

Innovative
Niedersachsen **ISSUE#1 | 2009**
Magazine for Business
and Technology



Energy for the Future

Niedersachsen – the New European Hub of Energy Supply

SHIPBUILDING

Meyer shipyard in Papenburg
is ready for competition

INNOVATION

Entrepreneurs and researchers
designing new technologies

EXHIBITIONS

Hannover Messe – a momentum
of recovery for the world's industries



Was auch immer Sie vorhaben.





Editorial

"I am convinced that Niedersachsen will come out of the crisis stronger than before."

Christian Wulff, Minister President of Niedersachsen

Dear reader,
Niedersachsen is a land of high-tech. This is where some of the most popular cars and the world's largest cruise liners are being built. Niedersachsen is at the global forefront of wind energy as well as of medical, measurement and laser technology. It is also world-class in the development of new materials, to name but a few examples. With the Hannover Messe and CeBIT, the Hanover area counts among the most significant fairs worldwide. Our state is a logistics hub in Europe.

The global financial and economic crisis is a big challenge, also for companies in Niedersachsen. Over the last few years the state government has made substantial progress in consolidating its budget and reducing bureaucracy. Right now we are benefiting from these efforts. I am convinced that Niedersachsen will come out of the crisis stronger than before.

This third issue of Innovative Niedersachsen portrays companies that see the crisis as a challenge. Their past experience with critical developments will, no doubt, provide them with the wisdom to make the right decisions. Furthermore, Niedersachsen offers to companies a climate that is very conducive to innovations and that favours various forms of cooperation as well as the transfer of knowledge.

In order that our state may continue to have a place in the globalized world, we want to further increase our potential and make our qualities known. To this end, NGlobal, our agency founded earlier this year, will be promoting Niedersachsen as a location for business and science, at home and abroad. Our image campaign focuses on our strengths. Niedersachsen is a good place for investment and a good place to live in. Innovative companies and research facilities offer an excellent starting point for investors, business founders and young professionals. This creates good perspectives for continued success in Niedersachsen. And we benefit from our location right in the heart of Europe.

I hope our magazine provides you with interesting vantage points and will allow you to gain forward-looking insights into Niedersachsen's economy.

Innovative Niedersachsen

Content Issue #1 | 2009

Places of Innovation

A Emden, North Sea Coast
Windparks (page 12)
Bard Engineering (page 14)
Harbour & Nannen Museum (page 62)

B Leer
Prokon Nord:
Exporting wind turbines (page 18)

C Papenburg
Meyer Shipyard:
Passion on board (page 32)

D Wiesmoor
Biogas plant (page 14)

E Wilhelmshaven
Emerging JadeWeserPort (page 22)

F Oldenburg
Research for wind energy (page 14)

G Dötlingen
Gas reserves for millions (page 14)

H Großenkneten
Gas desulphurization plant (page 14)

I Cuxhaven
Bard investment (page 14)

J Stade
CFK Valley, CFRP Research (page 44)

K Lathen
Heating network (page 14)

L Lingen
RWE power plants (page 24)

M Salzbergen
GE Wind Energy (page 20)

N Georgsmarienhütte
GMH: "Yes we can" (page 36)

O Rehden
Wingas Facility, B 14 (page 12)

P Wunstorf
Battery power for trucks (page 45)

Q Hanover
Continental (page 26)
CeBIT (page 51)
Hannover Messe (page 50)
Global Business Forum (page 42)
NGlobal (page 46)
Hirche, Rösler (page 48)
Airport freight hub (page 40)
Nordzucker (page 43)
Ideen-Expo (page 45)

R Wedemark
Sennheiser for audiophiles (page 42)

S Clausthal-Zellerfeld
Electronic control for cars (page 44)

T Brunswick
Lionharts for Wolters Hofbräuhaus (page 38)

U Wolfsburg
TRAIN for bio-medical research (page 44)
Rulers and researchers (page 58)

U Wolfsburg
Designing the icon Golf VI (page 28)
Phaeno (page 60)



03 Editorial
Minister President Christian Wulff
on entrepreneurship

06 Introduction
Energy, competitiveness,
exhibitions

11 Facts & Figures

Energy

12 A Hub for Energy
Niedersachsen becomes a European
centre of energy expertise

16 Going Offshore
The long awaited start of offshore
wind power in Germany to come
in 2009

20 Wind Expertise for GE
One of the world's leading
manufacturers headquartered
in Niedersachsen

22 New Port Emerges
The giant deep sea JadeWeserPort
is taking shape

23 Platform for Wind
Wind energy will be a special
focus at Hannover Messe 2009

24 Speeding up Investment
The plans of power giant RWE
for Niedersachsen

25 Dr. Jürgen Großmann
Strong ties to Niedersachsen

Innovations

26 Steady on Innovation
Continental's CEO Dr. Karl-Thomas
Neumann on perspectives for
ecofriendly cars

27 Designing an Icon
Golf VI returns to its roots.
VW Chief of Design Walter de Silva
explains why

32 Passion on Board
The Papenburg Meyer Shipyard is
ready for tough global competition

36 Successful with Steel
Georgsmarienhütte GmbH has
become a state-of-the-art steel
maker

38 Local Lion Hearts
Entrepreneurial courage and local
ties let Hofbräuhaus Wolters expand
again

40 The Freight Hub
Hanover Airport's ambitious
construction program will enlarge
freight and logistic business

42 Innovation for Audiophiles
Sennheiser has developed
headphones combining three new
patents at once

43 Sugar Beet Data Net
Nordzucker IT expertise helps to plan
a harvest digitally

44 Innovation News
Bio-medical research, CFRP, idea
expo, battery powered trucks and
more

Initiatives

46 Ready for Global Business
NGlobal's CEO Gerhard Gizler on
how to combine investment and
export promotion

48 Change-over in Hanover
Dr. Philipp Rösler is successor
of Walter Hirche as Minister
of Economics

50 A Lead to Industry
Deutsche Messe's CEO Dr. Wolfram
von Fritsch on exhibitions and
economic crisis

52 Focus on Cooperation
Niedersachsen Foreign Trade
Conference and Global Business
Forum

54 Simplified Incorporation
GmbH rules have been
significantly improved

Places

56 Popular Destination
Tourism in Niedersachsen

57 Cultural News

58 Brunswick
From rulers to researches

60 Wolfsburg
Wonders of science in phaeno
landscape

62 Emden
Harbour for cars and culture

66 Imprint & Service

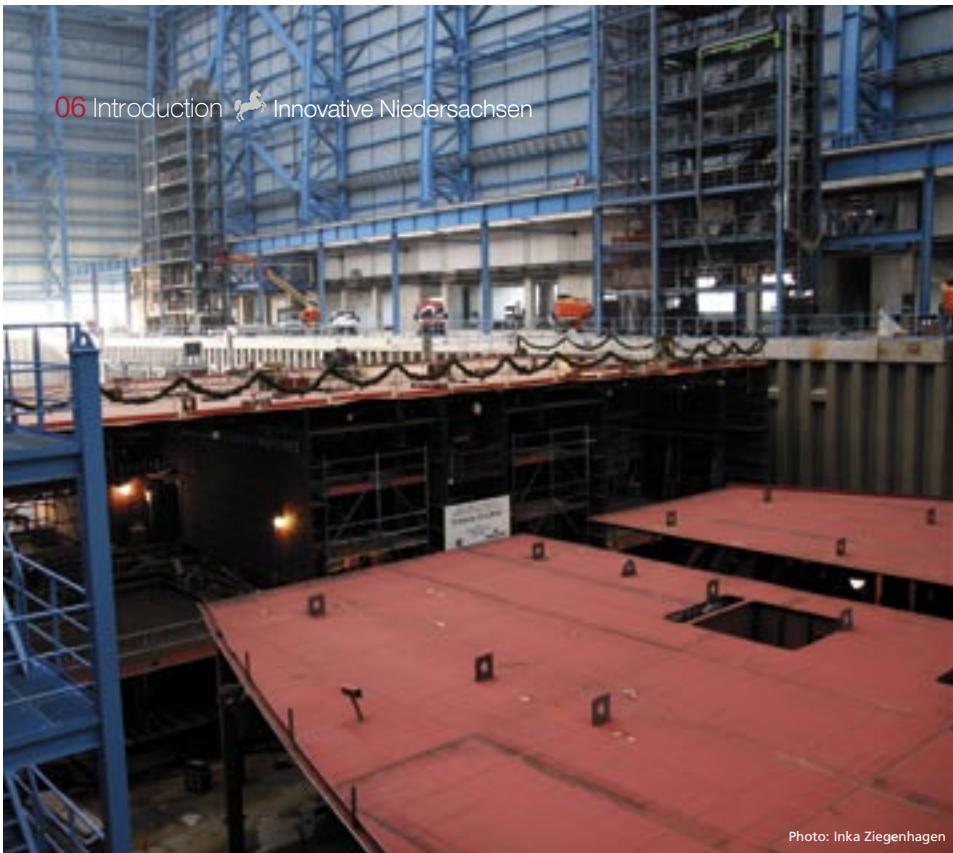


Photo: Inka Ziegenhagen



Entrepreneurship

Industrial pioneers like Bernard Meyer experience challenges and crises as integral parts of their entrepreneurial lives. With their passion for innovations and in alliance with their regional suppliers they consider themselves braced, also for stormy waters the economy and global competition might hold in store.



Photo: Inka Ziegenhagen







Energy

The first offshore wind turbines on the open sea are to be erected this year. Off Niedersachsen's coast in the North Sea two wind parks will begin to be realized – several more are planned for the coming years. Construction is a challenge: Nowhere else have wind turbines been put up in such water depths and distance from the coast.





Exhibitions

Fairs in Hanover have historically played a role as the German industry's door to the world. Today they can stimulate the worldwide economy. Dr. Wolfram von Fritsch makes sure that industrial communities connected through international networks find in Hanover new areas for growth.



Niedersachsen

Facts & Figures



Science, Research and Development

- The Brunswick region is the most research-intensive area in Europe.
- The Wolfsburg-Hanover-Brunswick economic area is one of Europe's leading regions in terms of its clustering of expertise in the auto industry.
- CFK-Valley Stade is home to concentrated German know-how in carbon fibre-reinforced plastics.
- The innovation network "Innovationsnetzwerk Niedersachsen" brings together more than 200 members from the fields of innovation promotion, technology transfer and technology consultancy.

Politics and Administration

- Niedersachsen is governed by a coalition of the parties CDU and FDP with Christian Wulff (CDU) as Prime Minister and Dr. Philipp Rösler (FDP), Minister for Economics, Labour and Transport, as his Deputy.
- Campaign sticker: "You know our horses. Experience our power."
- Niedersachsen is divided into four administrative districts: Brunswick, Hanover, Lüneburg and Oldenburg. The entire state has eight autonomous towns, 37 counties and 1,032 municipalities. The capital is Hanover.

Economy

- GDP: 206.4 billion euros
- Motor vehicle construction is the dominant sector in Niedersachsen's industry, and is present in Wolfsburg, Hanover, Brunswick, Salzgitter and Emden.
- The agricultural and food industry is the second largest sector in the state after the car industry.
- The largest companies headquartered in Niedersachsen are Volkswagen AG, TUI AG, Continental AG, Piepenbrock and Salzgitter AG.
- Niedersachsen's coast and seven islands in the North Sea are one of the most popular holiday destinations in Germany.
- Deutsche Messe occupies the leading position in the international trade fair business: five of the ten biggest exhibitions in the world take place in Hanover.

Education

13 universities, six state or foundation universities of applied sciences and seven state-recognised universities of applied sciences are located in Niedersachsen as well as many extra-university research facilities, among them seven Max-Planck Institutes and three Fraunhofer Institutes.

Area and Population

- Niedersachsen is Germany's second largest state by area and fourth in population among the country's sixteen states.
- Area: 47,624 km²
- Population: 8 million
- Population Density: 168 /km²

A Hub for Energy

Worldwide leading wind turbine manufacturers, the lion's share of Germany's gas production and an innovative and growing biogas industry make Niedersachsen a centre of expertise.



Text Julia Koch

"Till 2012 we want to produce 26.5 billion kilowatt hours with wind energy; that is fifty percent of the electricity consumption in Niedersachsen."

Christian Wulff
Minister President of Niedersachsen

Niedersachsen is the state of wind energy: 5,102 wind turbines producing more than 6,000 megawatts are currently rotating there – that is 25 percent of the installed capacity in Germany. It comes second after Brandenburg in 2008 regarding newly installed capacity.

21 percent of the power requirement in Niedersachsen is met by wind energy. Prime Minister Christian Wulff wants to increase that share significantly: "Till 2012 we want to produce 26.5 billion kilowatt hours with wind energy; that is fifty percent of the electricity consumption in Niedersachsen. In 2021, Niedersachsen will feed more wind energy into the grid than is consumed in our state."

Offshore and Repowering

Wulff wants to reach that goal with the help of offshore wind parks and the so-called repowering. Repowering means the exchange of older and smaller turbines with new, higher and more efficient ones. Thus, more output with fewer turbines can be realized, doubling or even tripling the overall capacity. Niedersachsen has a lot of these small wind turbines from the beginnings of the industry. Its windy coastal region saw the installation of the first turbines by farmers who sought a second income source. Today, most wind parks are put up by energy suppliers.

Over time and with the advantage of an early start, great expertise has accumulated in Niedersachsen. The German market leader Enercon has its headquarters there as well as numerous other companies such

as GE Wind Energy GmbH, Prokon Nord Energiesysteme GmbH, Plambeck Neue Energie AG and Bard Engineering GmbH and their suppliers.

They export their know-how worldwide: The companies have an export quote of more than 80 percent.

The global wind energy market has increased by 30 percent in 2008 for the last three years in a row, and German manufacturers supply more than a third of the world market. The biggest market for the past four years has been the USA.

The industry is supported by the research institutions located in the state such as the German Wind Energy Institute DEWI GmbH, founded by the state Niedersachsen, and ForWind, the centre for wind energy research of the universities Oldenburg and Hanover. The DEWI provides research and services connected with the realisation of wind farms, while ForWind focuses on the utilization of offshore wind power.

A new Fraunhofer-Institute for wind energy research and energy system technology started operations in January this year. It is headquartered in Bremerhaven and aims to become a cluster of excellence with international importance through close cooperation with the universities Hanover, Oldenburg, Bremen and Kassel. Niedersachsen will support the cluster with up to





Photo: Stiftung Offshore Windenergie

Niedersachsen is leading in wind energy as well as in natural gas production within Germany.

twelve million euros in the coming years. But Niedersachsen is not only leading in wind energy: It supplies almost 95 percent of the natural gas produced in Germany. The most productive gas fields are located there as well as more than 90 percent of Germany's gas reserves. Employment rates and investments are increasing annually. According to the Association of German Oil and Gas Producers in Hannover, the number of employers in their member companies has risen by 40 percent since 2004. About 80 percent of all employers are working in Niedersachsen. In 2008, the companies increased their investments in Germany by 43 percent to 555 million euros.

In order to ensure future demand for qualified workers, the state Niedersachsen and the Association of German Oil and Gas Producers have developed a new cooperation between schools and companies. The aim is to inspire kids and teenagers with enthusiasm for technology and science. In 2007/2008, a hundred students gained insight into the oil and gas industry.

Most of Germany's natural gas storage facilities are located in Niedersachsen, too, among them the largest in Western Europe. Four billion cubic metres of gas are stored in the WINGAS facility in Rehden. ExxonMobil operates two large storage facilities in Uelsen and Dötlingen, big



Photo: ExxonMobil

enough to store 2.6 billion cubic metres. For comparison: 5.1 billion cubic metres of gas are annually produced in Niedersachsen. That is enough to supply more than two million households.

Moreover, the company BEB Erdgas und Erdöl GmbH has constructed one of the largest European gas desulphurization plants in Großenkneten. It cleans the gas of sulphur to make it usable. That makes the plant one the world's largest production facilities for natural gas sulphur. Almost 800,000 tons of sulphur are sold every year, mainly to clients from the chemical industry.

