz-Paal.

In solar power stations energy can be stored in the form of heat, before being used in turbines to generate electricity. This enables electricity to be supplied as required, without the need to hold fossil-fuel power stations in reserve. This is added value that will increase in the medium term, since PV and wind plants alone cannot guarantee security of supply, according to the researchers working on the study. ☀

For further information
www.dlr.de/sf/en

Our Engineers will invent Watt-ever you wish.



 **As inventor of the Automobile, we've always been something of a live wire.** The story of the automobile started in Baden-Württemberg and it will be continued here. Ever since Carl Benz and Gottlieb Daimler developed the first automobiles with internal-combustion engines in 1886, the world has got smaller and our region has got bigger – much bigger. Today,

Baden-Württemberg is automobile-country number 1. We say this in all modesty, for we are not just resting on the laurels of the past. We are driving towards a motor for the electromobile future that conserves our resources and on the road to that end, we are a live wire from time to time. We'd love to pick you up to join us on this ride at www.bw-invest.de and www.e-mobillbw.de

e-mobil BW 
State Agency for Electric Mobility and
Fuel Cell Technology Baden-Wuerttemberg GmbH


Baden-Württemberg
The German Southwest
Where ideas work.



01

Fresh Ideas, Emergent Technologies

The ZSW in Stuttgart is driving the energy turnaround forward

Renewable Energy at the Touch of a Button

ZSW, Fraunhofer IWES and SolarFuel are building a new pilot plant with a 250kW power rating to drive this new technology forward.

From 2020 onwards the most important power sources will include wind and solar. Yet to date no storage technology with sufficient capacity, capable of storing weather-related power surpluses long-term, has been available. However there is one exception — storing this green electricity as a gas in the natural gas grid. This emergent technology pioneered by the Centre for Solar Energy and Hydrogen Research Baden-Württemberg (ZSW), Fraunhofer IWES and SolarFuel GmbH, is now set to come of age. In July 2011 the partners in this venture started building a new 250 kW (input power) large-scale pilot plant at ZSW in Stuttgart that is ten times the size of their initial facility. The objective is to facilitate large-

scale commercial use of this technology. Completion is scheduled for summer 2012.

Better Together

Test results are also intended to be incorporated into Audi AG's substantially larger "e-gas project". SolarFuel is building an industrial-scale (around 6 megawatts) pilot plant for the vehicle manufacturer, which is due to be completed in 2013. "The new pilot plant has been designed to produce more than ten cubic metres of renewable methane per hour", says Dr. Michael Specht, Head of ZSW's Renewable Fuels and Processes Department. "All the technology required to transform electricity into gas is housed in this plant, which is the size of two contain-

01
Enamelled sheet steel panel functions as a substrate for flexible solar modules
ZSW

02
ZSW researchers develop mobile systems in collaboration with industrial partners
ZSW

03
ZSW, Fraunhofer IWES and Solar Fuel's pilot plant with a 250 kW power rating
ZSW



02



03

ers." The plant has a power rating of 250 kilowatts (kW). The very first plant from 2009 only had 25 kW. The plant has been designed to be operated in tandem with a biogas plant, i.e. CO₂ derived from biogas can be used. "The larger plant will enable us to enhance and optimise the technology", Gregor Waldstein, CEO of SolarFuel, explains.

At the Touch of a Button

"That is yet further progress on the road to serial-production readiness." Renewable energy at the touch of a button. The absorption of more and more green electricity surpluses into the energy system requires substantially more electricity storage capacity in the future. "Pump-storage hydroelectric power stations in Germany can only be upgraded to a very limited extent, whilst batteries only offer short-term storage capability, and the infrastructure is a limiting factor as far as hydrogen is concerned", says Mareike Jentsch, Fraunhofer IWES Project Manager. "If however renewable electricity is converted into methane, this green energy can be supplied via Germany's entire natural gas grid, which features enormous storage capacity." Methane can also be stored. Therefore storage of massive

Future Lab The Centre for Solar Energy and Hydrogen Research

The Centre for Solar Energy and Hydrogen Research Baden-Württemberg (ZSW) is one of the leading institutes for applied research in the field of photovoltaics and in battery and fuel cell technology. Renewable fuel and hydrogen generation and energy efficient systems

analysis are additional fields of research. The institute cooperates with research institutes, universities and commercial businesses in Germany and abroad. At its Ulm site the institute also operates Europe's largest development and testing centre for high-performance batteries and fuel cells.

ZSW researchers have been developing mobile and static systems in collaboration with industrial and SME partners for 20 years. More than 200 scientists, engineers and technicians currently work at the three ZSW sites in Stuttgart, Ulm and Widderstall.

surpluses of renewable electricity over an extended period is definitely feasible and at the same time means that demand for green electricity can be met sustainably when supply of such electricity is otherwise low. The gas can be used in mini CHP plants in homes. Or even in gas-powered cars.

Audi has already identified this benefit. The Ingolstadt-based vehicle manufacturer will be the first company to apply this new technology in practice—in 2013 an industrial pilot plant is due to go operational. The lessons learned from the 250 kW plant will also be incorporated. Audi customers

will be able to buy climate-neutral mobility. This new technology is very much a team effort—the process technology was provided by ZSW. The Fraunhofer Institute for Wind Energy and Energy System Technology (IWES) developed electricity grid integration concepts, whilst SolarFuel, in its role as a plant construction specialist, handles industrial-scale commercialisation of plants by upgrading to megawatt territory. ☀

For further information
www.zsw-bw.de

01

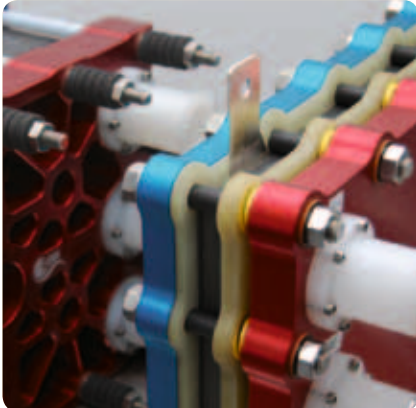
The Laboratory for Battery Technology includes a safety-testing centre
ZSW

02

The ZSW: Applied research for battery and fuel cell technology
ZSW



01



02

eLab Laboratory En Route to the Super-Battery

The ZSW celebrates the inauguration of the eLab Laboratory for Battery Technology in Ulm. This is where strategic production gaps are to be closed in the future.

Electric vehicles need safe, efficient vehicle batteries that are ready to go into mass production. The ZSW has established The Laboratory for Battery Technology (eLab) in Ulm for this purpose. The eLab features manufacturing facilities for lithium-ion cells and includes a safety-testing centre and therefore closes a battery manufacturing and skills gap. The building was completed on schedule. This new research centre is intended to help develop a competitive battery industry in Germany. "We want Germany to become a leading electromobility provider. A prerequisite for this is intensive battery research. The eLab is an important step along this route", explains Federal Minister for Education and Research, Annette Schavan. The Federal Minister for Transport, Peter Ramsauer, adds "Electric vehicles must be as safe as vehicles with conventional drive systems. German vehicle manufacturers are synonymous with high standards of safety. As far as vehicle

batteries are concerned, we need to develop the necessary expertise quickly if we want to achieve our electromobility objectives." The list of collaborative partners from the automotive industry is long and contains a number of prominent names. BMW and the Daimler subsidiary, Deutsche Accumotive, have made a financial commitment. Volkswagen, Bosch, Opel and the automotive supplier, Continental, are also supporting the project.

The battery manufacturers SB LiMotive and Li-Tec Battery should also be mentioned. The large, 3-storey building features floor space of 6,000 square metres and is divided into a head-end building and three wings. New components and hybrids in standard industrial cells are evaluated in the eLab. Manufacturers of production facilities are able to develop new manufacturing technologies using original materials in partnership with the ZSW. The objective is to develop an industry in Germany that is capable of manufacturing batteries for electric vehicles. The researchers established an extensive safety testing centre for battery systems in close cooperation with industrial partners. ☼

"We want Germany to become a leading electromobility provider. A prerequisite for this is intensive battery research."

Annette Schavan, Federal Minister for Education and Research

Window on the Future

By combining large-scale demonstration projects with research-focused cluster activities, Baden-Württemberg is well on its way to becoming Europe's electromobility hotspot

Showcase for Germany

Baden-Württemberg has been selected by the Federal Government to be one of four electromobility showcases in Germany. The Federal Government is providing financial assistance totalling 180 million Euros for large-scale pilot and demonstration projects to develop electromobility. In Baden-Württemberg around 120 stakeholders have joined forces to work on 41 projects. The state-funded agency, e-mobil BW, is coordinating this major project together with the Stuttgart Region Economic Development Corporation.

TEXT: Isabell Knüttgen

Electromobility in Baden-Württemberg will really take off now “, says State Premier Winfried Kretschmann with delight about the assistance, which the Federal Government has decided to provide. “Our concept proposed an intermodal, internationally integrated, manufacturer- and above all population-friendly electromobility showcase. Baden-Württemberg is in all respects synonymous with electromobility.” As far as the State Premier is concerned, the objective is clear. “Electromobility must be shown in practice to function and be compatible with our daily lives.”

Market Leaders, Lead Market

This success validates Baden-Württemberg's key role in enabling Germany to become the leading electromobility provider and market, says Finance and Economics Minister, Dr. Nils Schmid. “We put forward LivingLab BWe mobil, a persuasive system-based solution consisting of 41 interdependent projects. Around 120 partners from the business and scientific communities and from the public sector actively participated in the bid.” “What is particularly gratifying”, Schmid added, “is that we have been able to involve a very large number of SMEs in these funded projects, alongside such well-known companies as Audi, Bosch, Daimler, Deutsche Bahn, EnBW, IBM, Michelin, Porsche, TÜV Süd and other vehicle manufacturers.” Local authorities

and municipal utilities have also shown a gratifying level of commitment. LivingLab BWe mobil will demonstrate in the Stuttgart/Karlsruhe region that the heartland of the automobile can marry economic and environmental protection interests.