Niedersachsen is also the leading region for bio energy in Europe. There are an estimated 900 biogas plants currently in operation, producing electricity by feeding on liquid manure, biological waste and energy crops. They produce more than a third

of the total amount of biogas in Germany and cover approximately five percent of the state's power requirement. "We will double that share to ten percent by 2012", announced Prime Minister Christian Wulff in September 2008.

German market leader EnviTec Biogas AG from Lohne expects a growth in sales between 44 and 74 percent for 2009. The company is represented in 15 European countries, India and China. It currently builds the world's biggest biogas plant, which will be able to supply a town with 50,000 inhabitants with electricity. EnviTec Biogas India was awarded the gold medal in the Asian Power Awards 2008 in the category "Best Decentralized Power Plant in Asia" for the construction of 30 biogas plants in Punjab. 22 percent of the turnover is already realized abroad; the company expects that share to rise to 50 percent in the coming years.

The 2008 amendment of the Renewable Energy Sources Act – a law obliging operators of power grids to give priority to electricity from renewable energies and to pay fixed prices for this – increased the compensation for bio energy and also promotes using the waste heat. Accordingly, the cogeneration of heat and power is increasing. For example, the biogas plant Hortitherm Hinrichsfehn in Wiesmoor was granted an award for its exemplary concept: The waste heat is used by a garden centre to heat their hothouses. The owners of the garden centre build the plant in 2006 because of rising prices for energy. For the same reason, whole communities are thinking about producing their own power and heat with biomass. One model village even meets its whole energy demand with a biogas plant: In Jühnde, the electricity is fed into the grid, while the heat is transported to consumers as hot water via a district heating network. The community Lathen is also going to build a heating network to supply seven public institutions and a large amount of private households with heat from a nearby biogas plant, thus saving costs and diminishing CO2 emissions.

Why is Niedersachsen known as the hub of Europe?

Because so much innovation makes your head spin.

Research.

Despite our atomic clock, we're usually well ahead of the times. We work on innovation around the clock, in Europe's most research-intensive region.



A prime location.

If it helps people move forward, Niedersachsen is working on it. The world of tomorrow is emerging through innovation and an appetite for the new. Here in northwest Germany, those views are at home.

www.nglobal.de



Mobility.

On land, at sea, in the air and even in space, Niedersachsen is setting standards in mobility. Because we like helping people get ahead.



Niedersachsen

The state of things to come.



Going Offshore

This year will see the long awaited start of offshore wind power in Germany. Off the coast of Niedersachsen in the North Sea the first two offshore wind parks are planned to be erected starting in spring. Apart from three test turbines nearshore, no offshore wind park has so far been realized in Germany.

Text: Julia Koch



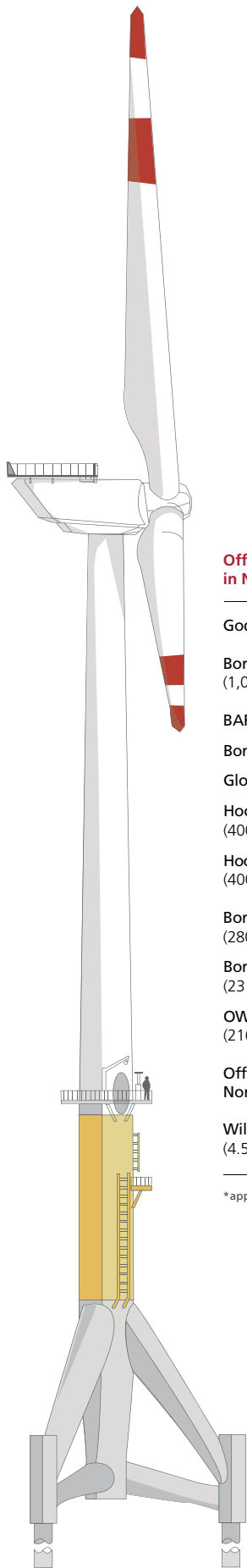
The conditions for offshore wind turbines in the North Sea are challenging: they have to be erected in 20 to 40 kilometres distance from the coast in water depths of 30 to 40 metres, because of environmental regulations. In particular the Wadden Sea national park – an area of 9,000 km² in front of the coast – is protected. That means, wind farms have to be erected in the open sea – nowhere else has this been attempted, and experiences with such conditions are lacking. In addition, the time slot for construction is limited because of strong wind and high waves. According to the German Wind Energy Association, only about a hundred days a year are fine enough to permit work. The first company to go offshore on a large scale is Bard Engineering GmbH

from Emden. Construction of "Bard Offshore 1", a wind park with 80 five megawatts turbines, starts in spring and is supposed to be finished at the end of 2010. It will be located 100 kilometres northwest of the island Borkum in a depth of about 40 metres. The turbines will rise about 152 metres above sea-level and stand on three-legged foundations the company has invented. The foundation was already tested nearshore in 2008: Bard put up a test turbine 500 metres off the coast at Hooksiel near Wilhelmshaven. According to spokesman Andreas Kölling, the company is relatively independent of the weather during construction, because they use a platform that rises on legs out of the water and is not affected by high waves. On average, they expect to erect one turbine in three days maximum.

Apart from the turbines, a living and transformer platform will be set up, where in the future a service team of 20 people will be on stand-by for maintenance work. They will use a special boat on tubes, a patented product by the shipyard Abeking & Rasmussen from Lemwerder, Niedersachsen. Abeking & Rasmussen have long been a supplier for the wind industry, building rotor blades for companies like Repower and GE Wind. Bard has hired 500 people in 2008 and thus increased its workforce to more than 700 employees.

Bard has invested almost 100 million euros at its locations in Emden, Cuxhaven and Bremen and wants to extend its facilities still more: A training centre and a second rotor blade production are planned.

Since the production facilities are located at the port, the components can be transported directly onto the ship. Bard is waiting for approvals for ten more offshore wind parks, seven in the North Sea and three in the Netherlands. All shall comprise 80 turbines, potentially with more capacity, because the company is working on a 6.5 megawatts turbine. Another pioneering project is a test field of twelve turbines. The wind farm "alpha ventus" will be situated 60 kilometres off the coast in a depth of 30 metres. Construction was supposed to start in 2008, but had to be delayed till 2009 because of the weather conditions. So far, only the transformer station has been placed. The five megawatts turbines by Multibrid and Repower are 148 metres high – only nine metres less than Cologne Cathedral – and they will produce enough electricity for 50,000 households. "The importance of the project as a showcase is tremendous", says Thorsten Herdan, Vice-President of the Offshore Wind Energy Foundation. The foundation has leased



Offshore Windparks in Niedersachsen*

- Gode Wind (1,120 MW)
- Borkum West /Alpha Ventus (1,040 MW)
- BARD Offshore I (400 MW)
- Borkum West II (400 MW)
- Global Tech I (400 MW)
- Hochsee Windpark Nordsee (400 MW)
- Hochsee Windpark, He dreiht (400 MW)
- Borkum Riffgrund West (280 MW)
- Borkum Riffgrund (231 MW)
- OWP Delta Nordsee I (216 MW)
- Offshore-Windpark Nordergründe (125 MW)
- Wilhelmshaven (4.5 MW)

*approved, first construction phase



"The importance of the project as a showcase is tremendous."

Thorsten Herdan
Vice-President, Offshore Wind Energy Foundation

the wind farm licensing rights to Deutsche Offshore-Testfeld- und Infrastruktur GmbH & Co. KG (DOTI) – a joint venture by the energy companies EWE, E.ON and Vattenfall. The three partners share the risks as well as the research results. The project costs 180 million euros.

Other companies are following: So far, 19 wind parks in the North Sea got a permit, 46 more are pending approval. The 2008 amendment of the Renewable Energy Sources Act makes offshore energy more financially attractive: Till 2015, a compensation of 15 Cent per kilowatt hour has to be paid, while onshore gets only 9.2 Cent. "Offshore wind turbines produce 40 to 50 percent more electricity than onshore turbines – and 150 percent more costs", points out Hermann Albers, President of the German Wind Energy Association (BWE). That is why he remains careful in his prognoses for the development of offshore. He predicts an installed capacity of 10,000 megawatts by 2020 in Germany, compared to 45,000 megawatts onshore. 10,000 to 15,000 people could be employed in the industry in the medium term.

Prokon Nord Energiesysteme GmbH from Leer wants to start erecting 80 five megawatts wind turbines next year in the North Sea. The project was approved in June 2008. At the same time, the company will build an offshore wind park with 21 turbines in France. That project was the only



Photo: Flickr



Photo: Stiftung Offshore Windenergie

one accepted from ten proposals in the first French offshore-wind energy tender. Another wind farm in the North Sea with 80 turbines is planned but not yet approved. Construction is supposed to start in 2011.

Prokon Nord uses the wind turbines of its 49 percent subsidiary company Multibrind GmbH and the services of its 20 percent subsidiary OWT – Offshore Wind Technologie GmbH. It was the first company to get an approval for an offshore wind farm outside territorial waters in 2001. It later sold all rights to the granted project to the Offshore Wind Energy Foundation – it later became the test field alpha ventus.

Plambeck Neue Energien AG from Cuxhaven plans to start building their first offshore park in 2010/2011. They are currently looking for suppliers. Two projects have been approved so far: The wind farm "Borkum Riffgrund" will consist of 77 wind



Photo: Stiftung Offshore Windenergie

Wind turbine foundations for alpha ventus are shipped into Wilhelmshaven – each weighs 700 tons.

turbines in the first building phase and up to 180 turbines in the final stage, supplying over 750,000 households with energy. Total investment in the two building phases will total more than one billion euros. The planning, construction and operation of the park is to be accompanied by a research programme extending over several years intended to answer problems of environmental protection such as the effects on the marine wildlife.

The second wind farm "Gode Wind" will have 80 turbines in the first phase, but is planned to be much larger in the end, too. In total, Plambeck wants to realize seven wind parks in the North and the Baltic Sea, with up to 680 turbines and an investment of six to eight billion euros. Two projects are currently waiting for permits.

A law passed in 2006 helps the offshore pioneers and relieves them of some their costs: It obligates the operators of power

grids to connect all offshore wind parks with a start of construction before the end of 2011 to the grid – and to bear the costs. "That means a saving of 30 percent of total investments for the offshore wind parks", says Federal Environment Minister Sigmar Gabriel.

Leading Offshore Base

The seaports Cuxhaven and Emden greatly profit from the offshore industry: In Cuxhaven, the handling of parts for wind turbines increased by eleven percent to almost 423,000 tons in 2008. In Emden, where Enercon ships its onshore and Bard its offshore components, the handling even increased by 70 percent to 328,000 tons. In both seaports, production facilities of offshore companies are located. Cuxhaven aims to become the leading offshore base – in the past two years, more than 80 million euros were invested in its

infrastructure. It built an offshore port with a heavy lift platform that is specially constructed to handle components of the offshore industry. As the only platform at the North Sea it can carry up to 90 tons per square metre. It can even handle completely mounted turbines. A 14 hectare offshore terminal that was specially constructed for the needs of the industry will be opened on 20 March.






Impact on Tourism

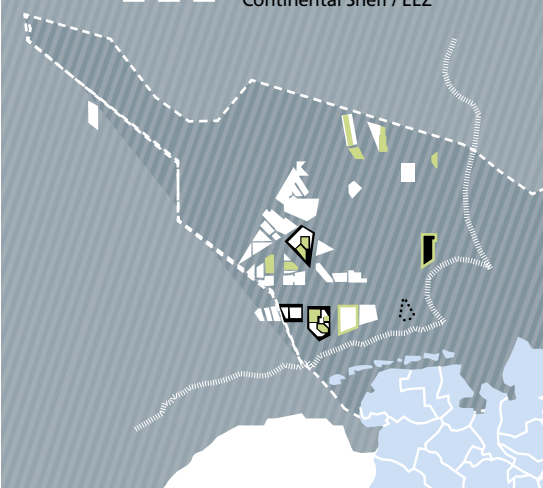
Cities and tourism boards have also begun to think about the possible impact of the offshore industry on tourism. The German Energy Agency (dena) organised a workshop about that subject in Cuxhaven. One of the results: It is important what associations the wind turbines evoke. So one of the tasks will be to provide information to the public and emphasize the importance of the industry for climate protection. Cuxhaven has already started that process by building an offshore information centre. Experiences from Denmark show that visitors are very interested.

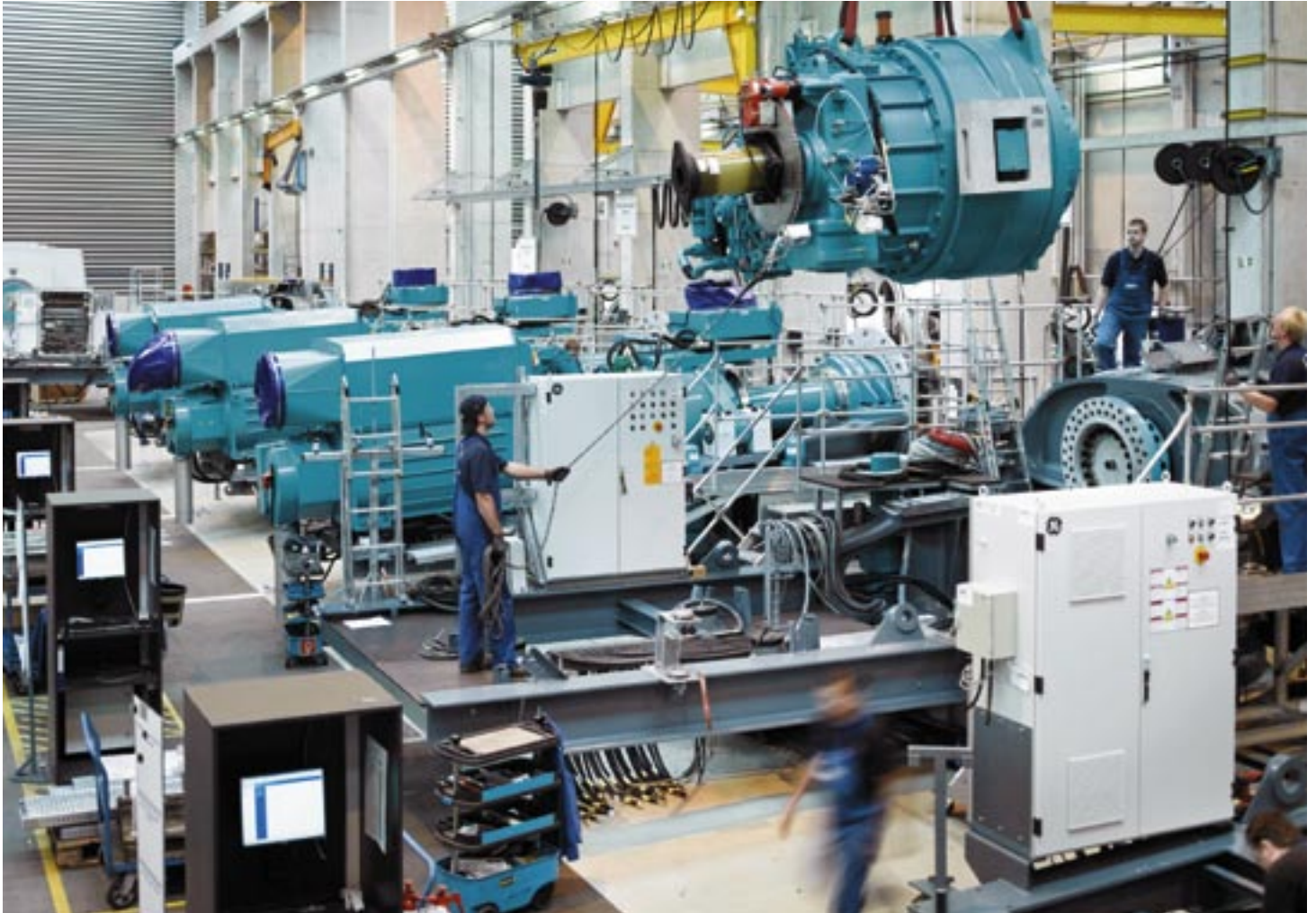
There are plans for an information ship travelling the region. Tourism concepts could include wind theme vacations (offshore wind energy, flying a kite, sailing) or a CO₂-free holiday.