An Integrated Approach to New Mobility

The successful bid was jointly coordinated by a proven team consisting of Landesagentur für Elektromobilität und Brennstoffzellentechnologie e-mobil BW GmbH and the Stuttgart Region Economic Development Corporation (WRS) using the resources of a specific-purpose project management office, Elektromobilität Baden-Württemberg, whose brief is to dovetail the many individual projects and to factor in new trends. That's because mobility-related issues that we take for granted nowadays are going to change. Smart traffic systems of the future include new, flexible and intermodal usage options and as each generation of young road users enters the market, acceptance of new forms of mobility, e.g. car sharing, will increase. The issue of promoting intermodal and multimodal mobility therefore played a key role in Baden-Württemberg's showcase bid. The car2go Stuttgart project is a good example of how new electromobility alliances can be formed to make mobility sustainable. As part of this project, which involves the setting up of a fleet of ›



“We can do more than just make cars, even though we excel at that.”

Winfried Kretschmann, State Premier

StM

01

Manufacturing is a basic competence of Baden-Württemberg

e-mobil



01

02

Greentech means hightech plus cleantech: Assembly of electronic components

e-mobil

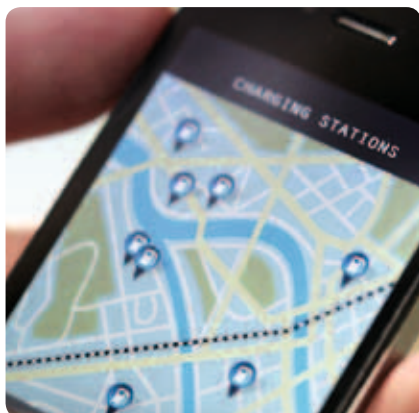


02

03

Ready to go: Smart solutions for a greener mobility

e-mobil



01

> 500 E-Smarts for short-term hire, Daimler AG is partnering, for example, with Stuttgarter Straßenbahnen AG to dovetail private with short-distance public transport. “We have planned a series of outstanding projects involving substantial vehicle and infrastructure volume. Total project volume amounts to around 153 million Euros. More than 3,100 electric vehicles will have been utilised in the course of these projects by the end of 2015. We are thus demonstrating smart mobility solutions in a showcase region that faces major topographical challenges and features a high population density and a large number of commuters”, is how project director and e-mobil BW’s CEO Franz Loogen outlines the concept.

Cutting-edge Cluster and Showcase Complement Each Other Perfectly

In the process of designing its showcase concept Baden-Württemberg was able to benefit from its forward-looking policy of championing clusters. By setting up the “Electromobility South-West” industrial cluster, which was one of five winners in the Federal Ministry of Education and Research’s cutting-edge cluster contest in January 2012, Baden-Württemberg has already managed to team up large, medium-sized and small businesses, involved in vehicle manufacturing, power engineering and ICT, with research institutions locally and thus leverage important innovation

synergies. The award also comes with funding worth 40 million Euros for research projects, which are intended to drive the development and manufacturing of serial-production-compatible electric vehicles, charging technologies and IT solutions forward.

“Our showcase and cutting-edge cluster complement each other perfectly, as far as their impact is concerned. We in Baden-Württemberg have a unique opportunity to lay the foundations for the industrialisation of electromobility and for the manufacture of future products within the cutting-edge cluster and at the same time to use the showcase to demonstrate how electromobility can dovetail with our daily lives and to develop sustainable business models”, is how e-mobil BW’s CEO Franz Loogen highlights this particular constellation.

Sustainable Business Models

e-mobil BW GmbH champions the award-winning Electromobility South-West cluster and is also responsible for managing it. The cluster incorporates around 80 industrial and scientific stakeholders and is one of the largest regional electromobility networks. Baden-Württemberg aspires to be a leading technology provider of smart mobility solutions for Germany and the global market in the future too. The speed of market penetration of vehicles featuring more efficient combustion engines as well as new types of drive systems (battery-powered electric vehicles and fuel-cell vehicles) is key, globally speaking, to how quickly CO₂ emissions can be reduced. Electromobility — ranging from serial hybrids via range-extender concepts through to purely battery-operated electric vehicles and fuel-cell drive systems — is the key to facilitating resource-efficient, climate-compatible mobility on a long-term basis. Based on an extensive meta-analysis, a recent Fraunhofer survey forecasts that every third vehicle will feature an electromobility component in its drive train by the year 2020. The proportion of combustion-engine-only vehicles will still account for the lion’s share, but will lose market share in relative terms. ☼

For further information
e-mobil BW GmbH is Baden-Württemberg’s state-funded agency for electromobility and fuel cell technology and the electromobility contact and advice centre.
www.e-mobilbw.de



“Our companies have an outstanding ability to develop solutions for entire traffic and mobility systems.”

Franz Loogen, CEO of e-mobil BW
e-mobil

“Reproduce our segment in any future e-mobility market.”

Interview with Franz Loogen

How do you keep track of all the electromobility stakeholders in Baden-Württemberg?

It is our objective to promote innovation in an integrated and cross-disciplinary manner that does justice to the complex issue of electromobility. This involves taking a systematic approach to implementing smart networked mobility solutions, based on regenerative energies. Our main task as a state-wide platform is to interlink all stakeholders from the business and scientific communities. For example the e-mobil BW Technology Day, which we are staging in Stuttgart on the 10th October 2012, is a great forum to communicate and share industry information.

What international partnership opportunities do you see, especially with China?

As far as electromobility is concerned, we regard China as both a serious competitor and as a potentially huge market for our products, components and services. For

that reason we analyse all emergent trends and developments very carefully. Our companies have an outstanding ability to develop solutions for entire traffic and mobility systems. That makes them sought-after partners, e.g. for Chinese industrial and commercial businesses. Just consider the Chinese mega-cities — here integrated solutions are required!

And what opportunities do medium-sized businesses have?

Baden-Württemberg has a highly innovative medium-sized sub-contracting and factory equipment industry, which is synonymous above all with premium-quality products and well-engineered components. This quality will also be in demand in the future, e.g. as part of international partnerships. The challenge is to reproduce our segment in any future e-mobility market. In this respect intellectual property rights to the know-how applied are critically important. ☼



e-mobil

01

An innovative project
in Baden-Württemberg
nyul—Fotolia.com



01

02

Electromobility in
Baden-Württemberg
IHK Reutlingen



02

03

Neckar-Alb is the region in the
south west of Germany
Standortagentur



03

The E-Bike Region Neckar-Alb “Your Future is Our Business”

The E-bike-region Neckar-Alb

Electromobility is on everyone's lips, but up to now, only very few electric cars are ready for mass production. The market for electric bikes and pedelecs, however, is in another stage of maturity: although pedal electric cycles have not been available for a very long time yet, the German market has quadrupled in the last five years—from 70,000 pedelecs sold in 2007 to approximately 300,000 pedelecs sold in 2011.

TEXT Marijana Tomin

For the members of the network ‘E-Bike’, founded by the Chamber of Commerce and Industry (IHK) in Reutlingen in March 2011, this is still not enough. With a project that is unique in Germany, they seek to target new user groups and to promote utility cycling in the Neckar-Alb region.

An Innovative Project

The project is funded by the Federal Ministry of Transport, Building and Urban Development. Its objective is to launch a

campaign that informs trainees, apprentices and students, the commuters of tomorrow, about the advantages of commuting to work by pedelec—for example, saving on fuel costs, travelling in an environmentally friendly manner, and, last but not least, improving one's health. In contrast to a conventional bicycle, the pedelec offers the possibility of cycling to work without getting sweaty.

An integral part of the information campaign is a roadshow through the companies and universities in the region. During these roadshows, the young people will have the opportunity to test drive different pedelecs on a test parcours. This will offer them the possibility to experience that pedalling is fun—not only for the “young at heart”. So far, pedelecs are still predominantly bought by the generation 50+.

Up to now, we know very little about the mobility behaviour as well as the attitudes of young people towards pedelecs and e-bikes. Therefore, the information campaign will be accompanied by research. The working group Human Geography of the renowned University of Tübingen will design a questionnaire to be filled in before and after the test ride. The objective is to find out more about the young people's attitudes towards this new form of mobility—and about how these can be changed. This information is not only interesting for

scientists, but will provide important hints for manufacturers, retailers and marketing professionals as well. The Tübingen scientists will be supported by a team of students from Albstadt-Sigmaringen University.

A Strong Regional Network

The ‘E-Bike’ network consists of regional bicycle retailers, municipal energy suppliers, local universities and manufacturers. Amongst them, Bosch and Magura are probably best known internationally. Four-wheeler specialist Bosch entered this new business field in 2010 with the development of high-quality e-bike drives in Reutlingen. Magura, located in Bad Urach, has been active in the bicycle business since 1987 and is well-known for high-quality products such as hydraulic rim and disk brakes, as well as suspension forks. Besides these ‘big players’, the region also boasts with lots of creative geniuses that offer innovative services and develop new products, such as especially resilient electric cargo bicycles.

The University of Tübingen, the Albstadt-Sigmaringen University and the Reutlingen University enrich the network with their scientific expertise in the field. ☼

For further information

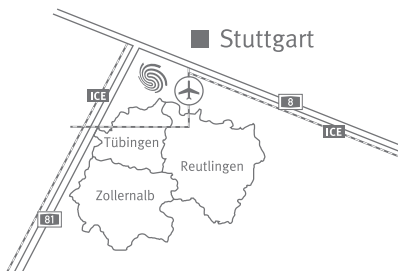
www.reutlingen.ihk.de/e-bike
Standortagentur Tübingen – Reutlingen – Zollernalb GmbH
Hindenburgstrasse 54
72762 Reutlingen, Germany
Phone: +49 7121 201-180
Fax: +49 7121 201-4180
e-mail: info@neckaralb.de
www.neckaralb.de

You can never start too early!



Neckar-Alb – a region in the fast lane

- A long tradition of Swabian inventors and craftsmen.
- Great networking in the automotive industry.
- Highly specialized mechanical engineering.
- The best links to international technology groups.
- Close ties between business, science and research.



www.neckaralb.de

www.kinderbetreuung-neckaralb.de

www.bildungsportal-neckaralb.de

Tübingen
Reutlingen
Zollernalb



RegionNeckarAlb

Your future is our business.