WINDFARM PILOT PROJECTS IN THE NORTH SEA

source: www.offshore-wind.de

-  Approved
-  Under consideration
-  Online
-  Deep water roads
-  Continental Shelf / EEZ





Photos: GE

Wind Expertise for GE

GE Wind Energy is one of the world's leading manufacturers of wind turbines. In the European headquarters in Salzbergen, the great know-how made the location a centre of excellence for renewables within the multinational company.

Text Julia Koch

The small municipality of Salzbergen in West-Niedersachsen is big when it comes to wind energy. Here the European headquarters of GE Wind Energy, the wind branch of General Electric, are located. The multinational company bought the wind turbine manufacturer in 2002 from the insolvent Enron, which had taken it

over in 1997 from Tacke Windtechnik, a family business. With that acquisition GE entered the wind energy market. Its great advantage: It could make use of the expert knowledge that was already available. "The technological know-how is located in Salzbergen", says Rainer Bröring, Managing Director of GE Wind Energy. "We are even the Renewable Energy Centre of Excellence within GE. We have a special status

in the company because of our expertise." On average, ten wind turbines per week are manufactured at the site. Further production sites are located in the USA, China and Spain. 13,000 turbines by GE Wind Energy have been erected worldwide, and 4,000 of them are monitored around the clock by the control centre in Salzbergen. "We concentrate on few products and produce these in great quantities", explains

Bröring. The concept pays off: GE Wind Energy achieved a market share of 16.6 percent (2007) in the world market, second after the leading manufacturer Vestas. It is even market leader in the USA with 45 percent. According to Bröring, their 1.5 MW series is the most successful wind turbine in the world. They sold it more than 10,000 times.

Now they want to continue that success with the new model 2.5 MW that replaces the less powerful 1.5 MW. In that context, the production site in Salzbergen was enlarged and a lean manufacturing process introduced. In total, about 70 million euros were invested. The demand is such that the facility will operate at full capacity till mid-2010 with existing orders. 1,000 employees work in Salzbergen, but many more people are indirectly employed through the 400 to 500 suppliers. All components are provided by suppliers, who build the parts according to the design by GE.

While the rotor blades are transported directly to the construction site, the machine heads are put together in Salzbergen.

With the new product Bröring is optimistic that GE Wind Energy can more than double its market share in Europe from less than five percent to more than ten percent in 2009. "Europe remains the biggest market", he says. Especially Eastern Europe showed high growth rates. "Countries like Poland, Bulgaria and Turkey have a lot of catching up to do." Currently GE builds Europe's largest wind park in Rumania. In Bröring's opinion, Germany will also remain a relevant market and still has potential for growth, for example through the so-called repowering, the exchange of older and smaller turbines with new, higher and more efficient ones.

There is a high demand in the USA, and with Barack Obama as new President, there are hopes that renewable energy in the USA will get a further boost.



"The main problem of the US market is that it lacks instruments", says Bröring. "Instead of a Renewable Energy Sources Act like in Germany, there are just tax credits. But few companies are interested in tax depreciation." But he is confident that under Obama the general conditions for renewable energy will be improved.

Output in China Doubled

Asia also emerges as an important market, in particular China, where GE continues to produce its 1.5 MW model. Bröring: "We think that we positioned ourselves well. Last year, the output in the factory there was doubled." But local competitors made it a difficult market. All in all, the Manag-



"We are strongly integrated in the global company structure and profit for example by improved production processes."

Rainer Bröring

Managing Director, GE Wind Energy

ing Director expects a growth in sales of 15 percent as from 2010.

While focusing on onshore energy, GE is also experimenting with offshore. It is trying out seven wind turbines on a test field in Ireland. Although the water is only eight meters deep – not comparable to conditions in the North Sea with depth of 30 to 40 metres – the maintenance was found to be challenging. This year, says Bröring, they want to think about offshore again. He sees potential in that market that could reach a share of 40 percent in Germany in his opinion.

Within the GE Energy division, the location in Salzbergen plays an important role because of its above-average growth rate. It is bigger than the whole oil and gas business. Besides, it scored highest in a company-wide ranking regarding job safety. The production site also profits from the GE know-how. "We are strongly integrated in the global company structure and profit for example by improved production processes", says Bröring, who is a specialist for logistics and production himself. Bröring, who worked in the automobile industry before, was attracted by the possibilities in the growing wind industry and saw a lot of potential for improvement in production and process optimization. His hopes were justified: "I could achieve and shape a lot here."



Land reclamation for the new deep sea container terminal is underway. The dimensions of the project are best seen from the air.

piled up to build dykes. More than 15 million cubic metres of sand have been pumped into the reclamation area and slowly displace the water. "We are completely on schedule", says Axel Kluth, Managing Director of JadeWeserPort Realisierungsgesellschaft. He took over from his predecessor Helmut Werner in August 2008.

"The deep sea container terminal is a huge chance for the region", says Kluth. One of the reasons for locating the terminal in Wilhelmshaven was the opportunity to reduce the above-average unemployment rate in that region – in addition to all the other location advantages such as tidal independence, short access from the open sea and a navigation channel deep enough for deep-sea going ships. The port will create 1,000 directly dependent jobs and at least another 1,000 jobs in the companies relocating close to the terminal.

Motorway to be Extended

Onshore, the works to connect the port to existing transport routes are also progressing: The access roads have been constructed as well as most of the engineering and embankment structures for the rail link. In November 2008, the start signal was given for the extension of the motorway right up to the gates of the port. The extension will take three years and costs ten million euros. Around 20 percent of the containers handled in Wilhelmshaven are scheduled to be transported by road.

Next to the terminal a 170 hectare Logistics Zone with freight village will be located. It is intended for companies with port-related, productive services and production activities. Plots at the Logistics Zone will be available in separate construction phases beginning from 2011.

New Port Emerges

The JadeWeserPort is taking shape: The construction of the new deep sea container terminal in Wilhelmshaven began last year and makes steady progress. It is one of the biggest infrastructure projects in Niedersachsen.

Text: Julia Koch, photos: S. Reimann

Once finished, the 130 hectare terminal is expected to handle 2.7 million standard containers every year. It will be the only port in Germany able to handle jumbo vessels with a length up to 430 metres and a draught up to 16.5 metres. Operations are supposed to start in late 2011.

At present, land reclamation is in progress. From the air, the huge dimensions of the JadeWeserPort can already be seen: 650,000 tonnes of a total of one million tonnes of rock from Norway have been

Platform for Wind

Wind energy will be a special focus of visitor interest at Hannover Messe 2009. The new international trade fair Wind gives the industry its first self-contained exhibition platform at the world's most important technology event.

"Wind is the strongest new tradeshow mounted by Hannover Messe in recent years", says Oliver Frese, who is in charge of organizing the individual energy-sector tradeshows. "On the one hand, it will display the industry in its vertical depth. One the other hand, it will position itself in the context of other energy production technologies." Wind will be opening its doors for the first time from 20 to 24 April 2009 amid a booming world market for wind generation technology with growth rates of 30 percent for the last three years in a row. It will be staged biennially, alternating with HusumWindEnergy.

The trade associations VDMA Power Systems Association and the German Wind Energy Association (BWE) support the fair. "Our industry exports 80 percent of its production. Maintaining that kind of performance necessitates a successful exhibition platform that puts the industry in touch with key domestic and foreign-based investors. Its ability to broker high-level dialogue between policymakers and private sector companies is another key strength of the Hannover Messe", explains BWE President Hermann Albers.

At Wind, suppliers of plants, components and services as well as installation engineers, operating companies and project finance providers will showcase their offerings to decision-makers from around the globe.

Hannover Messe has continually increased the energy exhibition space in recent years and now spans the entire energy business value chain, from generation and transmission, through to distribution and storage. "This year, more than 1,000 exhibitors will

present themselves on more than 43,000 square metres within the three energy leading energy-sector trade fairs Energy, Power Plant Technology and Wind", says Oliver Frese. At Wind alone, more than 10,000 square metres are already booked.

The market leaders Avantis, Enercon, Fuhrländer, GE Energy, Nordex, REpower, Siemens and Vestas are all represented.

"For the first time, the global wind industry can reap the benefits of a dedicated industrial fair that caters for the full spectrum of companies – from subcontractors to big name manufacturers", says Felix Losada, deputy head of corporate communications at Nordex AG.

Wind also explores the complex issues surrounding the integration of wind generation technology into the overall energy mix, with a broad range of solutions being exhibited in specialty areas, such as grid stability, grid expansion, base load supply security and storage options. The main display categories at Wind include plant engineering, components and services. Synergies result from the close proximity of the trade fairs Motion, Drive and Automation (power transmission and control), Surface-Technology, Subcontracting, ComVac (compressed air and vacuum technology) and Industrial Automation.

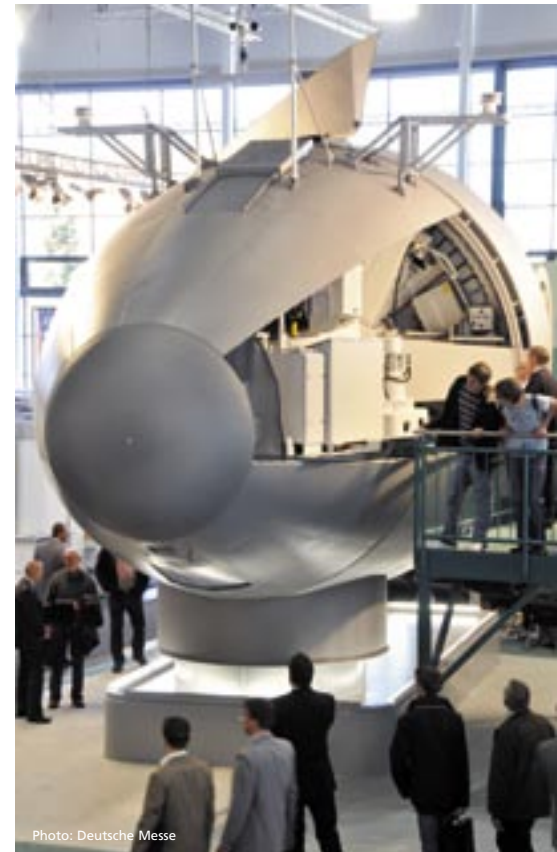


Photo: Deutsche Messe

At Hannover Messe 2008, wind energy was still part of the Energy trade fair. Now it is a leading tradeshow if its own.



"Its ability to broker high-level dialogue is a key strength of the Hannover Messe."

Hermann Albers, BWE President

Speeding up Investment

German power giant RWE is a driver in changing Niedersachsen to a European energy hub. CEO Dr. Jürgen Großmann is explaining why RWE invests here, right now and quite massively.



"Our industry must be innovative in order to develop new business areas, create jobs and accelerate infrastructural changes. The aim is to do all this with significantly less CO₂, but to maintain a high security of supply.

Dr. Jürgen Großmann, CEO, RWE AG

Interview: Hans Gäng, photos: RWE

Dr. Großmann, what connects RWE with the State of Niedersachsen?

Take for example the community of Wietze – cradle of the German petroleum industry. For 150 years people have been drilling for oil here. And RWE Dea has been involved there for more than 100 years. The drilling operation and the Wietze laboratory deliver world class services. Another example is the Emsland nuclear power plant near Lingen. It went into service in 1988 and produces around eleven billion kilowatt hours of electricity each year. Around 3.5 million households are being supplied with electric energy from here day and night. This power plant prevents approx. eight million tons of carbon dioxide from reaching the atmosphere annually. 300 employees work there.

And as a building block for energy supply in the future we are planning a climate protection pipeline which will also run through Niedersachsen. It is an essential part of our IGCC CCS coal-fired power plant. In this context IGCC stands for Integrated Gasification Combined Cycle; CCS means Carbon Capture and Storage. This technology separates the carbon dioxide and stores it underground. At the end of 2014 or the beginning of 2015 the power plant in Hürth near Cologne is due to start operation. The pipeline facilitates safe transport of the separated CO₂ through Niedersachsen to the deposit locations at the coast of Schleswig-Holstein – without any transfer operations, excessive noise or increased traffic volume. This makes it the safest and least trouble-

prone transport variant with the least amount of energy used. We also want operations along the pipeline to be able to feed CO₂ into it.

Can you give an example of a technological innovation in Niedersachsen?

Yes, there is a super-large construction site in Lingen an der Ems where a gas and steam power plant is being built right now. This extends the RWE power plant location Lingen by the coupled generation of electricity and heat. This plant, which will have a net output of around 870 megawatts, is supposed to start operation in mid-2009. This new power plant in Lingen will then be the most modern gas and steam plant worldwide. It will help to secure the balance between security of supply, operating efficiency and environmental compatibility. Due to its lower fuel demand compared with existing installations it will contribute to conserving resources and reducing CO₂ emissions.

Are you also active in the area of wind power?

In Germany we invest heavily in a balanced energy mix and wind power is of course part of this mix. Off the German coast, for example, we are planning the offshore wind park "Innogy Nordsee 1" – this is the largest single project that has been initiated by RWE so far in the area of renewable energies. Its prospective output will be 960 megawatts which makes it one of the largest offshore wind parks in all of Europe. It is going to be built north of the island of Juist over an area covering 150 km² and start opera-

tion in 2015. The amount of electricity generated there is calculated as sufficient to supply 780,000 households. You see: In spite of the current economic crisis we have intentionally sped up our innovation and investment activities.

How do you define "innovation" in the energy industry?

Innovations in the electricity and gas business are technologies or processes, products and ideas which help us improve the supply of safe, clean and affordable energy. They help us to be more independent from imports, use the available energy more carefully and expand renewable energy sources. Our industry must be innovative in order to develop new business areas, create jobs and accelerate infrastructural changes. The aim is to do all this with significantly less CO₂, but to maintain a high security of supply. Innovation and entrepreneurship are for me the same thing. A successful enterprise is innovative, because if it is not, it will stall and the competition will pass it by. For us to be able to accomplish this in the future and maintain our leading position here in Germany we will above all need qualified personnel. According to figures by the DIHK (German Association of Chambers of Industry and Commerce), the loss of value added caused by the lack of skilled labour amounted to 23 billion euros in 2007 alone.

We need to counteract this trend! It would be best to start at a very young age because children and teenagers are tomorrow's inventors and engineers. That's why I'm so taken with the "Ideen-Expo" which takes place in Niedersachsen every other year. It presents a hands-on experience of natural sciences and technologies. This is why RWE supports the "IdeenExpo".



Dr. Jürgen Großmann became CEO of RWE AG in October 2007. Before that, the 57-year-old had made a name for himself as a successful restructuring: He took over the ailing steel company Klöckner Edelstahl GmbH in Georgsmarienhütte in 1993 for the symbolic price of two D-Mark and transformed it into a state-of-the-art steel maker that soon realized profit (see page 36). Around the renamed Georgsmarienhütte GmbH Großmann built a group of companies with meanwhile 52 subsidiaries. He is still the sole owner of the group, but handed the management over to Peter van Hüllen in 2006.

The steel is in his blood: His father worked for Thyssen. He earned the money for his first car by working at the furnace. Großmann studied Iron Metallurgy at the Technical University of Clausthal and later Economics in Göttingen and Freiburg. He also spent a lot of time abroad doing internships and researching for his Master thesis and doctoral dissertation. Prior to buying his company, he worked 13 years for Klöckner-Werke AG and was a member of the Executive Board. He is known for his hands-on approach and down-to-earth manner. The passionate sailor has been described as a bon vivant with great communication skills. Großmann is also known for his extensive network of contacts that reach to the highest level: He plays skat with the former Chancellor Gerhard Schröder, whom Großmann accompanied on many business trips abroad, and he is on good terms with Chancellor Angela Merkel.

His appointment as CEO of RWE came as a surprise for many analysts because he comes from outside the industry. One of his plans is a reorganization of the company to tighten the structure. Besides, he wants to increase efficiency and invest abroad. In private, Großmann also dabbles in other enterprises: He owns a restaurant in Osnabrück, which is decorated with two Michelin stars, a vineyard in Australia and a hotel in Switzerland.

Steady on Innovation

Continental's CEO Dr. Karl-Thomas Neuman sees innovations for environmental friendliness as means to overcome the difficult market situation of the automotive sector.