Daimler and BYD Present DENZA

The new DENZA brand for the electric vehicle developed by BYD Daimler New Technology Co. Ltd. (BDNT), the 50:50 joint venture between Daimler and Chinese electric battery and car manufacturer BYD, was formally revealed today in Shenzhen at the "EV—The Future" event. Primarily created with a focus on Chinese consumers, the name DENZA derives its strength from profound and positive associations with the Chinese characters 腾势 téng shì, which together mean "rising power and momentum"—referring both to the attributes of the car as well as the pace of development DENZA aims to be ahead in the New Energy Vehicle industry.



 Daimler

DEKRA Invests in Future

Stuttgart-based testing group DEKRA remains optimally prepared for the future. DEKRA CEO Stefan Kölbl announced further growth: "In 2015, DEKRA will be a globally active company with revenues of around three billion Euros and 35,000 employees". In the 2011 financial year, DEKRA increased its group sales by eight percent to 2.007 billion Euros. The number of employees increased during 2011 by 2,400 (+10%) to 27,500. DEKRA has successfully attracted around 500 engineers only in Germany. DEKRA Industrial is the company's second strategic growth area. From 2005 to 2011, revenues tripled. Also in 2011, industrial testing services saw business grow by nine percent to 539 million Euros. This means that DEKRA has become one of the world's top ten providers within just a few years.

www.dekra.com

Female Power

*Germany's 25 most influential women
engineers in Baden-Württemberg*

Creating Role Models

There is a shortage of engineers in Germany. Yet what's the story with our ladies? To mark its 25th anniversary, the German Association of Women Engineers has taken a closer look at this issue and produced a Top 25 ranking of the country's most influential women engineers. "In my professional capacity I see how few young women opt for technical degree courses every day of the week – despite the outstanding career prospects", is how Susanne Staude, Professor at the Hochschule Ruhr-West, and a member of the project team describes the current situation. For this reason Business Baden-Württemberg has decided to profile the top women engineers in Baden-Württemberg.

TEXT Daniela Sandmann



02

Future Power by Female Power

Stefanie von Andrian-Werburg is Head of the Process Engineering/Steam Generator Unit at EnBW Kraftwerke AG. Her team is involved at all stages of power station projects (from site assessment, project planning, project management, tendering, construction management through to inauguration). In this capacity Stefanie von Andrian-Werburg is responsible for managing projects worth an investment volume of up to 500 million Euros per annum.

These have included, for example, the new-build 900 MW coal-fired power station in Karlsruhe's Rhine Harbour as well as construction of a 30 MW RDF-fired power station in Eisenhüttenstadt. Stefanie von Andrian-Werburg is also involved in a large number of EnBW research projects, such as the development of a new generation of power stations (700°C power stations) and investigating opportunities for using CO₂ as a raw material and transforming it into a new high-energy product with the aid of sunlight. ☼

Women & Career: That's How it Works

Marion A. Weissenberger-Eibl is Head of the Fraunhofer Institute for Systems and Innovation Research (ISI). Her work includes developing the conditions conducive to innovation and its impact and she also advises decision-makers in the business and scientific communities as well as politicians on important issues. In addition to heading up the 250-headcount, Karlsruhe-based institute, she also holds the Chair of Innovation and Technology Management at the University of Kassel. Marion Weissenberger-Eibl is also a member of the Baden-Württemberg Innovation Council and of the Advisory Board of Deutsche Energie-Agentur GmbH (dena). ☼



03

01

Dipl.-Ing. Anja Frank, Head of Department at the DLR's (German Aerospace Center) Institute of Space Propulsion

DLR

02

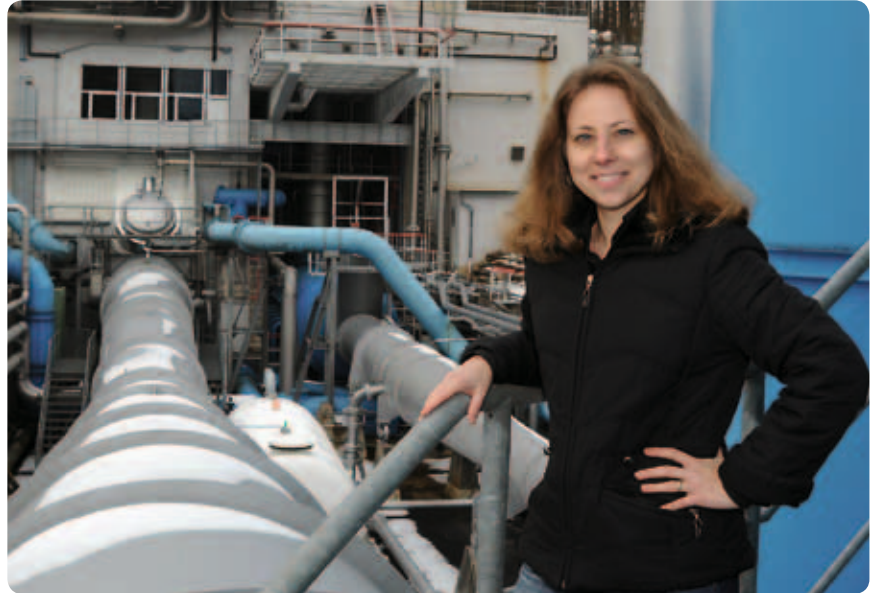
Dr.-Ing. Stefanie von Andrian-Werburg, Head of the Process Engineering/Steam Generator Unit at EnBW Kraftwerke AG

EnBW / Gaby Gerster

03

Prof. Dr. oec. Marion A. Weissenberger-Eibl, Head of the Fraunhofer Institute for Systems and Innovation Research (ISI)

Fraunhofer Institut



01

We can do it! Even Rocket Propulsion

Anja Frank has got every reason to be pleased. The 40-year-old has just been acknowledged as one of Germany's 25 most influential women engineers. "Anja Frank impressed us because she is a young engineer and already holds a prominent position of responsibility and has helped the DLR facility in Lampoldshausen to achieve a European 'Best in Class' rating for test data generation", is how Petra Mayerhofer, initiator of the Top 25 project, explained the accolade.

Anja Frank's work on rocket propulsion systems illustrates clearly that the engineering profession has many different facets. For many years this aerospace engineer conducted unparalleled tests on propulsion systems at the European Space Agency's (ESA) major test sites and she has therefore played a significant role in the enhancement of launch vehicle technology. "Anja Frank stands out due to the fact that she is a young woman engineer and a model ex-

ecutive, who consistently takes on technical challenges and does not shy away from difficulties", is how Prof. Dr.-Ing. Stefan Schlechtriem, Director of the DLR's Institute of Space Propulsion praises the achievements of Anja Frank. Anja Frank's successful career began with her taking the right decision. Upon completing her schooling she opted to study aerospace engineering at the (Technical) University of Stuttgart, graduating in 1997. To which organisation she should apply for a job was immediately clear to the fledgling woman engineer. "When I joined the DLR as a research engineer, we took responsibility for developing the Vulcain 2 propulsion system from the very first test. There is no more direct route to working in space technology. Even though as Head of Department I miss conducting experiments myself, I now have quite different opportunities to help shape the future of the European space industry", Anja Frank explains. ☼

The Issue of Sustainability

IBM wants to change the world for the better in the long term using intelligent systems

The Face of IBM in Germany

Increasingly more women are occupying positions in the boardrooms of major companies and this applies to Martina Koederitz as well. She has been CEO of IBM Deutschland since May 2011. Martina Koederitz began her career at IBM in 1987 as a systems consultant. Business Baden-Württemberg spoke with her.

INTERVIEW: Daniela Sandmann

IBM's German business unit has always mentored the IBM Corporation's cutting-edge research projects. What products and solutions are currently being researched in Böblingen?

Our teams in the Research & Development Center are currently working on more than 60 strategically important projects. These cover many of our clients' current key is-

sues—for instance cloud computing; big data (i.e. solutions for superfast handling and analysis of the enormous and very different volumes of data that are generated in and around companies nowadays); the next generation of Internet portals that companies can customize to meet the needs of specific clients; e-mail security through to the hard- and software technologies that are

absolutely key to a forward-looking infrastructure.

IBM is really focusing on cloud solutions. How far advanced are this market and the SME segment within it?

Companies have recognized that they can only retain customers, drive innovations forward and compete effectively in the mar-



IBM

ketplace with the aid of state-of-the-art information technology. That challenges IT providers to offer flexible IT concepts to mid-sized businesses in particular. On the one hand these are solutions that facilitate the achievement of business objectives in a meaningful way and on the other they are offerings that companies can afford. Cloud computing meets these needs in full. For

that reason cloud computing will become a standard platform amongst mid-sized businesses in particular, enabling companies to integrate new applications rapidly and to react flexibly to changing workloads. In this respect mid-sized businesses attach importance to regional proximity and partnerships of equals when opting for cloud-based IT services. To this end we have just launched the IBM City Cloud Initiative at CeBIT in Hanover. These City Clouds are operated and mentored by local IBM business partners in specific cities and regions.

What role does an ecosystem involving sales and solutions partners play in developing new customer segments in the SME sector?

Nowadays we discuss solutions with our clients and are departing more and more from a purely product-focused way of thinking. These solutions consist of different software and hardware products as well as services ranging all the way to financing and they frequently also often factor in industry specifics. So, for example, our solutions partner highQ provides e-ticketing solutions that facilitate improved planning for local public transport operations and make these more customer-friendly. Or take DREGER IT as an example—this IBM partner provides Lotus Notes-based mobile solutions, via which it reliably supplies internal corporate information via smartphone or tablet PC to employees on business trips or visiting customers. For more and more people want to use their own equipment at work as well.

Sustainability is a key issue in planning industrial and public infrastructure. How is IBM positioned in this respect?

Our Smarter Planet Strategy, which we have been pursuing for more than four years, demonstrates the great importance that we attach to the issue of sustainability. On the one hand it impacts on us as a business—we invest, for example in cost-effective and efficient energy and facilities management at our offices to ensure our energy footprint has a positive impact. As

“We are tackling the issue of how we can change the world for the better in the long term using intelligent systems.”

Martina Koederitz, CEO
of IBM Deutschland

far as public and industrial infrastructure is concerned, we are tackling the issue of how we can change the world for the better in the long term using intelligent systems. That includes physical infrastructure, such as traffic routes or even energy supply and communications networks. As a first step this infrastructure is upgraded by incorporating digital technologies and thus made to operate intelligently. If we take traffic management as an example, digitalization nowadays enables us to amalgamate and integrate traffic information from various sources and at the same time feed it back to all the information systems involved, i.e. to mobile phones or GPS systems. We learn of nascent traffic jams earlier and can take an alternative route. That saves time and energy.

How does IBM organize global collaboration between its teams, in order to service SME global players around the world?

As Team IBM we are proficient at networking and we action a social business model that revolves around sharing and providing information. Every employee, regardless of where they work, therefore has access to what's currently happening and is able to provide information about global projects. More than 600,000 employees, partners and suppliers collaborate daily using the IBM Connections social business platform. Mobile use of business applications is also feasible, because we provide our collaboration products on all relevant mobile platforms. ☀

For further information
www.ibm.com



VITA
**ACKNOWLEDGED
HIGH-FLIER**

Dr. Antje von Dewitz (born 1972) was appointed CEO of Tett nang-based Vaude Sport GmbH & Co. KG in 2009. After graduating in Economic and Cultural Studies from Passau University, she worked as a product manager from 1998 until 2000, establishing the "Packs 'n Bags" product division at Vaude. After that she was responsible for PR, Internet & Media Planning at the company until 2002. From 2002 to 2005 she did a PhD and was part of the Endowed Chair for Entrepreneurship team at the University of Hohenheim. She has been Head of Marketing since 2005 and in this capacity took over as CEO from her father in 2009.

Well I've Made It—Women in the Boardroom

Antje von Dewitz explains why women belong in positions of authority

Responsibility for People and the Environment

Vaude, a modern family-run business, takes its responsibility for people and the environment very seriously. The company is not only one of the most environmentally aware suppliers of outdoor leisure products but also champions the cause of women in executive positions.

GREEN SHAPE A FLAGSHIP SUSTAINABILITY PROJECT

As a modern family-run business Vaude takes its responsibility for people and the environment very seriously and its objective is to become Europe's most environmentally aware supplier of outdoor leisure products. The company has complied with the stringent bluesign® environmental standard, which regulates the entire textile value chain, since 2001. Furthermore in 2008 it became the first outdoor products business to be EMAS-certified. Vaude applies the most stringent criteria in the outdoor industry to its "Green Shape" products, which are manufactured to high environmentally compatible standards.

Why, in your opinion, do women belong in positions of authority?

Antje von Dewitz: I would not give blanket endorsement to this statement. From an entrepreneurial perspective I can basically say that mixed teams are able to generate creative solutions and can therefore apply sustainable responses to business challenges. By sustainable I mean that they analyse challenges from different angles and from a broad range of different experience and solutions therefore usually turn out to be sustainable in the long-term.

From my perspective as a businesswoman, a company is much better positioned if there is an optimum balance between the two sexes. However I believe the same applies to age or even age categories or balanced personality profiles. That means I am convinced that a company benefits if its decision-makers reflect diversity.

You have put forward the following proposition: "The larger the company, and the more senior the position, the fewer women there are". What do you attribute this to?

I can only speculate about the reasons. It's presumably because the parameters in large companies are less flexible than they are in small and medium-sized enterprises, where at any rate specific solutions are often applied.

What's the situation at Vaude?
How have you motivated your employees and executives?

About 40 percent of our executives are female. The reason for this is that 60 percent of our employees are women, who, even though they have children, are able to gain the necessary experience with the aid of children's day-care facilities and flexible working hours, and then combine family life with holding down a position of responsibility. We make every effort to facilitate family/career compatibility. That means, for example, that we have more female executives working part-time or that our executives can work from home or that they are fully responsible for managing their own time.

All companies want to go down the sustainable manufacturing route!
Your company recently won a sustainability award. What role does this issue play in daily corporate practice?

Sustainability is a key Vaude brand undertaking and a core corporate value. We are gradually embedding social and environmental issues throughout the company, at every workstation. We are taking an integrated and systematic approach to this challenge — both throughout product lifecycles, from material selection and the production process via guarantees and repairs through to recycling, as well as at our corporate location itself. For example, the use of electricity generated from renewable sources or 100 percent from renewable sources, the use of recycled paper".

How do you motivate your employees and female executives to endorse sustainability?

Most people find it easy to espouse a sense of social justice and environmental awareness, especially parents, for whom the responsibility for the world that we leave to our children stands very much to reason. It is therefore not difficult to appeal to our employees by addressing sustainability issues. There are always barriers to implementation in day-to-day business, but we view ourselves as lateral thinkers and pioneers, we try to overcome these barriers and try to break the mould. ☼

Top Ranking for Konstanz, Freiburg and Karlsruhe

Baden-Württemberg's universities and colleges have repeated their previous outstanding performance in this year's university ranking undertaken by the Centre for Higher Education Development (CHE). The Universities of Konstanz and Freiburg as well as Karlsruhe's University of Applied Sciences were all among the frontrunners. A total of 250,000 students were able to give their views on their experience of studying mathematics, natural sciences, medicine, pharmacy and sports as well as care and nursing subjects. The ranking covered 300 universities and colleges in Germany, Austria, Switzerland and the Netherlands.

www.bw-studyguide.de

Economics and Psychology in Football

Erroneous offside decisions, psycho-stress during penalty shoot-outs and forecasts for the European football championship—these and other aspects of football will be among the themes of an international congress at Heidelberg University from 28 to 30 June 2012. The "4th Biennial Conference on the Economics and Psychology of Football" is bringing together about 40 researchers on football in the fields of sport sciences, psychology and economics. The focus will be on the behaviour of players, trainers, managers and fans, and particularly their judgement and decision-making processes. Organisers are the Institute of Sports and Sports Sciences (ISSW) of Heidelberg University and the Institute of Cognitive Team/Racket Sport Research of the German Sport University Cologne.

www.issw.uni-heidelberg.de

Corporate Education

For years SIBE, Steinbeis University Berlin's International Business School, has opted to maintain close relationships with partner universities of global repute in emerging markets such as Brazil, India or China. Cooperation with three Brazilian universities was recently stepped up to a considerable degree—Master's students at SIBE now have the opportunity of laying the foundations for a Double Degree during their 3-week study trips abroad.

TEXT: Fabian Dirks

A Finger on the Pulse of the Times

By collaborating with a number of universities around the world, SIBE is able to offer its corporate partners genuine added value

The close ties between Steinbeis University Berlin's International Business School and its global partners enables Master's students not only to earn a Master of Arts in General Management or a Master of Science in International Management from the officially recognised Steinbeis University Berlin but also an additional MBA degree

from one of three top partner universities in Brazil — UNITAU, Católica or Mauá. SIBE is also enhancing its regional corporate networks in Brazil.

Brazilian students have been working on corporate projects in a range of different growth industries since the start of 2010. However not only do future graduates ben-



istockphoto

efit from networking with Brazilian companies and, in the case of German students, from the Double Degree, so above all do the project-sponsoring companies, where young professionals are required to implement actual corporate growth projects during their two-year programmes.

As far as HR megatrends of the future are concerned, experts have for years been referring to the fact that companies are finding it increasingly difficult to recruit highly qualified, internationally educated young professionals. A catchphrase that has for some time been increasingly attracting attention is so-called Employer Branding, which companies, both large and small, use to up their appeal and raise their profiles as employers. This is the only way that they can attract top talent and remain competitive in the long term by being innovative. Partnering with a well-known business school is a frequently chosen method of appealing to and retaining employees who perform.

Highly Competitive Recruiting

SIBE's recruitment work also offers companies added value. For more than a decade SIBE has been enhancing its recruitment portfolio and in this respect is unrivalled in the German market. Companies benefit from a multi-stage, DIN-certified selection process at the University, which at an acceptance rate of less than 10 percent, preselects the best graduates as project staff.

SIBE's recruitment work is now so professional, that SAPHIR Deutschland GmbH has even established a successful track record as an external recruitment consultancy in the highly competitive recruitment market. Nevertheless this first-class recruitment service remains cost-neutral to corporate partners—they thus benefit from

a talent pool including around 700 above-average-ability young professionals. With the Double Degree SIBE has taken an important step along the way of attracting and enabling their corporate partners to recruit the best university graduates in the future.

International Focus a Must

Around ten MA, MSc and MBA classes travel every year for two to three weeks, courtesy of SIBE, Steinbeis University Berlin's International Business School, to Brazil. The objective is to give these young executives a better understanding of an emerging market. The study trip's tightly packed agenda incorporates both visits to companies and trade associations as well as cultural and culinary highlights. A sound management education would not be complete if it did not include learning intercultural skills in a globalised world.

Stefanie Kisgen, Master of Science in International Management course director, explains, "These days modern management teaching would be completely inconceivable if it lacked an international focus. Global integration is already too far advanced. Therefore it is all the more important that we give our students the opportunity to gain intercultural experience whilst they are studying. This newly-created opportunity to gain an MBA from one of our three partner universities is of course extra added value for our corporate partners and participants."

This firm belief is backed up by surveys and reports on what makes German companies successful. All around the world, both large corporations and medium-sized companies have long been sought-after trading partners that are synonymous with quality and reliability and whose leading-edge products set global standards. A study by

"More effective use of the skills and qualifications that immigrants bring with them is a political priority and equally a key contribution to professional and social integration."

the international accountancy firm Ernst & Young also validates this trend towards internationalisation. Mid-2011 the experts took a closer look at the annual reports of all DAX-listed companies. Their findings were that these companies generate three-quarters of their turnover outside Germany. Whilst turnover growth in Germany came in at nine percent, it was 19 percent abroad; headcounts in Germany are stagnating, increasing only by 0.5 percent, whilst headcounts abroad increased during the same period by 2.5 percent.

This brief factual summary alone validates SIBE's internationalisation strategy on the one hand and highlights the growing demand from German companies for highly qualified human resources, who have the confidence to represent the interests of their employers in an international environment.

Experiences in One of the World's Most Innovative Countries

One of the participants, Erik Brandstädter, a product manager at ABB and SIBE Master's student summarised the experiences he gained on his foreign study trip at the beginning of 2011 as follows. "Of course one's own perceptions are influenced by carnival in Rio, football and Brazilian music. But we soon realised during our many company visits that there is so much more to Brazil and that it has so much to offer. Brazil is actually one of the world's most innovative and productive countries, boasting high economic growth and close economic and business ties with Germany.