Photo: Continental

Interview: Hans Gäng

How can Germany's industry save its innovation strength and how it will be positioned in the international competition after the crisis?

The markets have collapsed and the automotive industry is facing major challenges worldwide. The German supplier industry is, however, the technology leader in most fields, and this strength will help us participate in the recovery of the markets following the crisis. As an international automotive supplier with numerous locations in Germany, we anticipate a very difficult market situation. And we will continue to act decisively in order to emerge from the most difficult phase of the automotive crisis all the stronger.

Reflecting the situation what are Continental's targets for R&D?

With the takeover of Siemens VDO, we were able to expand our market position with innovative products. Unfortunately, because of the crisis we must look once again very closely at all our expenditures for research and development. The challenge now is to continue working vigorously on the right subjects. Here, we are concentrating on the automotive megatrends: environment, safety, information and emerging markets. We are working on developing technologies geared to these trends, even during the crisis.

Which milestones do you foresee for the production of Lithium Ion batteries?

Continental supplies Daimler with the lithium-ion battery and the power electronics for the new Mercedes S400 Blue-Hybrid, which is scheduled to hit the market mid-2009. The most important milestone was the production start of the world's first lithium-ion battery for a hybrid vehicle at the end of 2008. The lithium-ion battery is the key technology for emission-free, individual mobility of the future. The further increase in the energy and power density is one of the most important topics here.

Will the handling and filling of batteries remain obstacles for electric powertrain systems and its general acceptance?

A hybrid study, first carried out by Continental in 2008, showed that the majority of motorists (83.4 percent) drive short distances or in urban traffic. More than two thirds of them drive primarily in urban traffic, and it is precisely here that electric vehicles and electric drives come into play. It is already possible for lithium-ion batteries to have ranges from 100 to 150 kilome-

tres for use in urban and suburban traffic. The batteries that are currently available can also be charged quickly, although they must be connected to a power supply. Another possibility we are working on is to extend the range with a small combustion engine that charges the battery while the vehicle is in operation. This is also referred to as a range extender.

How do you face the security challenge of high tension and flammability of batteries?

Despite the high energy density provided by lithium-ion technology, the safety systems have already reached a high level of maturity. The safety concept is basically divided into three areas: the cell chemistry itself, the cell design, and the overall battery system. With the safety concept which has already been firmly established, the high automotive standards are satisfied and in some cases even exceeded.

How do you focus on energy efficiency?

If you look at the overall CO₂ impact of a vehicle during its entire life cycle, CO₂ emissions during operation play a key role. And this is where Continental starts with its technology developments. We focus on innovations which, in the first step, increase the efficiency of the classic combustion engine new injection technologies, downsizing of the engine with simultaneous supercharging, in the second step electrify the powertrain, energy management and hybrid technologies; and in the third step, finally make purely electric driving possible. Of course, in order for the overall CO₂ impact to be balanced, it is important that electricity from renewable energy be used for driving.

Niedersachsen – the state of things to come



Abb.: BARD Engineering GmbH



NGlobal GmbH is Niedersachsen's new provider of services for economic development and international cooperation.

We are committed to enhancing Niedersachsen's economy by attracting foreign investment and new companies to the State, and encouraging inter-enterprise collaboration and joint ventures.

We support Niedersachsen companies seeking to develop and expand their activities abroad.

Inward Investment

Foreign Trade

Niedersachsen Marketing

Your first call in Niedersachsen!

NGlobal

Designing an Icon

The essence of form: The sixth Golf generation returns to its original roots. Chief of Design Walter de Silva explains his most recent creation.

Text: Markus Honsig; photos: Volkswagen

"The Golf is an icon in automotive design," says Walter de Silva as an introduction, "maybe the only one that still exists." These words seem to contain a good deal of respect. In any case Volkswagen's Chief of Design takes a noticeably careful approach when presenting his most recent and probably the most important creation of his career. The spotlight is always on the new Golf and not on him. And this introverted nature of the designer seems to be translated into his work: Clear architecture, precisely drawn lines and precisely shaped surfaces are the distinctive features of the new Golf. A car goes back to its original roots and steers clear of all superficial effects whose half-life is short anyway.

It's the Simple that is Difficult

Simplicity is also the key word when Walter de Silva explains the new Golf: "Recently we have seen a lot of decoration in automotive design, an excess of design and aesthetic exaggeration. Honesty in automotive design has been on the retreat to a certain extent. With the Golf, we made a conscious decision to return to simplicity and develop a design that does not need long explanations, that is instantaneously recognisable and easy to comprehend." A look at the front end of the Golf is all it takes to get the message: The horizontal focus, the dynamically cut positioning of the radiator grill and headlights, the logical apportionment of the bumper and the air intake show a clearly defined design that does not need complex transitions and connections but creates an immediately recognisable identity and value.

"We made a conscious decision to return to simplicity and develop a design that is instantaneously recognisable."

Walter de Silva, Volkswagen's Chief of Design



This quality of design characterises the entire car: The rear end is also arranged in a decisively horizontal manner and the broad rear lights award the Golf an even more powerful appearance on the road. The side view with the striking angle of the light which begins at the front wheel wells, becomes sharper as it runs towards the back and culminates in a muscular shoulder. It is an unambiguous, compact design that never seems approximate or discretionary in any respect. As soon as one



Photos: Volkswagen

stands in front of the new Golf, there is a certainty that this car had to look exactly like this and not any other way. Since the Golf came into existence, each new Golf version has received criticism that its design advancements are too careful, not progressive enough and the like. But the Chief of Design at Volkswagen always carries a high degree of responsibility towards the product, the brand and above all towards the customers: "The Golf is a very sensitive product that everybody

knows, that is firmly rooted in the collective memory and about which everyone has a notion of how it should look like. This is something one has to have respect for. That is why we wanted an evolutionary rather than revolutionary approach towards the Golf." The basic architecture of the Golf with a long roof, steep rear end and broad C-pillar has therefore not been changed and the basic dimensions stayed the same in order to avoid weakening the compact character of the Golf. The finely



balanced proportions, the perfectly treated surfaces and the precise graphics make the Golf look flatter, wider and more sportive than ever before. And Walter de Silva does not forget to mention that a beautiful car can only be developed in cooperation with the engineers. This is one reason why the designer, who was born and trained in Italy, feels so much at home in the German engineering world at Volkswagen: "The knowledge and the sensitivity of the engineers is extremely important when a beautiful model is to be transposed into a beautiful car."

The fact that the new Golf has been more strongly orientated on the cradle of its success story is hard to miss.

There are two reference models that predominantly and significantly determined the design of the new Golf: The Golf I drafted by Giorgetto Giugiaro and the Golf IV by Hartmut Warkuß, one of them Italian, the other German. "The Golf I had an absolutely clear and simple architecture. And the Golf IV had its strong point in illustrating the precision and perfection of the design," says de Silva about the special qualities of these Golf models. It may not be a coincidence that now it is again an Italian who has newly determined the initial idea of this German design icon and has shaped a contemporary form. It is as if a circle is closing.



Walter de Silva believes that the trend towards simplicity will establish itself in the automotive industry.

You get the picture: To design something simple is not easy, but quite the contrary. "This is very, very difficult," de Silva confirms, "because it is always the result of an extreme synthesis and because it is always the essence of a product." That's how high-quality designs, high-quality products develop, "products such as the iPhone, simple and universal, or a Bic lighter, great design, best in class for decades." This trend towards simplicity can also be observed in architecture as well as in furniture design, "where valence and quality are communicated by a very simple and minimalist concept." Therefore de Silva believes, that the Golf sets a new direction of design not only for the Volkswagen brand, but that "many cars will be designed along these lines in the next ten years."

Sophisticated Interior

Testing a seat in the completely newly designed interior. "If one sits down inside a Golf, it should feel as if you have arrived in the next higher segment," says Walter de Silva. That's exactly it. And it does not have to do with optional equipment or additional features initially. "It is a matter of value; the quality that is known from higher-class cars. This is the added value we tried to create by means of the sophis-

ticated interior, the choice of materials, the profiling, the accuracy of the alignments, the embossing and surface qualities, harmonious transitions." All this is supplemented by nice details such as the slightly tube-shaped cockpit displays, chrome-framed switches or high-gloss lacquered surfaces. Welcome to the better and more beautiful side of life.

Walter de Silva's desk is covered with open notebooks of many shapes and sizes; on each page there are little sketches of cars visible, cars with rather racy shapes to be precise. "I spend one or two hours every day with drawing. For me these are notes. Drawing is a universal language, everyone understands it. And there is always a thought behind it, an idea. Not to lose sight of this basic idea of interaction between technology, production, market, and cost – that's what it's all about."

It is a challenge that has even more complexity if it is about the Golf. Because a Golf is indeed not only a Golf, it is representative for Volkswagen as a brand. The design of the new Golf, its simplicity and clarity, will determine future models starting with small cars such as the Up, up to the top segment. "You will see quite a few of these in the months to come," promises de Silva. The excitement will continue.



ZF technology –
the intelligent choice.

Because using our innovative
components and systems
pays off.



With over 3,700 employees in western Lower Saxony, ZF develops and manufactures chassis modules and components, and axle systems for cars, commercial vehicles and construction and agricultural machinery. Vibration damping components, thermoplastic precision modules and gear systems for transmissions round off the portfolio.

www.zf.com

Cost-effectiveness, dependability and flexibility play an important role in operating at a competitive level in the transport of goods, and ZF gives customers this decisive advantage. Our transmissions, steering systems and axles ensure the safe and economical control of driving power; reduce strain on the vehicle, freight and the environment; and facilitate driving. And that is why ZF driveline and chassis technology is used in millions of vehicles worldwide.

Driveline and Chassis Technology



Passion on Board

The Papenburg shipyard is the cradle for many a „dream ship“. This is where luxury cruise liners are being built at two of the world's most modern docks. Thanks to a far-sighted management and a committed team of employees, the shipyard has successfully faced the financial crisis.

Text Inka Ziegenhagen

Twice a year a funfair mood prevails in the Northwest of Germany, and in particular in and around the otherwise quiet town of Emden. Caravans are piling into parking places while TV presenters are busy doing a final sound check. Many an eager visitor is grabbing a quick sandwich not to miss her. And there she is, the star of Papenburg, a brandnew 315-million-euro cruise liner, coming into sight. Under the eyes of thousands of curious onlookers and slowed down by her weight of 69,200 RT, the Meyer shipyard's most recent cruise ship AIDAluna is making her way through

the narrow river Ems towards the North Sea. 32.2 metres wide, with 1,025 cabins spread over 13 decks, complete with a theatre, several bars and 6,400 square metres worth of sundeck, the liner is well equipped to spoil her future passengers. You name it, the AIDAluna's got it.

The cruise liner whose bow is shaped like a mouth in anticipation of a kiss is the third luxury liner that Meyer built for the Rostock shipping company Aida Cruises. Order books are full, three more, enhanced, club cruise liners with a total value of about five billion euros, are to follow by 2012. The American shipping company Celebrity Cruises, Miami, is among Meyer's custom-



ers; two orders were placed by Orlando based Disney Cruise Line. No time though for the Emsland shipbuilders to rest on their laurels.

Heavy Storms are Brewing up

The maritime economy has, like other sectors, been in the whirl of the global financial crisis for some time. The banks were the first to be affected, then the flow of goods and since last October numerous freight and container ships have also been touched. Eventually the shipyards were hit. By now many container services from and to Asia have been completely suspended. The cruise liner market appears to have been spared from the financial crisis, though detailed figures for 2008 are yet come out. Observers like Helge Grammerstorf of seaconsult GmbH continue to expect the German market to grow by nine percent. And in an interview with the newspaper "Die Welt", Aida Cruises state their intention to double the number of employees over the next three years.

Along these lines, many shipyards that have until now specialized in building tankers, container and bulk cargo ships, will in the future try to force their way into the cruise liner market. They are being led by Asian companies whose dumping prices have meant quite dangerous currents for their European competitors in the past.

So far the Meyer shipyard is set up very well? As things stand today, four cruise liners are expected to be built worldwide by 2012, out of which three will come from Papenburg. Only few shipyards in Germany boast such reserves to lean back on. And afterwards? "Once we have launched the fourth ship in 2012, we will be at an entirely new cost level. But we are definitely braced to face our Asian competitors," says Bernard Meyer.

"From now on your Name is Meyer, and you are going to be a Catholic"

Last year Meyer turned 60. He is the father of the Papenburg "dreamships". Recently he was awarded the Werner-von-Siemens-Ring, Germany's most significant award in

the technical domain, which means that Bernard Meyer is joining Carl Bosch and Wernher von Braun as one of the most significant representatives of Germany technology. By the way, the certificate and Meyer owe their name to the Church, as the following story relates. When in 1796 one of Bernard Meyer's ancestors wanted to settle in Catholic Papenburg, the clergyman in charge at the time took the decision. "Your name is Janßen? We have already got plenty of Janßens around here. From now on your name is going to be Meyer, and you are going to be a Catholic."

Since 1982 Bernhard Meyer has been at the helm of the company that is steeped in tradition. He landed the firm's first contract for a cruise liner, an order that was to pave the company's way towards worldwide fame. Despite his success, Meyer has remained a down-to-earth and approachable principal, someone who is fully aware of what is going on the docks and who looks at his over 2,500 employees as a team whom he greets with a cheerful "Moin" every morning. At the same time he is a strategist thinking ahead of others.



Photo: Ingrid Fiebak

Meyer Werft is one of the most modern shipyards worldwide. Recently one of the two dock halls were extended by 120 metres.



Photo: Inka Ziegenhagen

"Our customers know that it is the owner himself who once a week goes to the docks to make sure that everything is as it should be."

Bernard Meyer, CEO, Meyer Werft

"We have been specializing in cruise liners and have been able to accumulate know-how in the field that other shipyards don't have. Someone who builds a container ship today won't be automatically in a position to build a cruise liner tomorrow," Meyer explains. There are differences, from the hull to the furnishings.

Carpets Making a Difference

For example, when building container ships the steel plates used have a thickness of ten to 30 mm, Meyer elaborates. At the Papenburg shipyard in turn, the vast majority of the plates have a thickness of about five to six mm. This saves time and energy, but it also means a challenge for those who produce the sheets, since these tend to become wavy quite fast. The Meyer shipyard solved the problem by developing a novel technique, laser hybrid welding, that reduce the error rate to zero. "This new technique requires 50 percent less energy," explains Meyer. "This cuts energy costs, and above all, there is less energy going into the plate; this also leads to just half the deformations. We are able to construct in a much more precise man-

ner, a fact which has a number of positive consequences." Furthermore, the welding seam is smaller. When later on a carpet is laid on top of the plate, there is no need to grind the seam down or compensate by using a filler. This might be irrelevant for a tanker, it isn't for a cruise liner.

These are the subtle differences that allow the Meyer shipyard to be one step ahead. While others claim to be able to do just about anything, Meyer's employees as well as those of the firm's 1,800 suppliers are scratching their heads thinking hard about how to make the building even better, even more efficient and cheaper.

The company's leaders understand the significance of an efficient suppliers' network – a sizeable 75 percent of the ships are built by partner companies. "Today the direct annual turnover achieved with our regional suppliers amounts to nearly 200 million euros," says head of purchasing Ralf Sempf. Besides, many of the companies act as subcontractors for one or several of the shipyard's international suppliers.

The shipbuilders' approach towards their suppliers is often somewhat unusual. Last year the shipyard made a survey and asked suppliers where they saw scope for improvement.

"Often companies don't want to hear of this," comments Bernard Meyer, unable to keep himself from laughing. The survey was actually a big success. 40 longstanding suppliers came up with many a good idea, and the best one was granted an award for innovation. This has resulted in the presence of an employee of the main logistics partner for ship steel, Klöckner Stahl- und Metallhandel GmbH, on the shipyard grounds. Her task is to coordinate on a daily basis the direct, just-in-time supply of steel on its way from Bremen to Papenburg. Production in Papenburg is streamlined. Cooperation among suppliers is an important issue, too. The ship-



Photo: Ingrid Fiebak

yard's new internet database is meant to enable regional suppliers to offer their services not only to the shipyard but also to other, national suppliers and partners of the shipyard. Bernhard Meyer explains the idea behind the platform. "When a supplier from Bavaria needs a painter just for the day, there is no need to have one flown in from Bavaria. The supplier can find a local painter via the database," he says.

Every year the best partners are presented with an award. This the Lüneburg-based baumeister programm KG was commended for its outstanding performance in the interior decoration of the ships.

"This is our Life."

"Meyer's most important capital though are his employees," says Theo Hanneken who himself helped to plan the construction of many a ship for 50 years. "For precisely 50 years," he emphasizes. "Not one day more and not one day less. If the shipyard can't go on without me, then we



Photo: Ingrid Fiebak

70 percent of the shipyard's employees own a home. This reflects a quality of life that is hard to find anywhere else nowadays.

made a mistake somewhere along the lines." Employees tend to have close ties with the shipyard; after their retirement most of them continue to express their loyalty as members of the company's association for former employees. Recently five, crammed, buses took 294 former employees to the Neptun shipyard, which belongs to Meyer, where the senior citizens admired the river cruisers that are being built there. "This was our life," raves Hanneken who chairs the "Seniorenverein". Nostalgia resonates in his voice, as he slowly leafs through the new company brochure. His former colleague, specialist welder Helmut Warnecke is sitting next to him in the "Waldeslust", their favourite pub. "The people who joined stayed, often all their working lives," Hannecken reminisces.

Attracting Young Trainees

A minimal turnover of staff proves that employee satisfaction still holds true today. The average age of the 2,500 strong workforce is just about 38 years, of which they would have on average spent 13 years in the company. It looks like the Papenburg management need not worry about qualified young professionals in the future. While elsewhere heated political debates about the young generation's technophobia are taking place, Papenburg is attracting young trainees from as far away as the 1,000 km distant Black Forest. They are training to become ship mechanics or mechanotricians. Cooperating with universities, the shipyard has for some time now been offering a dual training to the future shipbuilders. In-company training and studies are joining hands.

It is not only a committed team though, state of the art technology and a far-sighted management that contribute to success of the Meyer shipyard. What makes a difference, too, is the passionate commitment with which the ships are being built. It is not a rare sight for an employee to try and suppress tears as he or she is bidding farewell to their ship, the AIDA-luna, that moves along the Ems to join the open sea.

Successful with Steel

From a company on the brink of bankruptcy, Georgsmarienhütte GmbH became a state-of-the-art steel maker and the centre of a group of 52 companies. Today, the range of products has diversified.



"We followed a strategy of downstream expansion. When there was an opportunity for acquisition, we used it."

Peter van Hüllen
Managing Director, Georgsmarienhütte

17 years ago, Georgsmarienhütte GmbH (then called Klöckner Edelstahl GmbH) was about to be closed. The steel production site, that has a history stretching back to 1856, was out-dated and incurred losses. The corporate group which had owned the company for almost 70 years wanted to file for bankruptcy. 1,600 people were about to lose their jobs. One of the group's managers decided to risk saving the company: Dr. Jürgen Großmann took over the steel enterprise himself in 1993 by means of a management buyout. He paid the symbolic price of two D-Marks. "Most people thought at the time that I was being extremely foolish", remembers Großmann. They were proved wrong.

With his management team Großmann turned the company around, demanding maximum effort and performance from the employees, while at the same time involving them in the commercial success, and overhauling the production process completely. It led to Georgsmarienhütte GmbH putting Germany's first direct-current electric arc furnace into operation in 1994. This laid the foundation for a sophisticated production programme in which steel grades of the highest quality are made using only scrap as raw material.

Georgsmarienhütte GmbH is now among the most modern and efficient steel makers in Europe as well as the heart of the Georgsmarienhütte group of companies. The Georgsmarienhütte Holding GmbH today includes 52 companies. 10,600 employees generated sales of more than three billion euros in 2008. Besides the locations in Germany and Austria there are branch operations in France, Japan, China and Brazil. The group is also represented in the USA, England and Italy. In 2006, Georgsmarienhütte GmbH celebrated its 150th anniversary with a festivity that was attended – among many other guests – by Germany's Chancellor Angela Merkel and Niedersachsen's Prime Minister Christian Wulff.

Having its roots in steel, the Georgsmarienhütte group of companies has expanded its capabilities continuously over the past years in the core processes of smelting, casting, forging and rolling. "We followed a strategy of downstream expansion", explains Managing Director Peter van Hüllen, who took over the management from Großmann in 2006. "When there was an opportunity for acquisition, we used it." According to van Hüllen, to be active in various areas cushions the effects of a crisis. Nearly 60 percent of the group turnover is generated by supplying the mobility sector. The automotive industry is of special importance, and in that field Georgsmarienhütte Group is feeling the effects of the economic crisis. But Georgsmarienhütte Group also supplies parts for the booming energy sector and the railway systems industry.

Since that is already 30 percent of the mobility sector turnover, van Hüllen is optimistic that they can ride out the present crisis.

"Yes, we can!" he accordingly titled his last editorial in the inhouse magazine Glückauf. Van Hüllen affirms: "People today are too apprehensive. Our attitude has always been different. We don't ask why, we ask why not. If that hadn't been our attitude in 1992, the company wouldn't exist today." www.gmh-holding.de

WOLTERS Pilsener



**GERMAN
PREMIUM BEER
SINCE 1627**



Local Lionhearts

Hofbrauhaus Wolters – or how a brewery secures its future thanks to entrepreneurial courage and local ties.

Text Hans Gäng

The 380-year-old Brunswick brewery's new start sounds like a lesson out of a business textbook. It is possible for a local brand to maintain its place despite increasingly international competition. The ingredients for success are to be found in the drive and determination of the new management, in the support given by the employees and in the Brunswick region's ties to the brand.

The beer brewing industry is to a large extent characterized by concentration, not only in Germany. The big ones in the sector are international companies with the resources to manage brands of national and international renown. Like InBev, the

Belgian-Brazilian giant, they also take an interest in regional brands. When InBev swallowed the regional Hanover based Gilde Group, and with it Hofbrauhaus Wolters in Brunswick, a brewery steeped in tradition. The InBev strategists did not think there was room for two regional brands and wanted to close Wolters.

Four lionhearted Gilde managers did not want to accept the closure: Peter Lehna, head of marketing, Thomas Renneke, head of the legal department, Hanns-Bernd de Wall, at the former Gilde subsidiary in charge of sales to hotel, restaurants etc. and Wilhelm Koch, factory manager on the technical side. Believing firmly in the power of the regional brand and in the friendly ties with their customers, they

took over the business. The City of Brunswick offered support and, for three million euros, bought the grounds off InBev. Quite aware of its responsibility towards the region, the group passed the liquid assets on to the new owners.

The company had to go back to square one. There was no administration set up, no computers, neither accounts nor sales departments. "We started from scratch," says Peter Lehna. In Brunswick, beer was being brewed and bottled, nothing else. Lehna was committed to looking after local customers personally. "People in the region are loyal to the brand," he says.

Their customers also went along with the new products and prices.

They enhanced old varieties of beer, in a conscious attempt to strengthen the company's traditional image. "Schwarzer Herzog" – Black Duke – did convince consumers. The sales department was also able to win over new and neighbouring areas around Brunswick.

With sales on the increase, Hofbrauhaus Wolters has turned into the regional market leader. While in Northern Germany other companies saw their sales declining, Peter Lehna and his colleagues were able to stimulate growth. It helps that Wolters brew for other producers, like for a Dutch brewery and for a specialized dealer.

The company was also in a position to invest again. The ordinary capital was increased from 25,000 to five million euros, the aim is to continue increases until 2010. Part of the purchasing price of 8.3 million euros that Wolters is paying back in monthly instalments to InBev has already been paid off. "Now all of the 100 jobs are secure in the mid-term."

There were sceptical voices that refused to believe in Wolters' rescue. The brewery's employees and its undaunted management have shown that local ties are a factor for success to count with, even in a globalized economy.

The Freight Hub

Hannover Airport is the most important hub for air freight in the region. An ambitious construction program will enlarge freight and logistic business.



Photo: Hannover Airport

In a globalized economy it is all about rapid fulfilment of customers need: Products and parts have to be supplied worldwide.

Global sourcing and just in time delivery are increasingly gaining in importance. This is a decisive reason for the disproportionately high growth of the air freight service compared to the rest of economy. The particular benefits of air freight service over road and maritime traffic are the fast transportation, a high level of security regarding damage and theft, reduced capital lockup and shortened stock keeping.

Hannover Airport, the central air freight reloading point of Niedersachsen, has developed into a logistic center of excellence. Against this background, the Airport started an ambitious extension scheme which focuses on the expansion of the freight and logistics branch, and until the year 2010 it is going to invest a total of 110 million euros in this segment. The main aspect of this project is creating a direct connection from the western complex to the other parts of the Airport via a road tunnel. This shall create the space required for the additional cargo and logistic facilities.

At the moment, a new logistic centre with access to the apron is emerging, which enlarges the cargo capacities to 30,000 sqm.

The start of construction of the approximately 20,000 sq. m large World Cargo Center of Garbe Logistic AG is scheduled for 1st July 2009. It will be completed already in 2010. The World Cargo Center meets high safety-related demands, and it matches the specific needs of air freight. It will be a building at the apron with direct access to the parked aircraft.

The advantages over other airports are clearly defined: possessing a 24-hour operation permit, a parallel runway system for intercontinental flights and broad real estate reserves, the Airport disposes of an excellent infrastructure. On top of that, the Airport Business Park with direct access to the airstrip is an important aspect of the greater Hannover Region logistics center as gateway of various air freight and logistics

activities. Hence, all the important service companies of the air freight and shipping business are located in and around Hannover Airport.

The Airport's connection to the motorway network and its location at the junction of the most important European East-West and North-South routes contribute to its function as consolidating and distribution centre of the whole North German region. The driving time to the big seaports Hamburg, Bremen and the future Jade Weser Port is not exceeding two hours and various commercial transport centers – gateways to railway transport – are nearby, for instance Lehrte where a sophisticated container system ("Megahub") is planned. Hannover Airport as economic factor is a dynamic pacesetter: all companies located in the complex invested together 310



Photo: Garbe Logistics AG

million euros in the year 2007. Nationwide, the location's value added already amounts to 1.3 billion euros. Concerning work development, the Airport alone guarantees about 8,800 employments and 12,000 additional jobs in Niedersachsen as well as 22,000 jobs nationwide.
www.hannover-airport.de

World Cargo Center, Airport Business Park: Hannover Airport's facilities are to be expanded on the highest levels both of security and accessibility.



Germany at its best!

Where Global Players and hidden champions are at home: Discover Baden-Württemberg and Niedersachsen. Read about the highly innovative German automotive industry and learn brilliant concept in architecture and consulting.



Innovative Niedersachsen
Home of global players



Business Baden-Württemberg
Where ideas work



consulting.world
From ideas to reality



auto.world
In cooperation with VDA

Order now! www.localglobal.com

Innovation for Audiophiles

Audio specialist Sennheiser has developed new headphones that combine three new patents at once: The HD 800 features a novel type of transducer, an innovative ear cup design and a multi-layer headband.



Photo: Sennheiser

Special attention was paid to the design of the ear cups to produce a natural listening experience.

The new top-of-the-range headphones are aimed at highly discerning audiophiles. The HD 800 offers an outstanding frequency response of 6 to 51,000 Hz, a brilliant sound image and impressive spatiality. Its key component is a 56 millimetres sound transducer – currently the largest that can be found in dynamic headphones. A new design principle allows the purest possible sound reproduction in exceptional detail. The vibrating part of the diaphragm is not a circular surface area but a ring. This ring is able to set the entire air volume over the transducer into motion, generating the full-bodied sound.

Patented Ring Design

The annular design patented by Sennheiser solves the problems relating to the dynamic transducer principle: "The more transducer surface area is caused to vibrate, the purer the headphone sound becomes at low frequencies. However, transducers with a large surface area have the disadvantage that, at high frequencies, undesired resonances occur at the diaphragm, resulting in distortions in sound reproduction", explains acoustics developer Axel Grell. "This is precisely the dilemma that we have resolved in the HD 800. The ring design minimises the distortion of the sound image, even with a transducer as large as 56 mm."

Special attention was also paid to the design of the ear cups. The sound waves are directed to the ear at a slight angle. This produces a natural listening experience. "We perceive acoustic signals to be natural when we experience them with a spatial extension," is how Axel Grell describes the basic idea. "Today, most music is made to

be reproduced by two loudspeakers, which form an equal-sided triangle together with the listener. This results in a sound field close to the ears that is at a slight angle to the head." This causes the sound to be reflected into the ear canal with slight time differences. The HD 800 simulates this effect by directing the sound wave to the ear at an angle of 45 degrees.

With their circumaural design, the ear cups fit precisely round the ears without pressure. To ensure that the acoustic properties are not impaired by any partial vibrations, the transducer is mounted in high-precision gauze made of stainless steel. The ear cups are made of high-quality plastic with particularly good attenuation characteristics. There is no covering, as less material means that there is less opportunity for partial vibrations to occur. For the same reason, a special headband was developed.

A patented multi-layer design consisting of metal and high-quality plastic attenuates all of the vibrations of the headband, thus eliminating any dips in sound pressure level at low frequencies.

The HD 800 was developed and designed at Sennheiser's corporate headquarters in Wedemark in Niedersachsen, where it will also be produced. The Sennheiser Group, a family-owned company established in 1945, recorded sales of over 395 million euros in 2007, 83 percent of which were generated abroad.

www.sennheiser.com

Sugar Beet Data Net

Digitally planning of beet harvest: Nordzucker accomplishes the required logistic efforts with the help of modern technology. Nordzucker has consistently built up a unique data network which is continuously being improved in the process.

Text: Rolf Hoffmann /Volker Bückmann

Niedersachsen is, with 100,000 hectare area cultivated with beets, the federal state with the highest sugar production. The sugar beets are being harvested from the middle of September until the middle of January and in four processing plants of the company Nordzucker AG they are turned into various kinds of sugar. During this period of time, more than 6 million tons of beets are being transported from the fields to the factories.

After the harvest and the storage of the beets in a clamp at the field edges, the beets have to be transported to the sugar refinery, where they are processed, as fast as possible and just in time.

Nordzucker accomplishes this logistic effort with the help of modern technology. Nordzucker has consistently built up a data network which is continuously being improved in the process. This data network is called MIR: "Modulare Integrierte Rübenlogistik – System Nordzucker", modular integrated logistics of beet. In this system, the data concerning the following processes are connected:

1. Sugar beet harvest and storage in the clamp at the field edge
2. Maintenance of the clamp, putting up nonwovens for protection and quality assurance
3. Brushing off loose earth from the beets and loading them onto freight vehicles
4. transportation of beets to the respective refinery

The main element of the MIR system is registering the location of the storage clamps at the field borders already before the har-



Photo: Nordzucker

vest. They are visualized with the help of a digital map and they are the basis of the planning of the harvest, the maintenance of the clamps and the transportation. The data of the beet distributors (address, telephone number, etc.), name and size of the beet field, estimated yield etc. are linked to the coordinates. With the help of the data, the beet logisticians are able to plan the whole logistic chain, from harvest to transportation of the beets, in an optimal way.

The driver of the beet harvester is the first who uses these data. During the harvest, he forms the beets into clamps exactly at the previously determined coordinates. Afterwards, the yield and the cleared area are known and the managers in the refineries can adjust the planning at an early stage.

The coordinates of the clamps help the clamp attendant who puts the protective nonwoven over the beets to find the clamp. He reports to the MIR system about

the completed covering of the beets which is protection against wetness and frost.

If the removal of the clamp is due, the loading and cleaning machinery finds the right beet clamp with the GPS coordinates and the clamp can be allocated to the beet planter and the specific beet type. The new module "MIR-Truck-Logistics" navigates systematically the truck drivers via GPS to the clamps. After the loading onto the trucks the beet data (clamp coordinates, identification of the cleaning machinery and truck number) are sent to the beet weighing machine in the sugar refinery.