In my opinion Brazil is characterised by an unbelievable acceptance of change and innovation. This openness definitely makes Brazil a worthwhile business and tourist destination for foreigners." ☼

"Workforce diversity adds more expertise, more creativity and more innovation to the mix. Those represent competitive advantages in an ever more complex world."

The Challenges Posed by the Energy Turnaround
Ulm University of Applied Sciences is responding to the challenges posed by the energy turnaround by offering a package of three new degree courses in energy engineering and energy management. It is therefore making a significant contribution to securing the services of an urgently required next generation of professionals and executives for companies and the public sector. At the same time it is continuing to upgrade its facilities in Ulm's Science Park on the Oberer Eselsberg.

TEXT: Ingrid Horn

Energy Turnaround Degree

International Energy Management and Energy Systems Engineering at Ulm University of Applied Sciences

The energy turnaround is a mega-challenge for society. In order to reduce our dependence on fossil fuels by enhancing alternative and regenerative technologies, industry and business need professionals and executives with applied knowledge. These two new Bachelor's degree courses in International Energy Management and Energy Systems Engineering provide vocational foundations, whilst the postgraduate Master's course in Electrical Energy Systems and Electromobility is also offered as an added scientific qualification. "This is the right range of degree courses at the right time, in the right place", says Professor Dr.

Achim Bubenzer, Principal of Ulm University of Applied Sciences, with conviction.

These three degree courses are based on Ulm University of Applied Sciences' proven, 20-year-old 4-point energy strategy, which was initiated in 1991 by incorporating the energy engineering course specialism in all conventional engineering degree courses. This strategy includes minimisation of energy demand, efficient energy use, the application of renewable energies and more cost-effective energy handling. This strategy has played a role in ensuring that systematically acquired knowledge of modern energy engineering has been ap-

plied, particularly in the close relationship with the City of Ulm, to local energy supply and building services engineering. "The City of Ulm and Ulm University of Applied Sciences have thus paved the way to establishing a pre-eminent testing ground for modern, sustainable energy engineering and energy management in Baden-Württemberg", the Principal explains. Knowledge and experience of this kind are more important and more in demand than ever before since the Fukushima disaster.

Knowledge and Experience

The Bachelor's degree course in Interna-



Teaching and researching
with a practical orienta-
tion — Hochschule Ulm

 Hochschule Ulm



*“This is the right range of
degree courses at the right
time, in the right place.”*

Prof. Dr. Achim Bubenzer, Principal of Ulm
University of Applied Sciences
 Hochschule Ulm

tional Energy Management (IEM) focuses on intelligent handling of that scarce resource, energy, which naturally does not stop at national borders. This degree course is characterised by close interlinkage of the subjects of energy engineering, IT and business management plus a compulsory semester at a partner university abroad. The first students will be admitted during the Winter 2012/2013 semester. There are 40 places available per semester. The Bachelor's degree course in Energy Systems Engineering (ES) communicates the principles of forward-looking methods of energy provision and handling, ranging from modern power station engineering via fuel cells through to photovoltaics and the engineering systems required for their effective use. Graduates of this degree course will be ideally equipped to find and implement comprehensive technical solutions to facilitate the energy turnaround. There will be 35 places available per semester as from the Winter 2012/2013 semester. The Master's degree course in Electrical Energy Systems and Electromobility (EE) enhances techni-

cal and functional knowledge about the development and use of electrochemical power sources, the management of electricity grids and the use of electric drive systems. This degree course commenced at the start of the Summer 2012 semester. By offering these new degree courses Ulm University of Applied Sciences has reached its capacity limits. The IEM degree course alone will add 250 students, for whom tuition facilities are required. Therefore a tuition wing extension to the existing building complex is currently being planned at the university's Albert-Einstein-Allee site. ☼

For further information

www.hs-ulm.de
Bachelor's degree courses contact:
Prof. Dr.-Ing. Josef Kurfess,
Faculty of Production Engineering
and Production Management
Phone: +49 7315028126
Master's degree course contact:
Prof. Dr.-Ing. Wolfgang Schroer,
Chief Graduate School Scientist
Phone: +49 7315028171



Addressing Global Players

local global is focusing the new global challenges. In addition to magazines and websites we are organizing and communicating your conferences:

References:

- ▶ Hannover Messe 1998-2013
- ▶ Partner Country Russia 2005
- ▶ Partner Country India 2006
- ▶ Partner Country Turkey 2007
- ▶ Partner Country Italy 2010
- ▶ Partner Country France 2011
- ▶ Partner Country China 2012
- ▶ CeBIT Flat World Forum 2009-2012
- ▶ Deutscher Außenwirtschaftstag 1999-2011
- ▶ Global Connect 2008-2012
- ▶ sourcing_asia 2004-2011
- ▶ Asia-Pacific Sourcing 2007-2011
- ▶ Baden-Württemberg 2007-2012
- ▶ Magazine Business Baden-Württemberg
- ▶ Niedersachsen 2007-2010
- ▶ Website, Magazine Niedersachsen Global
- ▶ AFIDA, AUMA 2005-2010
- ▶ Exhibition Markets China, Central & Eastern Europe, Latin America
- ▶ edubiz Boosting Corporate Brain 2010-2012
- ▶ greenr.biz 2012



local global
www.localglobal.de



**Energy Management
Degree Course**

The first ever degree course combining energy management theory and practice, focusing on the use of renewable energies in engineering, kicked off on 1 October 2011 at Baden-Württemberg Cooperative State University (DHBW) Mannheim. Prof. Dr. Rolf Litzenberger designed the curriculum in close cooperation with MVV Energie AG to meet the needs of the energy sector.

“Not only do the graduates benefit, but so of course do companies, as they are able to nurture their human resources in line with their own needs and give them full-blown assignment responsibility immediately.”

Hans-Jürgen Farrenkopf,
MVV Energie's HR Director

The Country Needs Engineers: Energy Sector Opportunities

New discipline at DHBW Mannheim

DHBW Mannheim's Principal, Prof. Dr. Johannes Beverungen, highlighted the bias towards innovation that underpins the concept behind this new degree course by accommodating this discipline in the engineering faculty.

This fact, coupled with the combination of academic theory and practical experience, provides significantly more added value than previous degree courses. MVV Energie's HR Director, Hans-Jürgen Farrenkopf, also lauded the new degree course as an important educational innovation and as a superlative offering that would benefit the entire energy sector. “Not only do the graduates benefit, but so of course do companies, as they are able to nurture their human resources in line with their own needs and give them full-blown assignment responsibility immediately.” Given the positive news about the German economy's resurgence, there are once again growing calls for highly qualified professionals.

Theorie + Practice = Success

Engineers, technicians and IT specialists in particular continue to be in desperate shortage. All those now opting to take an appropriate degree are forecast to have optimum career prospects in the future. This fact has once again been validated by the “Fachkräftemonitor” (Professional Monitor) survey, recently published by Rhine-Neckar CIC, which has already forecast a desperate shortage of skilled/qualified graduates entering the so-called MINT professions, incorporating the disciplines of mathematics, IT, natural sciences and technology, in 2014. The situation is particularly acute in the energy sector, where the debate about

security of energy supply in the future has just been reignited. Competition on the energy markets, the challenges of climate protection and the refocusing of energy generation towards renewable energies are permanently changing the energy sector and therefore well-educated all-rounders, who are capable of working on a multi-disciplinary basis, are urgently needed. Based on these requirements, Germany's first ever interdisciplinary Energy Management degree course, which incorporates in-company practical experience, kicked off on 1 October 2011 at DHBW Mannheim's Engineering Faculty.

As a long-standing DHBW partner, the Mannheim-based energy business, MVV Energie, played a key role in conceptually designing the new discipline and is a guarantor of the practical relevance of the degree course's content.

This is Where the Future Starts

As an interdisciplinary subject, the course content consists of a range of different, mutually complementary engineering/technical and business sections. Therefore during the three-month academic (theory) periods the curriculum includes electrical and gas engineering, ICT, principles of business management, quality and project management, technical sales and English. Renewable and sustainable energies are the course specialization, whilst other energy and water supply issues, such as trading and procurement, liberalization and regulation, are compulsory. “

An intensive focus on the actual needs of the energy sector and a dovetailing of course content and practical experience at

Keeping the tried and
trusted—adding
new strengths—
DHBW Mannheim
DHBW Mannheim

each corporate training provider are the factors that give Bachelor of Engineering graduates in this discipline outstanding career opportunities in this seminal energy sector”, Prof. Dr. Rolf Litzenberger explains. “It is this close association with the Engineering Faculty and the resultant added value (in technical training terms) that professional experts rate so highly in operational practice. They also gave us valuable advice when we conceptually designed the degree course, enabling students to be outstandingly well-prepared to embark on careers in the energy sector”, he adds.

And this first rung on the career ladder takes a range of different forms for these budding engineers. They can work in practically any segment of the energy sector, ranging from power supply operations and grid management via network planning and systems through to sales and trading.

A Success Story

The fact that these budding engineers are not fazed by the much-cited “reality shock” of having to assume task responsibility within a company is also confirmed by MVV Energie’s Head of Training, Hans Joachim Mayer. “In order to create an optimum curriculum for this discipline, and to prepare the students as best as possible for their future engineering careers, we applied our many years of experience as a training provider and our know-how as a well-positioned and progressive service provider in the energy sector when designing the curriculum”, Mayer explains. This new discipline has attracted the attention of the energy companies — to date more than 20 companies have expressed an interest in getting involved in this new “Energy Management” discipline by acting as training providers. Besides MVV Energie, these companies include members of Pfalzenergie and well as a number of municipal utility and engineering businesses. There is also a great deal of interest from potential students — more than 60 university-entrance grade students have to date applied for the three MVV Energie-sponsored university places on offer. ☼



DHBW Mannheim recognised quality as the key to success

DHBW Mannheim is one of the two oldest and largest sites of Baden-Württemberg Cooperative State University, which was formed in 2009 as a result of a merger between Baden-Württemberg’s Universities of Cooperative Education. DHBW Mannheim therefore has 35 years of dual education system experience. The Business and Engineering Faculties offer a broad range of

degree courses in business management, information technology and engineering. The “Sustainable Energy Systems” and “Engineering Recruitment/Retention” skills centres are cornerstones of the Engineering Faculty. “Renewable Energy Systems” are also a key, cross-disciplinary topic in both theory and practice. There is currently a first-ever interdisciplinary “Renewable Energies”

course on offer, attended by more than 200 students from all technical degree courses, which validates its above-average acceptance. And the university’s own testing ground, featuring photovoltaic systems, a flow laboratory, fuel-cell learning system, wind turbine and control station, ensures that its undergraduate/skills centre interface profile is raised.