With the MIR system, Nordzucker has a modern data network system at its disposal, which links all of the logistic processes from the field to the sugar refinery. All processes involved can hereby access the required up-to-date data. A second data gathering is not necessary anymore. An additional benefit for the products of Nordzucker AG is created in line with the retraceability and the quality control.

Bio-medical Research

A new alliance of several research institutions aims to bring bio-medical findings into practical application.

Niedersachsen has pooled its bio-medical research in founding the alliance "Translationsallianz in Niedersachsen" (TRAIN). Four universities and two independent research institutions link their infrastructure and expertise from different disciplines ranging from mathematics to chemistry to medicine.

The aim of the alliance is to bring results from basic research systematically into practical application. Patients shall benefit quicker from new treatments and

diagnostic methods. At first, TRAIN will realize three infrastructure projects: The Technical University of Brunswick and the Helmholtz Centre for Infection Research build together the Brunswick Integrated Centre for Systems Biology (BRICS). The Helmholtz Centre and the Leibniz University Hanover share a substance centre, and three institutions build the Hannover Centre for Translational Medicine for early clinical trials.

www.mwkniedersachsen.de



IT - Controlled Car

Researchers from the Technical University of Clausthal have built an electronically controlled car: a computer manages the stirring wheel, brakes, accelerator, lights and mirrors. A first prototype of the TUCar will be shown at the International Motor Show 2009. The scientists have replaced the old-fashioned cabling, that is still widely used even in new cars, with a modern communications system. The advantage: Data can be transmitted a thousand times quicker and signals can be transported in real-time. Besides, different modules are able to communicate with each other. Four university institutes are involved in the project.

www.tu-clausthal.de

CFRP Research Centre

The CFK-Valley Stade strengthens its leading position in the development and production of carbon fibre-reinforced plastics: Construction has started of a new research centre, where technologies for the industrial application of CFRP are developed. The state Niedersachsen supports the works with 20 million euros.

The CFK-Valley Stade is a cluster of 70 companies and research institutions. In total, 120 million euros will be invested in research projects in the next few years. That will benefit Niedersachsen's whole mobility industry, because CFRP plays an increasingly important role in the aircraft, automobile and shipbuilding industry.

www.cfk-valley.com



Sciences in Oldenburg

All through the year, the city of Oldenburg in Niedersachsen celebrates its status as "City of Science 2009" with around 600 events. It has been awarded the prestigious title by the Association of German Research Foundations. The competition, that was held five times so far, was twice won by a participant from Niedersachsen. The events combine science with other areas like economy and culture, and they include exhibitions, concerts, readings, lectures and guided tours. The city won the title because of its future-oriented concept. The whole year will be dedicated to the question, how people will live after tomorrow. Oldenburg is especially renowned for its scientific achievements in the fields of hearing research and energy supply.

<http://www.uebermorgenstadt.de>

First Straw Power Plant

Making electricity from straw – that will be possible with the first German straw power plant that is built in Emlichheim in Niedersachsen. The construction of the plant costs 50 million euros and will be finished in 2010. It will produce 50 megawatts of heat and 60.000 megawatts of electricity annually. The heat will be used by a factory and in a district heating network; the power will be fed into the grid.

www.bioenergie-emsland.de

Magnesium for Better Healing of Bone Fractures

Scientists from the Leibniz University of Hanover have developed magnesium sponges for a better healing of bone fractures. Complicated fractures require the insertion of steel or titan implants. Those can cause inflammations, if they remain a long time in the body. So further operations to remove the implants are necessary. But magnesium sponges dissolve residue-free in

the body during the healing process. They also do not cause allergic reactions. Besides, they have large pores like a sponge, are as light as a feather but as resilient as the human bone. In spring 2009, a project will test processes to fill the pores of the sponges with a drug carrying polymer, thus further increasing the stability and compatibility of the implants.

Idea Expo for Teenagers

An interactive approach is used to inspire young people with enthusiasm for science and technology.

Teenagers can discover their talent for scientific and technical professions at the Idea Expo that takes place for the second time from 5 to 13 September 2009 in Hanover. The first Idea Expo was held in October 2007 and was a great success. Its aim is to show young people that engineering, scientific and technical professions are not boring, but very exciting. The key concept is participation: Companies, research institutes and universities show their latest in-

novations and invite the visitors in mostly interactive exhibits to try out, test and experiment. 160.000 visitors came to the first event. For the second Expo the available space was tripled. But admission remains free. Teenagers from Niedersachsen can even become "ambassadors" for the event, promote it with their picture, take part in press conferences and other events and represent their generation at the fair. www.ideen-expo.de



The Idea Expo invites visitors to try out and experiment.

www.nglobal.de



Battery-Powered Truck

The first electric light truck to be produced in series has gone into production in January. Developed by EcoCraft Automotive GmbH & Co. KG from Wunstorf, the battery-powered EcoCarrier is manufactured in the Volkswagen factory in Sarajewo. 600 trucks are built in the first year.

www.ecocraft-automotive.de

Traffic Info by Mobiles

A system to identify traffic congestions by the use of mobile phones has been developed by several companies with the Technical University of Brunswick and the Gesamtzentrum für Verkehr Brunswick. Mobile calls made during driving are forwarded from one transmission mast to the next. From that data the speed of the cars can be deduced. Decreasing speed means a congestion or traffic jam. In that case, the number of calls also increases significantly. This allows precise conclusions about the extent and expected duration of the congestion. The system called "MobileTraficInfo" is currently being tested on a part of the autobahn A2.

Earthquake Warning

Physicists from Oldenburg have developed the basics for a new early warning system against earthquakes. Prof. Dr. Joachim Peinke and visiting scientist Prof Dr. Mohammed Reza Rahimi Tabar from Iran discovered during their research and analysis of several earthquakes a new indicator that could make it possible to predict earthquakes hours before they occur.

Ready for Global Business

Earlier this year NGlobal, the company for the promotion of export and investment, was founded. Its Managing Director Gerhard Gizler explains how the agency plans to strengthen the international ties of the state .



Interview: Hans Gäng

NGlobal starts out in an environment which presents one of the biggest challenges companies doing international business have ever had to master. How do you see your tasks that include assisting, at this point particularly medium-sized, companies in the promotion of their exports?

I suppose there is no ideal starting date for an agency that has been planned such a long time in advance. In an economically more favourable situation we would have probably also been asked why NGlobal was setting up business right then. But seriously, we want to convince more and more Niedersachsen companies to commit themselves abroad in the medium and long term, irrespective of economic cycles, in order to increase exports.

What is the idea behind bringing together the promotion of exports and of investments in one company?

It was a coincidence that Niedersachsen and the German state both decided to bundle their activities – promoting exports, investments as well as the location – at the same time. GTAI (Germany Trade and Investment) is something like the elder brother (or sister) of Niedersachsen Global. So far exports from and investment in Niedersachsen were being promoted by two separate agencies that did not cooperate that much. But just a few weeks into our cooperation it shows how much we have in common and to what extent both areas benefit from the association and the continuous exchange of information.

Ownership of NGlobal is not just by the state of Niedersachsen, other actors from the economy as well as Hannover Messe company are stakeholders, too. What synergies can you see?

With a 51 percent share, the state of Niedersachsen is indeed the majority stakeholder. Deutsche Messe AG and NordLB bank both hold ten percent each, the state's chambers of commerce own a 29 percent share in our company. This means that on one the hand we have taken Niedersachsen global players on board which allows us to use their branches, subsidiaries or representative offices abroad for our purposes. On the other hand, the chambers of commerce give us access to all companies in the state as well as to the chambers of commerce abroad.

What are the specific tasks and the initial activities you and your team will be tackling?

On behalf of Niedersachsen, NGlobal has already organized Niedersachsen's participation in the Arab Health fair in Dubai. For 2009 we are currently preparing participation in fairs in Bulgaria and France. Of course, we also use Hannover. At CeBIT, for example, there will be as many as three joint stands representing Niedersachsen, and we will organize the Day of Foreign Trade at Hannover Messe on 21 April that will focus on MERCOSUR. NGlobal will also be present at the Munich Transport/Logistik fair as well as at EXPANSION in Hamburg and, like in the past, at EXPO REAL in Munich. For this year we are also planning to organize trips for delegations with the economics minister or the state secretary to India,

"We want to convince more and more Niedersachsen companies to commit themselves abroad in the medium and long term, irrespective of economic cycles, in order to increase exports."

Gerhard Gizler, Managing Director, NGlobal



Marktplatz Welt



CeBIT, 03. – 08.03.09

The world's No. 1 marketplace
for digital business



BIOTECHNICA, 06. – 08.10.09

International Trade Fair, Conferences,
Partnering and Award for Biotechnology



HANNOVER MESSE, 20. – 24.04.09

Das weltweit wichtigste
Technologieereignis



AGRITECHNICA, 10. – 14.11.09,

Exklusivtage Handel, 08./09.11.09
Internationale DLG-Fachausstellung für Landtechnik



PROMOTION WORLD, 20. – 24.04.09

Internationale Fachmesse
für Werbeartikel und Incentives



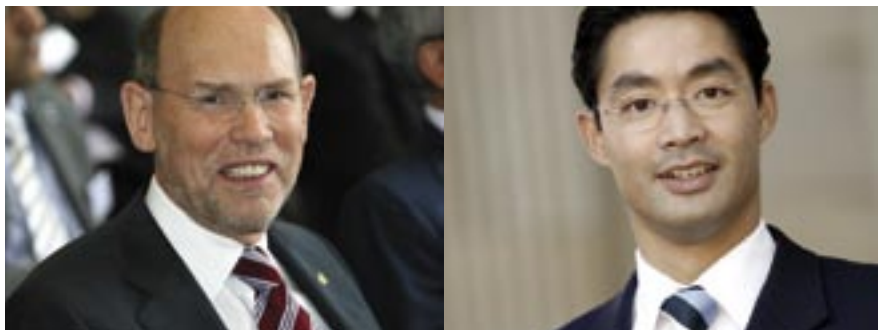
DOMOTEX HANNOVER, 16. – 19.01.10

Die Welt der Bodenbeläge



LIGNA HANNOVER, 18. – 22.05.09

Weltmesse für die Forst- und
Holzwirtschaft



Change-over in Hanover

Niedersachsen has a new Minister for Economics, Labour and Transport: **Dr. Philipp Rösler** (right side) took over from his predecessor Walter Hirche in February this year. The 68-year-old Hirche resigned because of his age. 35-year-old Rösler is the youngest Minister of Economics in Germany. Besides, he is also Deputy Prime Minister. Rösler wants to continue Hirche's course focused on promotion of medium-sized businesses, expansion of the transport infrastructure and internationalization of Niedersachsen's economy.

As a new accent, he wants to pay special attention to the healthcare and the media industry. Previously, he acted as chairman of the FDP parliamentary group. He is still party chairman of Niedersachsen's FDP.

Walter Hirche (left side) has headed the ministry of economics of Niedersachsen twice. His first period of office was between 1986 to 1990, the second term started 2003. In this period Niedersachsen could improve its export figures significantly due aslo to Hirche's commitment to support small and medium sized enterprises in doing business internationally.

the Middle East, Russia, Ukraine, to Africa and Turkey. We have just come back from a trip to the U.S., i.e. the Southern States.

What services does NGlobal offer to foreign companies who would like to get some first information on the Niedersachsen location? How can companies quickly get to know the specific advantages of your location, the networks and clusters? How can they become part of the Niedersachsens economic network?

In order to be able to respond to domestic and foreign inquiries, NGlobal is going to create a closely woven network together with those who promote the economy and growth, the metropolitan areas and district councils as well with our independent towns or cities. We are about to update and expand our internet site www.nglobal.de which will provide easy access to information and answer initial questions. Our NGlobal team is

there to help with the next steps. Here we have proven tools at our disposal like, for example, KomSIS, a wonderful research system for those looking for the right location. It gives information on the 400 towns and municipalities in Niedersachsen in this respect.

What roles do fairs play for NGlobal, both Hannover Messe and international fairs abroad?

I have already commented on Hannover Messe as a location. I would like to add that NGlobal is going to be represented at Hannover Messe with a stand of our own, this will be at the Global Business Forum in Hall 11. Another example, for the federal state of Niedersachsen as a logistics hub it is imperative to be present at the major logistics fairs. There is a brilliant logistics initiative who we cooperate with in this regard.

When we present ourselves we want to

highlight the considerable advantages our state offers (central location in Europe, our property offer that can suit practically all requirements). Then there are joint stands of Niedersachsen companies in important target markets as well as numerous companies presenting themselves individually at fairs abroad of which our specialized NBank is in charge.


The Day of Foreign Trade takes a look at Mercosur. What prospects does the region offer to companies?

As delegations learned during trips to the area and thanks to feedback from our companies, we know that over the past few years the common Mercosur market has become increasingly important, both economically and politically. A South American free trade zone or even integration zone offering plenty of opportunities for business is about to come into existence. It is particularly good news that the Mercosur markets do show positive growth rates, even in these economically quite sombre times.

Where and how does NGlobal draw attention to Niedersachsen companies internationally? How do you introduce companies into new markets?

We achieve this on the one hand by means of the delegation trips and participation in trade fairs that I have already mentioned. On the other hand we organize events to inform those who are interested, we do so together with the chambers of commerce and industry or other local partners. We have a workshop scheduled for May that will look at business opportunities in Scandinavian countries, another similar event will focus on our Dutch neighbours.

Finally, we will make information on recent offers available in our newsletter, on our website www.nglobal.de and via this magazine. We do invite feedback and appreciate any suggestions that readers might have.



We help you cross borders.

HERFURTH & PARTNER
INTERNATIONAL LAW.

HERFURTH & PARTNER

HANOVER
GOETTINGEN
MUNICH
BRUSSELS

MEMBER OF
ALLIURIS GROUP

BRUSSELS
LONDON
AMERSFOORT
LUXEMBURG
PARIS
LYON
MADRID
BILBAO
ALICANTE
MALAGA
LISBON
MILAN
COPENHAGEN
HANOVER
MUNICH
ZUG
VIENNA
BRATISLAVA
SOFIA
ISTANBUL

CORPORATE
MERGERS & ACQUISITION
COMMERCE & TRADE
TECHNOLOGY
MARKETING & SALES
REAL ESTATE

HERFURTH & PARTNER
RECHTSANWÄLTE GBR
LUISENSTRASSE 5
D - 30159 HANNOVER
FON++49-511-30756-0
FAX++49-511-30756-10
info@herfurth.de
www.herfurth.de

A Lead to Industry

Deutsche Messe, organizer of Hannover Messe and CeBIT, is one of the world's leading trade fair companies. Dr. Wolfram von Fritsch, Chairman of the Managing Board, about the economic crisis and why exhibitors should come all the same.



"No other trade fair can offer the diversity and the synergies that we offer – and the opportunity to see allied areas of technology in their broader context."

Dr. Wolfram von Fritsch,
Chairman of the Managing Board, Deutsche Messe

Interview: Hans Gäng

As we go into 2009, companies planning to exhibit at trade shows face unprecedented economic challenges. Is this reflected in your exhibitor numbers?

Naturally we too are feeling the effects of the crisis, because as a trade fair organizer we show what is happening right across industry. We are noticing that quite a few companies have become more cautious, and are deferring a decision about whether or not to exhibit at trade shows.

But because our business is so broadly based, we are not feeling the impact of the crisis quite so much as other types of business. So while three companies in one sector might hold back on their investment, new exhibitors are coming forward in other sectors.

Even in difficult economic times, trade fairs in Hanover have historically performed the function of opening up new markets for German industry. To what extent can and must the events you organize carry on this great tradition?

HANNOVER MESSE has always given a lead to industry, and that will remain the case this year too. This April's show will be setting a new global benchmark with a wealth of new products, technologies and solutions. It is the task of flagship trade fairs to document new trends and thus to show businesses how they can weather the crisis and move forward. We are very pleased that Research & Technology, the trade show for R&D, is



attracting so many exhibitors, especially in such a difficult economic climate. This means that companies are continuing to invest in researching new technologies, so that they can emerge from the crisis in a stronger position.

You have made energy supply one of the key themes of this year's HANNOVER MESSE, and this is clearly going to be a big issue in the future not only for industry, but for sustainable development worldwide. How will the show be able to drive the debate forward?

This year's show will be giving a lead on many different fronts, spearheaded by the next round of the WORLD ENERGY DIALOGUE. Under the overarching theme of "Energy efficiency in industrial processes", this year's round looks at "Security of Energy Supply". We are expecting numerous high-calibre guest speakers, who will be giving their answers to pressing questions about our future energy needs.



Photo: Deutsche Messe

What do you think are the chances that by engaging with these issues Hanover will kick-start a new phase of industrial growth?

Energy efficiency and environmental technologies are both themes that pervade the entire show. In every display category you can find presentations that put the spotlight on energy-efficient mobility. One example is the special display "E-Motive", which showcases electric drives. This is all about the electrification of drive trains for vehicles and mobile machinery. Universal in application and emissions-free, electric drives can be powered by a variety of primary energy sources – including renewables. Worldwide there is a need for new investment in power stations and power distribution grids, in both the conventional and the renewable sectors. This in turn creates massive sales opportunities for companies exhibiting at the energy-related trade fairs in the HANNOVER MESSE lineup.

None of the German major trade fairs attracts a more international public than CeBIT and HANNOVER MESSE. How do you convince foreign exhibitors and visitors that they can benefit from them, particularly in times of economic crisis?

Every economic crisis also brings with it opportunities, and these must be grasped. With its format of multiple flagship trade fairs assembled under one roof, HANNOVER MESSE stands for diversity and knowledge-sharing across traditional industry divides. This means that exhibitors will not only encounter their direct competitors, and see how they compare with them, but they can also talk to their suppliers about new technologies. To give you an example: a manufacturer of wind turbines can come to HANNOVER MESSE and find out all about mechanical drive systems, new casting technologies, surface treatment solutions, generators and new servicing and maintenance options. No other trade



Photo: Deutsche Messe

CALIFORNIA @ CEBIT 2009

California's global leadership in information technology takes center stage at the CeBIT 2009. It is the first state to be the official partner of CeBIT, the world's largest trade fair for digital business solutions and information and communications technology. That role was previously reserved only for nations. As the Partner State, California businesses will be highlighted above all others. "We look forward to demonstrating California's global leadership in information communications technology," says California's Governor Arnold Schwarzenegger. „Not only does CeBIT provide California with a venue to showcase our innovative spirit, it is a tremendous opportunity for California companies looking to promote their products in the global marketplace." Schwarzenegger will open the CeBIT together with Chancellor Angela Merkel. At CeBIT 2009, California will spotlight the state's innovative ICT technologies in several key industries including green IT, entertainment, Internet-based services, TeleHealth, security, consumer electronics, digital content generation and distribution, aerospace, and research and technology. About 50 companies are represented. A highlight will be the Germany-California ICT Summit as an opportunity to step-up collaboration and stimulate bilateral business. "California is the cradle of the international ICT industry. To this day, world-changing trends and innovations are still being developed there", says Ernst Raue, Managing Board Member at Deutsche Messe, the company behind CeBIT. "California's special presentation at CeBIT will demonstrate Silicon Valley's power to innovative."

fair in the world can offer them all this under one roof.

So if you are planning to use the economic downturn to get in shape for the recovery when it comes, you can't afford not to be at HANNOVER MESSE – and that applies to exhibitors and visitors alike.

What initiatives is Deutsche Messe relying on to secure pole position in national and international markets?

We are totally committed to quality – and quality always wins out in the end. No other trade fair can offer the diversity and the synergies that we offer – and the opportunity to see allied areas of

technology in their broader context. The worldwide interest generated by this event each year attracts the attention of the business community, politicians and the press. But of course we are not content just to be different. We intend to carry on exploring new areas of interest and adding to our range of service offerings, with the aim of encouraging more smaller companies to exhibit in Hanover. For example, we are constantly introducing more live presentations of complete systems solutions. We are creating new forums to debate and explore the latest innovations and trends.

And we are continuing to expand our program of conferences and congresses, transforming HANNOVER MESSE from a traditional showcase for technology into an important global platform for international dialogue and knowledge transfer.

How important are new formats for promoting international contacts at your trade fairs, specifically in terms of helping small and medium-sized firms to expand into foreign markets?

This year's exhibitors have the opportunity to present their products and services to visiting professionals at 13 different trade fairs. 95 percent of all visitors are classed as trade visitors, and a high proportion of these have a say in their company's purchasing decisions: so exhibiting companies can be certain that having a presence at the show will really pay dividends. Nowhere else can they make new contacts so easily, gain a foothold in new markets and position themselves up against their international competitors. And this applies as much to smaller companies as it does to the big global players. Naturally we provide a complete service package to make life as easy as possible for our exhibitors, not least the smaller firms. We can help with the planning and marketing of their presentation at the show, we can erect their stand and dismantle it after the show, and during the show itself we provide security services, catering and stand personnel.



Photo: Inka Ziegenhagen

Global Business Forum

The Global Business Forum is the platform for all foreign trade related events at Hanover Fair. In 2009 the focus will be on the dramatic changes in the global economy after the financial crisis. For industrial businesses in Germany and Europe the crisis means an unprecedented challenge. Particularly small and medium-sized companies, the pillars for employment and innovation in Europe, are seeking new international contacts at the Global Business Forum. It serves them as a source of information about business opportunities in global target markets. The Forum has been initiated by Deutsche Messe and BDI, the Federation of the German Industry, a rea-

son for the state of Niedersachsen, the Federal Ministry of Economic Affairs and the umbrella associations of the German economy to commit themselves as partners. In 2009 all events at Hannover Messe that are related to foreign trade will be linked with the Global Business Forum.

Within the framework of the Global Business Forum, partners want to offer companies first-hand information and contacts to the most significant industrial markets worldwide.

Global Business Forum
20–24 April 2009, Pavilion Hall 11
www.gbfi-online.de

The Global Business Forum brings together quite a network of different business organizations. What kind of support and help can small and medium-sized enterprises in particular expect from this event?

Through a combination of exhibition, forums and symposia the Global Business Forum enables these smaller businesses to explore opportunities for expanding into international markets. For example, there is a presentation on the European Cluster Policy, with its various initiatives to promote cooperation, innovation and competitiveness.

This event is aimed primarily at small and medium-sized enterprises, giving them access to knowledge resources, showing them how to translate technical innovations into commercially viable products and how to utilize shared resources.

Deutsche Messe has agreed to participate in Niedersachsen's NGlobal economic development initiative. What synergies do you expect this collaboration to generate?

One of the key goals of Niedersachsen's economic policy since 2003 has been to promote international cooperation, and NGlobal has been set up specifically in order to strengthen Niedersachsen's position in the global marketplace. It's not hard to see where the synergies lie here, given that we at Deutsche Messe have been developing our international operations for decades, and now maintain a worldwide network of local representatives.

Only recently Deutsche Messe has worked together with NGlobal to set up an office in Dubai representing Niedersachsen's business interests in the region, which covers the United Arab Emirates, Qatar and Oman. In return NGlobal will organize a joint presentation for firms from Niedersachsen at the industrial trade fairs that we are staging in Dubai in January 2010. And we plan to develop this collaboration further in the coming years.



Mercosur Option

Mercosur is the focus region of 6th Niedersachsen Foreign Trade Conference at Hannover Messe. A first class opportunity to gain information and new contacts in Latin America.

At the 6th Niedersachsen Day of Foreign Trade on 21 April 2009 in Hanover, the focus will be on the Mercosur markets. Experts will discuss the development and the economic framework of the South American economic community. There are plenty of business opportunities – despite the crisis.

Target Region for Investment

In 1991 Argentina, Brazil, Paraguay and Uruguay founded the South American economic association Mercosur (Mercado Común del Sur – common market of the South). In 2006 Venezuela became a full member and is currently in the process of being integrated into the domestic market. Associate members are Chile, Bolivia, Peru, Colombia and Ecuador. The EU is Mercosur's second most important trade partner after the United States. 19.6 percent of the foreign trade is with the European Union. The EU is also the economic association's most important investor. For

the EU, Mercosur ranks eighth among its trade partners; in 2007 three percent of the EU's total foreign trade was with Mercosur countries.

Mercosur mainly exports agricultural products to the EU. In 2007 nearly 22 percent of all agricultural products imported by the EU came from the Mercosur states. The EU in turn exports mostly industrial goods such as machines, transport equipment and chemicals.

NGlobal
Niedersachsen Global GmbH

Organized by:
Niedersachsen Global GmbH,
Tuesday, 21 April 2004, Pavilion Hall 11,
Global Business Forum
www.nglobal.de



Simplified Incorporation

The rules applicable for the most popular corporate form, the GmbH, have been significantly improved. Legislation has recognised that foreign investments require both safety and a simple and comprehensive legal framework and system.



"Changes in the corporate tax law and new possibilities with the GmbH have improved the conditions for local as well as for foreign companies in Germany."

Ulrich Herfurth, Attorney at Law

The new regulations applicable for corporate tax has caused further advantages for the GmbH. The statute relating to the corporate tax reform is applicable as of 1 January 2008 and simplifies the taxation procedure. With regards to the GmbH, corporate tax has been reduced to 15 percent. This tax rate is advantages in the event that the GmbH chooses to retain its profits for future investment and not to distribute the same as dividends. In the event that the profits are distributed as dividends, the shareholder would be liable to pay tax for the same at the rate of his personal income tax. Unlike before, corporate tax would no longer be off-set against the personal income tax.

The limited liability company or GmbH was introduced into German law in 1892. Being the classic feature in German law,

which has been widely "exported", many other countries have adopted this model both wholly or partially since then.

The GmbH is the most popular form of doing business in Germany and is the "standard" corporate form utilised by German mid-sized businesses. To date, some one million GmbHs are in existence.

Further development of foreign legal systems around the world and increasing economical globalisation has lead to increased competition between the legal systems. This has caused a need for the GmbH to adapt to modern day needs.

Another factor playing a role in the necessity for adaptation was the judgement of the European Court of Justice that other European forms of doing business must be recognized and usable in Germany, even when these companies remain listed in a



Photo: istockphoto

foreign trade registry and the management (administrative seat) is exclusively located outside of Germany. This obligation to recognise other corporate forms caused many new company incorporators to elect the English Limited Company as opposed to the German GmbH. This was mainly due to the fact that the Limited requires no minimum share capital and can be quickly and cheaply established. The many disadvantages of operating a foreign law company in Germany were often not considered by the incorporators.

New GmbH Law

For the reasons mentioned above, at the end of 2008 new legislation adjusted the GmbH to meet new market requirements at the end of 2008. These changes introduced interesting simplifications and improvements (Law on the Modernization of GmbH Law and to Fight Abuses, known by its German acronym, MoMiG).

Simplified and Accelerated Incorporation Procedure

Under the new GmbH Law, the minimum statutory capitalization is only one euro. However, in such a case, the incorporators are not permitted to use the term "GmbH"

www.nglobal.de

but instead have to use the designation "entrepreneurial company (limited liability)" or the acronym "UG (limited liability)". The entrepreneurial company has to set aside in a reserve amounting to 25 percent of its annual net revenues, after deduction of any carryover losses each year. Once the reserves build up to EUR 25,000, the UG may transform the reserves into capital contributions and may then designate itself as a GmbH. This transformation is however not obligatory and the incorporators can elect for their business to remain in an entrepreneurial company.

The new statute provides model forms for companies with up to three shareholders and one managing director, which can be used by incorporators so that the incorporation procedure can run faster and more cost-effective.

The incorporation procedure has also been accelerated in that registration of the GmbH in the companies registry is now possible prior to the receipt of any necessary public licenses (for example restaurant licenses). Furthermore, there is no general need to prove payment of the share capital. The trade registry would only require such evidence when there is a substantial doubt that such payment has actually been made.

The changes made to the GmbH have caused a further attractive advantage for the GmbH as compared to the English limited, namely, that it is now possible for the GmbH to maintain an administrative office/domicile (Verwaltungssitz), which differs in location with the actual registered domicile of the company (Satzungssitz).

In order to create more transparency, the new law provides that only persons listed on the list of Shareholders are deemed to be shareholders of the GmbH. By an inspection of the list at the trade registry, third parties can receive information on the shareholders. This new system also allows

third parties under certain circumstances to acquire shares in the company in good faith from persons without good title.

One major change in the new GmbH Law is the relaxation of the strict rules on capital contributions and capital maintenance. In particular, the rules on equity capital substitution have been deregulated and simplified. This includes the rules on shareholders' loans to the GmbH and vice versa. However, according to the new law, shareholders' loans are no longer priority debts in insolvency proceedings.

For company groups there are improvements regarding cash-pooling. Payments are now accepted if there is an effective claim for repayment.

Protection of Creditors

The new legislation also strengthens the protection of creditors of the company. It expands the duties to file an insolvency petition and increases the liability of the managing director for careless management as well as his liability in the event of insolvency.

The service of documents to the company is facilitated by the requirement that the GmbH has to file a proper domestic business address with the trade registry to which documents can be served.

www.herfurth.de

With a new and fully revised edition of "My Business in Niedersachsen"; investors will be able to obtain comprehensive information regarding the extraordinary opportunities to do business in Germany with Niedersachsen as their choice location.





Popular Destination

Niedersachsen's beautiful islands, mountains and historical sights attract lots of tourists every year. The landscape is particularly varied.

At times the islands are bathed in sunlight, at times they are shaken by storms. Mountains invite not only for hiking and climbing, but tobogganing and skiing are options, too. And Lüneburger Heide offers numerous trails for hiking, biking or horse-riding. Fairytale like landscapes with romantic rivers charm the visitor in the hilly Weserbergland. More natural beauty and historical sights await tourists in Emsland, Osnabrücker Land and in the Grafschaft Bentheim. Nowhere in Germany will you find an area as beautiful and varied as Niedersachsen, says Carolin Ruh, expert for tourism, who heads the TourismusMarketing Niedersachsen GmbH (TMN).

The aim of the tourism agency is to promote Niedersachsen as a destination for holidays and other trips, to attract tourists from other parts of Germany and from abroad, also in the long term. A core business of the agency is to continuously improve the services offered. And, judging by the constantly growing figures for

overnight stays, things seem to be working out. In 2007, almost 36 million overnight stays were recorded in Niedersachsen; this is a 2.9 percent increase compared to 2006. Niedersachsen, therefore, ranks top among Northern Germany's holiday destinations, on a nationwide level it is uncontested number four (Federal Office of Statistics).

According to a survey carried out by market research institute Gesellschaft für Konsumforschung (GfK), Niedersachsen is the second most popular holiday destination for Germans.

For business travellers the state capital Hannover with its numerous leading fairs and Wolfsburg, home to Volkswagen, are prime destinations. To encourage tourism, new projects are being developed and ex-

Photos: TourismusMarketing Niedersachsen GmbH



isting structures are being expanded. The East Frisian Islands and the North Sea coast have always been popular destinations and have lost none of their charm. Every year millions of people spend their holidays in the very North of Niedersachsen. Spa centres located between the Harz Mountains and the coast are likewise big attractions. There are about 50 therapeutic spas, 30 climatic spas and 100 resorts that particularly cater for those requiring a restful holiday; a wide range of offers, exclusive accommodation and trained staff are awaiting the guests in need of relaxation.

Towns in Niedersachsen are also broadening their offers for shopping, they promote facilities for the arts and culture in general. Stalactite caves – Höhlenerlebniszentrum Iberger Tropfsteinhöhle – in the Harz Mountains, Varusschlacht Besucherzentrum informing about battles between Teutons and Romans, and the Adventure-Zoo Hannover are just a few points of interest that hold a spell on visitors. Volkswagen Autostadt Wolfsburg counts an annual two million visitors, and the sheer number of theme and leisure parks in Lüneburger Heide is unrivalled in Europe, offering a wide range of unique outdoor events for the adventurous and wildlife safari parks for animal lovers.

TMN has published a photo booklet about Niedersachsen, a special gift that local patriots, domestic and foreign visitors will appreciate alike. Order a free copy on their website.

www.niedersachsen-tourism.com

Phone: +49 511 270488-50

Welcome to Niedersachsen!