MVV Energie training partner and co-initiator of this new discipline

For more than nine years the Mannheim-based energy company MVV Energie, in its role as a dual education system partner, has provided vocational education/training to engineering and commercial students at the former

University of Cooperative Education, now known as DHBW Mannheim. The company now sponsors six engineering/technical and three commercial degree courses.

Of the 98 students who have been trained at MVV Energie, 92 percent have successfully completed their degree courses. The company has offered all graduates the opportunity to become full-time employees.



Bilingual Learning

Nearly 750 students from more than 40 different nations are taught both in English and in German in Stuttgart and Sindelfingen. School Director Timothy Kelley explains the philosophy of his school: "Our mission is to inspire, challenge and actively support our students and each other to become positive participants in a changing world."

Educating Global Minds

The International School of Stuttgart celebrates 25 years of learning with an expansion of its facilities

Ben Schmitt is a local with global vision. present at the school's recent 25th anniversary celebration. A former student of the International School of Stuttgart, he recently returned to work with the school to help update its promotional materials. Director Tim Kelley noted "Ben was an ideal consultant.

He knows our program, the families we work with, lives in the area and has already become a cutting edge designer in a field

that didn't exist when he was in school." This is the future of education, where students study to prepare for the unknown. The International School, its mission and its program is recognized by local business leaders as the kind of school that trains children to be the kind of employees they are going to need in the future and the school is proud of its students who think out of the box. With a 25 year history of supporting and partnering with local business the

Opening new perspectives for the children of their employees: International School in Stuttgart is supported by leading companies of the region

ISS

school has been described as one of the pillars of the global economy of the Stuttgart region.

The school, with a current student population of 770 students from over 40 different nationalities, is actually more than just a pillar of the growing international community in Baden-Württemberg. For the past 11 years, it has been sending students to universities here in Stuttgart, Germany and of course, the world. The International Baccalaureate Diploma, recognized here in Germany as an Abitur equivalent, is also accepted globally and the data from recent alumni suggests that ISS students are not only well prepared for their academics, but they are also recognized as being involved students who are not afraid to integrate with professors and the community at large, no matter what the location.

However, more and more ISS students, like Ben Schmitt, choose to stay in Baden-Württemberg not only for their education, but for employment. The city's international population, the vibrant economic climate and the chance to grow with some of the same leading companies who support the school for their ex-patriot employees attract them.

One such student, Reshef Zinger, who hails from Israel, attended Kindergarten through 4th grade at ISS, moved to Brussels for several years, then returned to ISS to graduate in 2009. Even though he was not a local, Reshef still felt that Stuttgart was his home. He therefore chose to study engineering at the university here. When asked how ISS influenced his decision, he remarked "ISS, was a very caring school, and devoted a lot of its time to the individual student needs. I had a great time there, and met many wonderful people, and the teachers were great overall. The college counselor also helped a lot."

Tim Kelley has noticed that many of the ISS students feel the same. "We have kids who have lived everywhere, and usually for only a few years at a time, but they always come back here for a visit. We are their foundation. Their home. And in some ways, their family." He explains that unlike many

DIRECTOR **TIMOTHY KELLEY**

Timothy Kelley has been an educator for over 25 years. Formerly the Head of Ross School in East Hampton New York, Tim has also served as the Headmaster for the Leysin American School in Switzerland. He began his career at the Noble and Greenough School in Dedham Massachusetts (USA) where he was an award-winning teacher. Kelley is a member of the Board of the Association of German International Schools and is a member of the Academy for International School Heads and the European Council of International Schools.

local institutions, ISS spends a great deal of time assisting students for their applications to the next educational experience, not to mention boasting an extremely low faculty to student ratio that supports a personalized educational experience. Perhaps this is why more and more students are considering Baden-Württemberg for their future. Those that don't remain, usually choose international careers, like their families, and somehow find their way back here either for a visit or for a job. Says the Director of External Relations, Valerie Lark-Webler, "ISS takes kids in Germany and makes them employable worldwide. It also takes kids from everywhere and makes them employable in Germany." At the same 25th celebration, the founder of the school, De-

borah Skillicorn from Colorado, expressed amazement at how her little experiment with other international families has grown into such a leading educational institution. What made her particularly happy, however, was the way the school remained rooted in its mission to remain connected to Stuttgart. Mr. Kelley agrees. "Our school is not an international island. And our program educates students to appreciate their host country too. We are really much more than just a Standortfaktor...we don't just build our student's futures, we also build the bridges that brings them back to this beautiful state." ☼

For further information
www.issev.de



International
School
Stuttgart
www.issev.de

BaSICS
Böblingen & Sindelfingen
International
Community School

25 years

of supporting international business in Baden-Württemberg

AMB 2012 to Feature Career Opportunities

18. - 22.09.2012, Stuttgart

AMB, International Exhibition for Metal Working, will react to the shortage of manpower of the metal sector with several simultaneous forums on job opportunities the metal working and processing industry. Finding and retaining skilled personnel is posed a "great challenge for industry and society". Under the motto "Mechanical engineer—a job with power", the VDW (Association of German Machine Tool Manufacturers) AMB will canvass for young people. THINK ING, a joint initiative is primarily aimed at young engineers. Tours of AMB will lead potential employees to around 15 exhibitors.

www.amb-messe.de/



Messe Stuttgart

Outdoor Climbs to Records

12. - 15.07.2012, Friedrichshafen

The world's leaders in the outdoor industry, as well as many new heavyweights in the business, will present their premieres for the 2013 Season at the OutDoor, the leading trade show in July. With 900 exhibitors from 40 countries the 19th edition of the OutDoor is climbing to new heights. In early May of this year, Messe Friedrichshafen and the industry's association, the European OutDoor Group (EOG), agreed that Friedrichshafen would continue to host the global meeting of the outdoor industry beyond the year 2013. For the 19th OutDoor, the entire exhibition grounds will be covered with 85,000 m² of exhibition space. Central themes for 2012 are sustainability, corporate social responsibility (CSR), children in mountaineering, demographic change and clothing trends of the future.

www.plaza-culinaria.de

Premiere in Karlsruhe

*How to attract global minds: edubiz discussed
HR and qualificalational strategies for companies
with operations abroad*

edubiz at Learntec 2012

Europe's leading combined convention and trade fair for vocational learning celebrated its 20th anniversary, whilst the edubiz platform marked its debut in Karlsruhe. Experts discussed the issue of internationalisation as the key driver of corporate education.

Migration 2.0—qualificational perspectives as an international competitive advantage was the subject of the discussion forum opened by Baden-Württemberg's Minister for Integration, Bilkay Öney. Thousands of medium-sized global players are faced with the challenge of finding talented people in Germany and in growth markets and qualifying and motivating them to become assets in future global corporate development.

This point of departure, which can only be partially described as a shortage of skilled human resources, affords the education industry completely new opportunities to follow their industrial and service provider clients around the world. The event in Karlsruhe was not edubiz operator lo-

cal global GmbH's debut at LEARNTEC. Hans Gäng, founder of local global, recalled the first event dealing with this topic ten years ago. "The objective of this event is to model the education value chain. Our approach of getting the education industry and international companies talking still has a great deal of mileage." CEO of the trade fair organiser, Britta Wirtz, made it clear in her welcoming address that she also intends to drive the internationalisation of LEARNTEC forward.

Minister Öney emphasised in her presentation that Baden-Württemberg remains dependent on talented people from abroad recognising and exploiting the opportunities open to them of gaining excellent qualifications locally and in companies. However the relevant intercultural skills need to be enhanced to ensure that Baden-Württemberg remains a cosmopolitan and attractive educational location. "We need to take action." Rights of residence, settlement opportunities and recognition of foreign qualifications – here too there is a major information requirement.

Erwin Selg, CIO and CTO of GFT Technologies and Christina Merkel-Reif, HR Director of Karlsruhe-based Init AG illustrated how knowledge-based companies are tackling the challenge of developing their potential. Selg emphasised the importance

“We can simply no longer afford to let existing potential go to waste.”

Bilkay Öney,
Baden-Württemberg’s
Minister for Integration
 Learntec



of emotion, which is boosted by integrating social media concepts into corporate knowledge and learning systems. Mrs. Merkel-Reif referred to the increasing importance of intercultural skills in a global customer base environment.

Prof. Werner Faix, founder and Rector of the Steinbeis School of International Business and Entrepreneurship, demonstrated that educational establishments definitely have opportunities to respond to companies' evolving needs as they continue to internationalise their operations. Faix called on education providers to show a new level of flexibility when partnering with organisations abroad – in the interest of companies, which themselves need to be “as quick as a flash” in the global race to attract and recruit talented people.

The Chambers of Industry & Commerce organisation is an important shaper of and player in the vocational training and further education segment – and indeed this role is taking on an increasingly international significance. Tassilo Zywiets described the training and further education challenges that companies face internationally – and how the Chambers can help to enhance the global quality of training that companies need their human resources to have by pursuing a strategy of internationalising syllabuses.

Turkey has a young population plus high rates of growth and hosts almost 4000 German companies, and is therefore one of Europe's most important educational markets. Dursun Topcu, Vice-President of the Istanbul Chamber of Commerce, revealed for the first time in Germany how one of

the country's largest business organisations, with around 300,000 members, is reacting to the requirements of an increasingly internationally focused business community. “We are ready to enter into more partnerships and welcome this international dialogue at LEARNTEC.” ☼

Technologies and Concepts for **Life Long Learning**

200 exhibitors (180 in the previous year) from eleven different countries showcased their products and services at the leading international trade fair and convention for vocational education, learning and IT.

“The renewed increase in exhibitor numbers validates the new LEARNTEC concept and shows that we continue to be the most important platform for IT-assisted learning”, emphasised the CEO of Karlsruher Messe- und Kongress-GmbH, Britta Wirtz. “Our very up-to-date topics, such as mobile learning, social media and serious

games, enable us to attract a broad spectrum of visitors, who are able to find solutions to their specific educational issues at LEARNTEC”. The visitor figures speak for themselves—a total of 6,117 visitors (5,785 in the previous year) came to Messe Karlsruhe. The catchment area has also grown—65 percent of visitors travelled more than 100 kilometres to Karlsruhe.

This year the convention attracted 15 percent more international visitors. Umeed Kothavala, CEO of Extentia Information Technology (Pune, India), which focuses

on the potential offered by mobile devices in primary and secondary education, is impressed by the quality of LEARNTEC.

“We need social and political structures that can accommodate these new technologies.” As a result of the major success of the 20th edition of LEARNTEC, there have already been a large number of bookings for 2013. More than 60 percent of exhibition space has already been reserved in advance. The 21st edition of LEARNTEC takes place from 29 to 31 January 2013 at Messe Karlsruhe.



istockphoto

GlobalConnect

The third edition of GlobalConnect—Germany's largest internationalisation and foreign investment event—will open its doors in 2012. This biennial trade fair and conference platform will take place from 14 to 15 November 2012 at Messe Stuttgart's exhibition grounds.

Meeting Point for Exporters

It is round three of GlobalConnect—the internationalisation forum

GlobalConnect

14. - 15. November 2012

With a new concept GlobalConnect is offering foreign trade related information. Hundreds of experts will provide advice how to enter and to expand in international markets.

www.globalconnect.de

The 2012 event in Stuttgart will provide both small and medium-sized businesses and global players with fresh impetus for their exporting activities and the successful implementation of their internationalisation strategies.

For the event's third edition the organisers have focused on providing increased visitor benefits. For the first time visitors to this trade fair can participate free of charge in the GlobalConnect Congress, in the International Consultancy Days (IBT) event sponsored by the German Chambers of Commerce Abroad and in the Cooperation Exchange.

Once again the organiser, Landesmesse Stuttgart, the State of Baden-Württemberg, the State's Chambers of Industry and Commerce, Handwerk International and Baden-Württemberg International are anticipating increased visitor numbers. It is an ideal opportunity in the heart of the world's second-largest exporting country for business development agencies as well as international B2B service providers and partners to find new clients amongst Germany's successful and dynamic companies. GlobalConnect focuses on the process of internationalisation and therefore the broadening of business activities in inter-

national markets. The Forum focuses on current challenges, solutions and case studies involving international companies and provides businesses that are already active abroad with an extensive range of information.

More Than Just Making New Contacts

The GlobalConnect Congress and the IBT consultancy sessions will be free-of-charge to all visitors for the first time. This also applies to participation in the Cooperation Exchange, which is being conducted together with b2fair as part of the Enterprise Europe Network. Therefore the event is not just an information platform but also a great opportunity to make new contacts and to network.

"The GlobalConnect event caters for small and medium-sized businesses. It helps these businesses to identify new markets and thus to safeguard growth and employment at home", says Dr. Nils Schmid MdL, Minister of Finance and Economics of the State of Baden-Württemberg in relation to GlobalConnect's long-term objective. This combination of specialist trade fair, GlobalConnect Congress, IBT, Cooperation Exchange, guest congresses, business association meetings and the State Government Reception, including the GlobalConnect Awards ceremony, delivers a varied programme that provides visitors with a wealth of information about internationalisation.

Focus on Emerging Markets

Despite the Euro crisis and a weakening economy, the German business community expects exports to grow in the current year, according to the "Going International" survey. This survey, which was conducted amongst 3,200 German-based companies with operations abroad, shows that their international business expectations are "cautiously optimistic". Respondents saw excellent business prospects in the "BRIC" countries—Brazil, Russia, India and China. They have also seen signs of improvement in the USA. More than two-thirds of

InterGest—aged only 40—and a GlobalConnect partner

This international business administration and management company assists export-focused businesses to plan and implement expansion into new markets. In 2012 the company, with offices in over 50 locations worldwide, is celebrating its 40th anniversary—and is a GlobalConnect partner. InterGest provides all the relevant consultancy and services to enable its clients to develop foreign markets. InterGest delivers solutions, ranging from the establishment and domiciliation of foreign branches/subsidiaries, fiduciary performance of routine administrative tasks, such as accounting, collections and payroll, through to financial control and reporting. "In Stuttgart we will be

"In Stuttgart we will be represented with 25 experts from all over the world."

Prof. Dr. Peter Anterist,
CEO of InterGest

 InterGest

represented by a total of 25 from all over the world", Prof. Dr. Peter Anterist, CEO of the company, announced. "Whatever plans medium-sized businesses may have, be they country-specific, regional or global—we can support both the head office and the local branch or subsidiary in their endeavours."



InterGest

InterGest is an international business administration and management company which supports businesses in export and international expansion with offices in over 50 locations worldwide.

www.intergest.com

those companies surveyed want to expand their own activities abroad. These are the findings of the "Going International" survey by the DIHK Deutsche Industrie- und Handelskammertag (Association of German Chambers of Industry and Commerce). Businesses anticipate a further increase in exports in 2012.

Export and Internationalisation Consultancy Expertise

GlobalConnect is the right place for businesses intending to enter international markets and those that already have international operations. This event showcases services, assistance programmes and partners that can assist medium-sized businesses to plan new or expand existing international activities. A large number of service providers will be joined as exhibitors by the German Chambers of Commerce Abroad global network. Businesses can obtain specific advice from German Chambers of

Commerce Abroad (AHK) experts at the IBT and can showcase and discuss new international projects. "Cooperating with the Association of Chambers of Commerce enables GlobalConnect to provide its visitors with an unrivalled service—a well-prepared consultancy meeting to discuss first steps into new markets", says Ulrich Kromer von Baerle, CEO of Landesmesse Stuttgart GmbH.

Other trade fair highlights include the GlobalConnect Congress, which features presentations about countries and markets, financial assistance and financing, international business location search, getting started in international business and import/export/enterprise resource planning; the Cooperation Exchange, which is jointly conducted with b2fair as part of the Enterprise Europe Networks, and a large number of guest conferences and meetings involving both German and international business associations. ☼

MEXICANIDAD in Schwäbisch Hall

Until 16.09.2012, Schwäbisch-Hall

With about 300 important works by outstanding representatives of twentieth-century Mexican art, the Kunsthalle Würth in Schwäbisch Hall sheds light on the phenomenon of "Mexicanidad", that specifically Mexican mentality, difficult to define and continually self-questioning, shaped by the checkered history of this young and hybrid nation.

kunst.wuerth.com



Kunsthalle Würth

Nagold's Spectacular Gardens

Until 07.10.2012, Nagold

The "State Garden Festival" — a 60-year-old institution in Baden-Württemberg — is getting a makeover in Nagold. A 4,000-square-metre sea of flowers, a variety of different gardens featuring perennials, a wide range of magnificent displays and twelve alternating flower shows are being sited for the first time in a disused brewery. Thrills and spills, aimed primarily at a younger audience, are guaranteed at the playing fields and sports grounds, the brand new minigolf facilities, the Garden Festival light railway, the fast e-bike test track and the 19.50-metre cable-car attraction.

www.landesgartenschau-nagold.de

The Natural World as a Role Model

Actively experiencing the natural world and at the same time treating it in a responsible and considerate manner — more and more people factor this in when selecting where to go on holiday. Environmentally compatible types of holiday that are in harmony with the natural world are attracting serious attention. Tourismus Marketing GmbH Baden-Württemberg (TMBW) has cottoned on to this trend and has initiated the "Green South" project, which pools tourist packages, incorporating natural world experiences, environmentally compatible mobility, climate-compatible accommodation as well as sustainably produced regional produce and cuisine and makes them tangible for visitors.

TEXT: Daniela Sandmann

A Different Kind of Holiday

*Environmentally aware holidays
made in Baden-Württemberg*



TMBW

The objective of this unparalleled project is to be able to provide people, who take their holidays in all of Baden-Württemberg's regions, with an extensive and attractive "green holidays in the South" offering, says TMBW's CEO, Andreas Braun. The initial phase is designed to launch and action the project, in partnership with "role-model regions and organisations", where the issue of ecologically compatible holidays has already played an important role. For example TMBW has close working relationships with both the Swabian Alps Biosphere Region and the Black Forest Highlands. "Nature partners" also include Baden-Württemberg's nature parks that view this

combination of sustainability and tourism as an important component of their work", Braun explains. "Nature and countryside guides play a key role in communicating an authentic, first-hand nature experience to visitors."

EXPEDITION GREEN SOUTH

- › New experience brand for the holiday region of Baden-Württemberg
- › Focus is on sustainable holidays
- › Packages nature-oriented, environmentally compat-

ible tourist offerings and factors in all issues (travel to destination, local mobility, overnight accommodation, culinary facilities, natural world experiences)

- › Important: reduction of CO₂ emissions, energy savings at accommodation providers and leisure facilities, use of organic and regional produce in the hospitality industry.

"Sustainable holidays and enjoyment are not mutually exclusive."

Dieter Wetzel, Biosphere Region
Hospitality provider and owner of the
Schwanen Hotel in Metzingen

Baden-Württemberg is also comparatively well-positioned in terms of environmentally compatible travel to holiday destinations and e-mobility, in Braun's opinion. He specifically had projects, such as KONUS (free use of short-distance public transport for holidaymakers) or ZUMO (use of e-vehicles and e-bikes on holiday), in mind.

TMBW regards another key component of an ecologically sound holiday as the type of accommodation chosen. "Here availability ranges from holiday apartments on a Demeter Farm or bio-hotels via city hotels that generate their own electricity on their roof gardens, using solar panels and wind turbines, through to campsites at Lake Constance that comply with Viabono environmental standards and Biosphere Region Hospitality hotels", says Braun.

All Biosphere Region Hospitality hotels are certified in accordance with the EU's EMAS environmental management system, Europe's highest distinction, states Achim Nagel from the Biosphere Region's office. As officially approved Biosphere Region partners, these hotels have undertaken to contribute actively to preserving "our cultural landscape, which is well worth protecting" by employing sustainable management methods. ☼



Tripsdrill

Following in nature's footsteps

Overnighting in harmony with the natural world

Nature-oriented Accommodation

The natural world is rated highly at the Tripsdrill Adventure & Wildlife Park—that much is obvious from the decision to opt for green electricity. Its location in the Stromberg-Heuchelberg Nature Park also speaks volumes. And so it's clear that the Fischer family that operates the Park has opted for nature-oriented accommodation at its new resort.

TEXT: Daniela Sandmann

At Tripsdrill the operators (the Fischer family) focus on the natural world and have designed new buildings and structures that blend in with their surroundings. The wooden "Mammoth" rollercoaster with its 30-metre-high wooden structure, for example, itself conveys the impression of being a part of the natural world—just like the treehouses in Tripsdrill's wildlife paradise.

This rustic accommodation for overnight guests is located right by the entrance, hidden amongst the trees. Nature-oriented overnighting, surrounded by woodland dwellers, is a mini-adventure in itself.

Each Treehouse is Individual

Treehouses are therefore the epitome of this love of adventure that both adults and children have. Overnight accommodation includes twenty rustic wagons and five comfortable treehouses in the middle of woodland. The approval process took six years, since the particular circumstances applying to a nature reserve had to be catered for. The houses had to be designed and built to look as if they are a natural part of the woodland and have grown as the woodland has grown over a period of many years. ☼

For further information
www.tripsdrill.de

Just get on and set off

Effortlessly scaling Black Forest heights on an e-bike



Touristik Bad Wildbad GmbH

Rock and Roll

Grab an e-bike and get pedalling—that is all you need to explore the "Naturpark Schwarzwald Mitte/Nord" at a canter.

Dr. Klaus Michael Rückert, district chief executive of Freudenstadt and chairman of the "Schwarzwald Mitte/Nord" Nature Park is delighted that the latter is continuing to promote e-biking as an innovative activity in the region.

"The Pedelects enable a broad target audience, ranging from well-trained cyclists via senior citizens through to families with children, to explore the scenic beauty of the

nature park, and indeed do so on bikes." The bike's electrically assisted hill-climb capability provides a whole range of new bike excursion opportunities.

Regions, which many people would otherwise find to be inaccessible without the aid of these bikes with environmentally compatible mini electric motors, can easily be explored. People can view tour options on the Nature Park's newly established e-bike database according to their own preferences.

Many communities in the "Naturpark Schwarzwald Mitte/Nord" already have e-bikes available for hire by visitors. Irrespective of whether you cycle along the River Nagold, up to the hill moor plateaux atop the Kaltenbronn or around Freudenstadt—the e-bike enables you to take both gentle and more challenging slopes comfortably on your stride. ☼

For further information
www.naturparkschwarzwald.de
www.bad-wildbad.de

“We Think Cosmopolitan”

The Spanish Swabian Juan Amador on the molecule gastronomy

Cuisine Research

One of Germany's most successful and influential chefs, Juan Amador, talks about global influences in modern cuisine. Until recently he was based in Langen, near Frankfurt. Here he earned three Michelin stars and from here he had a major impact on avant-garde cuisine. Now his restaurant “Amador” in Mannheim attracts guests from all over the world.

INTERVIEW: Daniela Sandmann

You are actually a “quintessential Swabian”. Yet you have gained so much experience around the world but are now returning home and have opened your restaurant in Mannheim. What are your current expectations of Baden-Württemberg?

Yes I am and I am proud of it. I was born and bred in the Rems Valley. After that I travelled the world and learned my culinary trade in various places. Now I am delighted to be “home” again. A few years ago I could not have imagined returning to Baden-Württemberg. But it happened and I am pleased it happened.

I would not call them expectations, rather opportunities. Here in the Rhine-Neckar Region there is a lot of potential as far as our public is concerned. We came from Frankfurt, which of course has a completely different environment to Mannheim. Other major cities, such as Stuttgart and Karlsruhe, are having a greater impact on our cuisine. Mannheim is a great city, complex and very pleasant. The region is spot on.

People associate molecular gastronomy much more with cities like Barcelona or Paris. How is it accepted in Germany in general and Mannheim in particular?

I am convinced that molecular gastronomy cannot be tied to any particular region. We just provide a product for which there



Wong Bergmann

is demand. We cook for a target audience that has developed a kind of affinity with our cuisine. Those who enjoy our cuisine can be located in the Rems Valley or even Barcelona or Tokyo. As we only have limited seating capacity we are not aiming at the mass market. We have huge potential within a radius of 100km. These are people, who are open-minded and who of course

travel a lot. Cosmopolitan people naturally travel the world. That includes people from Ludwigshafen, Mannheim and also Heidelberg. Location only plays a minor role. Our cuisine is just authentic and we create something special. ✨

For further information
www.restaurant-amador.de



FWTM

Lifestyle of Health

Freiburg is addressing new segments of healthcare tourism

Medical Cluster

Co-financed by the European Regional Development Fund (ERDF) Freiburg has launched a cluster initiative for medical tourism. The offices are based at Freiburg Wirtschaft Touristik und Messe (FWTM).

TEXT: Daniela Sandmann

In future, Freiburg's thriving healthcare and tourism industries will become closely interlinked," adds FWTM CEO Bernd Dallmann. The project, which is initially due to run for three years, will be funded by a total of twelve co-financing partners, all institutions and companies from Freiburg and the region which have jointly raised the region's own contribution of 195,000 Euros toward the financing package. The alphabetical order contains the most prestigious names of regional tourism and medical services. Badenweiler Thermen und Touristik, Colombi Hotel/Hotel Stadt Freiburg,

Erich Lexer Clinic Freiburg, FWTM, Gesundheitsresort Freiburg, Herz-Zentrum Bad Krozingen, Keidel Mineral Thermal Bath Freiburg, Kur und Bäder GmbH Bad Krozingen, Landkreis Breisgau-Hochschwarzwald, Technology Foundation BioMed Freiburg, Wirtschaftsförderung Region Freiburg and University Medical Center Freiburg

The cross-sector, cross-industry cluster initiative aims to permanently boost the region's innovative strength and competitive edge in the fields of healthcare and tourism, and in doing so to make a significant contribution to protecting existing and creating new healthcare-based jobs that are sustainable. The intention is to steadily unlock and exploit potential for collaboration, innovation and value creation, which can be expected to contribute significantly to regional development.

By using the scientific and industry experience present in Freiburg and the region, and by raising the profile of the expertise available, it will be possible to offer and market consulting services in e-health and telemedicine as well as in hospital hygiene, environmental medicine, hospital management and health management, etc.

Such services are generating increasing interest, particularly in emerging countries. The cluster's activities should ultimately focus on the type of healthcare travel preferred by the Lifestyles of Health and Sustainability (LOHAS) demographic, which is becoming an increasingly important key target group within tourism. This positioning is supported by a general paradigm shift toward more preventative healthcare and personal responsibility. ☼

Preview Health Made in Baden- Württemberg

The healthcare sector is an employment mainstay in Baden-Württemberg. Medical technology clusters, such as Tuttlingen, have established a global reputation and have a positive track record in showcasing their capabilities to an international audience. Following in the footsteps of the high-tech medical and hospital management segments, Baden-Württemberg's tourism professionals have also discovered markets abroad. Baden-Württemberg is becoming an increasingly more attractive international location for medical training as well. Business Baden-Württemberg 2/2012 takes a closer look at the issue of healthcare.

New Publications

local global is providing a range of publications in support of the German government's "Exportinitiative Gesundheitswirtschaft" (Healthcare Sector Export Initiative). Brochures covering medical services and medical technology in English, Portuguese and Spanish can be downloaded at www.localglobal.biz/health





Klinikum Stuttgart

First Class Medical Care

Klinikum Stuttgart, as a maximum care hospital, offers comprehensive medical care on University level. With more than 2,100 beds it is one of Germany's largest and best performing hospitals.

More than 50 clinics and institutes provide highest levels of specialization and a broad range of services in almost all medical specialties. This includes pre-natal diagnosis, intensive care of premature infants, all specialties of infant and adult care, geriatric care and treatment of mental illness – the whole range of maximum care.

Optimal results in diagnosis and therapy are guaranteed through interdisciplinary cooperation of all specialties, a high potential for innovations and state-of-the-art medical equipment. For health provision the specialists of Klinikum Stuttgart offer various check-up packages with precise diagnosis and competent consultation.

Every year more than 84,000 patients are coming to Klinikum Stuttgart either for a refined diagnosis, a surgery or for in-patient treatment. Additionally, 425,000 outpatients are treated at Klinikum Stuttgart on annual basis. More than 6,800 employees take care of patients in different wards, in operation theatres and other functional areas or ensure smooth operation in the administrative and technical departments.

Klinikum Stuttgart → International Unit → Kriegsbergstraße 60 → D-70174 Stuttgart → Germany →
Telephone: +49 / 711 / 2 78 40 20 60 → www.klinikum-stuttgart.de → international-unit@klinikum-stuttgart.de



Klinikum Stuttgart

Invest in the Future – Invest in Baden-Württemberg



We support your investment projects

As one of the world's leading business and research locations, Baden-Württemberg offers domestic and foreign investors a multitude of business and cooperation opportunities. Baden-Württemberg International, your center of excellence for the internationalization of the location of Baden-Württemberg, is available to field all your questions about the location.

Regardless of whether you are seeking a cooperation partner in the area of business, science or research, looking for a location for your company or interested in investing in Baden-Württemberg – we stand by your side and are your first point of contact.

Our team of experts finds suitable business and cooperation partners, provides a comprehensive investor service supports you in your plans to locate, and suggests suitable investment projects and properties.

Benefit from our knowledge network

Baden-Württemberg International has extensive knowledge networks in Germany and more than 70 countries. These networks serve as a guarantee for successful business contacts and comprehensive transfer of know-how. In the past few years, we have established contact between more than 7,000 companies in Baden-Württemberg and 25,000 foreign companies in 34 countries, helped numerous countries locate and actively seen investors through investment processes.

We would be happy to pave your way to a successful investment.

Start using our know-how and contact us.

Find out more at:
www.bw-invest.de
www.bw-estate.de



Baden-Württemberg International

Haus der Wirtschaft
Willi-Bleicher-Straße 19
70174 Stuttgart
Germany

Telephone: +49 (0) 711-2 27 87-0
E-mail: info@bw-i.de
Internet: www.bw-i.de