Photo: Sprengel Museum Hannover

Marc, Macke & Delaunay

The Sprengel Museum Hannover dedicates an exhibition to the painters Franz Marc, August Macke and Robert Delaunay, showing key works of Classical Modernism. "Marc, Macke und Delaunay. The Beauty of a Fragile World (1910–1914)" is shown from 29 March to 19 July 2009. The three artists were united by one common theme, namely that of light, its fragmentation and its concomitant energizing and heightening of colour. The exhibition comprises about 90 paintings as well as 100 watercolours and drawings that document the artistic exchange between German and French avant-garde.

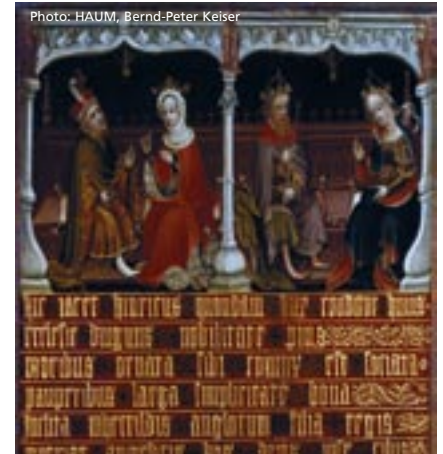
www.nglobal.de

Leonardo da Vinci

The museum Schloss Salder in Salzgitter shows works by Leonardo da Vinci till 8 March 2009. The exhibition that was only shown in one other European city will later move into the new Da Vinci museum in Rome. It comprises 45 works that have been built on a 1:1 scale according to construction plans by the great artist, scientist and inventor.

Visitors can marvel at flying apparatuses, weapons, chimes and many more inventions. Of the original constructions that Leonardo Da Vinci built 500 years ago, none have been preserved.

www.salzgitter.de



State Exhibition: Otto IV.

Brunswick marks the 800th coronation anniversary of emperor Otto IV. with the State Exhibition of Niedersachsen "Otto IV. – Dream of a Guelph Empire". It will be shown from 8 August to 8 November 2009 at the Landesmuseum Brunswick. For the first time, the life and achievements of the only Guelph emperor in German and European history will be presented in a big exhibition, located at the original historical castle courtyard, in the Braunschweigische Landesmuseum, Dankwarderode castle and the cathedral of St. Blasii. Imposing samples such as the coronation cloak, parts of the Guelph Treasure, Otto's testament and the foundation-certificate of the duchy Brunswick and Lüneburg are among the exhibits.

Fundación "la Caixa"

As the first museum in Germany, the Kunsthalle Emden shows 30 works of art from the Fundación "la Caixa", one of the most important collections of temporary art in Spain. The exhibition will be shown from 14 March to 21 June 2009. It focuses on American minimal art and the European environment, on the gestural painting of the 1980s/1990s and on young Spanish positions. The media used by the artists range from paintings and photos to sculptures and videos.



Photo: Braunschweig Stadtmarketing/Kornath

From Rulers to Researchers

The past and the future meet each other in the city of Brunswick, where old monuments bear witness to a rich history and new inventions pave the path to tomorrow.

Text: Julia Koch

The city, that is located about 70 kilometres east of Hanover, is more than a thousand years old. Its history is closely connected to Henry the Lion, member of the Guelph dynasty, Duke of Saxony and Duke of Bavaria, and his son Otto IV., the only emperor of the Guelph dynasty. Henry made Brunswick the capital of his state, and his heraldic animal, the lion, is still its emblem. That is why Brunswick is also called the Lion City.

The lion statue stands in front of the famous 800 year old Brunswick Cathedral, which belongs to the top ten most visited

Protestant churches in Europe. Both Henry und Otto are buried there. In 2009, the city celebrates the 800th anniversary of Otto's coronation as emperor with numerous events recalling the Middle Ages such as a knights' tournament and a historical Pentecost celebration.

Historical Sights

Brunswick Cathedral and Burg Dankwarderode, a 19th-century reconstruction of the old castle of Henry the Lion, are amongst the historical sights that have survived World War II, though much of Brunswick's inner city was destroyed. Besides, picturesque half-timbered houses, old churches

and the old town market with the town hall are still preserved.

One can take a turn around the inner city on a boat trip on the river Oker. The river was the cause for Brunswick's economic success in the past centuries because goods could be transported via the rivers Aller und Weser to the North Sea, making the city an important trading town. It even became member of the Hanseatic League. But Brunswick also used to be a cultural centre: In the Staatstheater (State Theatre) the plays Emilia Galotti by Lessing and Goethe's Faust I were performed for the first time in the 18th and 19th century respectively.

Around the monuments of a rich past, a lively present has evolved with extensive shopping opportunities. In fact, according to a study by the Chamber of Industry and Commerce Brunswick is the number one shopping destination in Niedersachsen, even surpassing Hanover. The city gets 12.8 million day trippers every year. From 2005 to 2007, a replica of the Ducal Palace with a reconstructed facade was built using many original parts and now contains a new shopping centre. The original palace, an imposing 19th century building, had been badly damaged in the war and was later demolished. A replica of the original quadriga (a larger-than-life sculpture of the goddess Brunonia in her chariot with four horses) rises above the portico. The quadriga is one of the biggest of its kind in Europe.

At the same time, Brunswick shapes the future as the centre of the most research-intensive region in Europe.

A study by Eurostat and Deutsche Bank Research showed that the region has the highest “density of scientists” in Europe with four percent of its working population employed in this field.

It even has a leading place worldwide with its research and development intensity coming to 7.1 percent of GDP. 27 scientific organisations and research institutions are located there as well as 250 companies from the high technology sector. That also impressed the Association of German Research Foundations: It awarded Brunswick the title “City of Science 2007”. With the concept “Kitchen of Ideas Brunswick” the city cooked up close to 800 events connecting science, business, culture and the people in the region with each other.

One of the flagship projects of Niedersachsen is the Brunswick Research Airport,

a cluster for traffic safety and efficiency. It is the second largest of its kind after the Airbus-base Toulouse. Companies as well as public and scientific institutions are located at the Airport, for example the German Aerospace Center, the German Federal Bureau of Aircraft Accidents Investigation and three institutes of the Technical University of Brunswick. There, university students developed the car Caroline that can drive by itself and came off as the best non-US team in the Urban Challenge 2007, a US-competition for unmanned cars. And the company Mavionics built the world’s smallest plane with an autopilot system. Such concentrated competence makes the city an attractive business location.

Centre for Sugar Industry

Siemens is located there with a factory that is leading in railway automation. The company has developed the CargoMover, a kind of truck running on rails, jointly with the Center of Transportation at the TU Brunswick. Volkswagen AG, which opened its first factory in Brunswick in 1938, still produces there as well as several suppliers. It constantly has exchanges with regional research institutes, including the Brunswick University of Art, in the field of Transportation Design.

Besides, Brunswick is traditionally a centre for the sugar industry. Several sugar factories merged and formed the Nordzucker AG that is today the second biggest sugar producer in Europe. Also Robert Bosch GmbH, Intel, New Yorker and Heimbs Kaffee have chosen the Lion City for headquarters. Apart from that, Brunswick has its own brewery. The beer by the Hofbrauhaus Wolters is the favourite of the locals.

At the end of February each year, the people of Brunswick celebrate “Schoduvel” – the local carnival that has roots going back 700 years in time. Noise, costumes and scary behaviour are supposed to scare away the ghosts of death, coldness and danger. Today, Schoduvel is celebrated with one of the biggest carnival processions in Germany.



Photo: Braunschweig Stadtmarketing

For art lovers: The Herzog Anton Ulrich-Museum is the oldest museum in Germany that is open to the public.



Photo: Braunschweig Stadtmarketing



Photo: Braunschweig Stadtmarketing/Kornath

Brunswick is known for its renowned research institutions and for its imperial heritage.



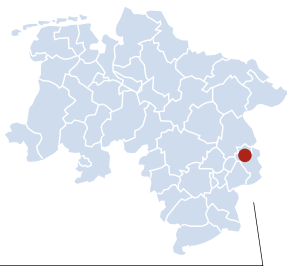
Photo: phaeno



Photo: phaeno

Wonders of Science

Watching a fire tornado, floating on a flying carpet – the wonders that are possible through natural science can be experienced in the experimental landscape phæno in Wolfsburg.



The experimental landscape phæno wants to awaken the curiosity of its visitors. It also promises a lot of fun.

Opened in 2005, it offers 250 interactive stations on eight thematic areas from the world of natural science and technology. These comprise Wind and Weather, Micro / Macro, Matter, Light and Vision, Life, Energy, Information and Movement.

Visitors can Experiment

“The essential idea is to have fun, to feel one’s curiosity being awakened, and to deepen one’s knowledge”, describes Dr. Wolfgang Guthardt, the director of phæno. “We deliberately set no agenda and lay down no paths to be taken. Each visitor paves his or her own individual way.” Among many other experiments, visitors can simulate the movement of waves, perform a crash test with their own bodies, produce ice at a temperature of 4°C without the addition of cooling, generate sounds with heat, test their reaction speed, analyse DNA, experience the

weightlessness of objects, generate electricity through muscle power and fix their own shadow to a wall. The building itself is also amazing: The architectural design was composed by the Pritzker Prize-winning, London-based architect Zaha Hadid. Specially for this dominant location in Wolfsburg – directly sited on the ICE rail line – she has created what must be the largest accessible sculpture in Germany. The imposing structure, borne by conic supports, is enthroned high above street-level. Its interior, at a height of seven metres, opens up a constructional wonderland of forms reminiscent of craters, caverns, terraces and plateaux.

phæno is an initiative of the city of Wolfsburg. Altogether, the city government has invested a total of 79 million euros in the project from its concept resolution in 1999 to its completion in 2005.

www.phaeno.de

turning ideas into holidays

inspiration niedersachsen



www.niedersachsen-tourism.com



TourismusMarketing
niedersachsen



Emden's location at the North Sea is great for sailing, but the harbour is also an important economic factor for East Frisia.



Harbour for Cars & Culture

The seaport Emden provides jobs for a large part of East Frisia. It is an important port for the automobile as well as the wind energy industry. Visitors enjoy the town's cultural offerings such as the renowned art museum and the nationally acclaimed film festival.

Text: Julia Koch

Emden is shaped by its harbour. The city is located in the West of Niedersachsen where the river Ems flows into the North Sea. The port was the cause for Emden's wealth in the past and in the present gives it an above-average employment density, providing a large part of the region with jobs. It has an annual turnover of 4.4 million tons. Around the year 1600, maritime trade and the inflow of religious refugees from Holland, many of them merchants and ship-owners, made Emden very wealthy. It used to be one of the most important ports in Northern Europe. The English poet Christopher Marlowe even had his Dr. Faustus say: "The signiority of Emden shall be mine!"

Today, Europe's third biggest car lading port is located in Emden and handles almost exclusively cars by Volkswagen.

The Volkswagen factory is the biggest employer in Emden with about 9,500 employees. The range of products include the Passat Limousine and Passat Variant models, the body components for the plant at Zwickau as well as the surface parts from the new press shop for the Lupo and Touran production.

Emden also carries out another company activity by handling sea transport of around 800,000 vehicles. Car transporters carrying up to 6000 units arrive at and leave Emden nearly every day. Several suppliers are also located in Emden.

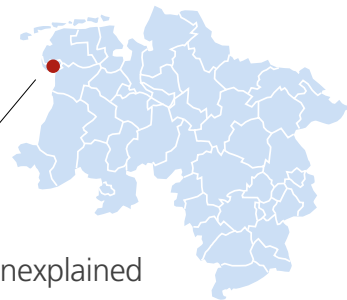
The second biggest employer in Emden is the shipbuilding company Nordseewerke. Founded 1903, it is one of the oldest still-existing shipyards in Germany. It is now a subsidiary of ThyssenKrupp Marine Systems and employs about 1,400 people. Besides naval vessels, Nordseewerke builds container and other freight-carrying ships. In 1971, the cruise liner Sea Venture (later renamed Pacific Princess) was constructed. The ship is well-known as the film location of *The Love Boat*.

Important for Wind Industry

Besides, Emden is an important location for regenerative energy: Germany's leading wind turbine manufacturer Enercon ships its components in the port and also opened a factory there in 2005. Enercon is headquartered in the nearby city of Aurich and reactivated an old railway line between the two towns for transportation. Offshore company Bard Engineering made Emden its headquarters and has its production facilities at the port so that the wind turbine parts can be transported directly onto the ships.

The city itself has installed wind turbines as well as a biogas plant and photovoltaic plants. For example, solar panels were placed on public buildings and on a noise protection wall of several hundred metres lengths. For that commitment Emden was awarded the German Solar Award in 2005. It was stated that the city was exemplary for its use of regenerative energy in Germany as well as Europe.

Emden is a popular destination for tourists holidaying at the coast, who visit the city on a day trip. Especially the renowned



"So much is unexplained in this world. To keep it that way, we have science."

Otto Waalkes, comedian from Emden



Photo: Inka Ziegenhagen



Photo: flickr

Herring filets or an aromatic cup of the creamy, sour and sweet East Frisia Tea – the region is well-known for its gastronomic specialties.

art museum Kunsthalle Emden is a visitor magnet. It was donated by the famous German journalist Henri Nannen, who was born in Emden. Nannen used all his wealth to build the museum and contributed his own extensive art collection. Later, the museum was expanded with the outstanding collection by the art collector Otto van de Loo from Munich. Beside the Kunsthalle, the Ostfriesisches Landesmuseum Emden (East Frisia State Museum Emden) and the library Johannes a Lasco Bibliothek are among the cultural highlights.

Hometown of Otto Waalkes

One of the most famous persons from Emden is the comedian Otto Waalkes. He became famous in the 1970s and 1980s in Germany with his shows, books and movies. His perhaps most famous trademark are the 'Ottifanten' ('Ottiphants'), elephant-like comic characters of his own design. In 1987, he opened the Otto Huus in Emden, where an exhibition about his life is shown.

The red-and-yellow-striped lighthouse of Pilsum nearby gained cult status through one of Otto's movies and is today a favourite spot for weddings. The internationally best-known personage from Emden is the film director Wolfgang Petersen. He be-

came famous with the movies *Das Boot*, *The Perfect Storm*, *Troy*, *Outbreak*, *In the Line of Fire* and *Air Force One*.

Visitors to Emden should try the local speciality matjes herring. Until the 1960s, Emden followed its herring fishing tradition, than the sea was overfished. Today, the matjes comes from Holland and is refined in Emden. Every year, the people of Emden celebrate the beginning of the matjes season with a festival, the so-called Matjes Days. Many visitors travel to Emden to taste the new matjes, hear shanty choirs and watch traditional ships that have come to the seaport for that occasion. The festival takes place from 5 to 7 June 2009.

A few days later, on 10 June, starts the 20th International Film Festival Emden-Norderney. It is one of Germany's most nationally acclaimed and internationally recognised film festivals and the most visited in Niedersachsen. The main focus of the programme is on current film productions from north-western Europe. Due to its extensive programme of new British and Irish films, the International Film Festival Emden-Norderney has also come to be regarded as a showcase for these productions in Germany.

As in all East Frisia, tea is the local's favourite drink. The people in that region drink about ten times the amount of tea as in the rest of Germany.

They have their own East Frisia Tea, and a special culture has developed around tea drinking. An integral part is the so-called kluntjes, a rock candy sugar that makes a sizzling noise when the hot tea is poured and melts slowly. Then, cream is added, but traditionally not stirred. In Emden, the tea company Thiele & Freese, founded in 1873, is one of the few who are allowed to call their tea "Real East Frisia Tea". Visitors should find one of the many comfortable tearooms in Emden and settle down to a cup – or rather three, because that is traditionally the minimum.



Romantischer Winkel

SPA & WELLNESS RESORT

★★★★★

Bismarckstraße 23
37441 Bad Sachsa/Südharz

Phone +49 (0) 55 23/30 40
Fax +49 (0) 55 23/3 04-1 22

info@romantischer-winkel.de
www.romantischer-winkel.de

TUSCAN VACATION PARADISE IN THE SOUTH HARZ MOUNTAINS

What enchants a place, in which you can forget about time and space, recharge your inner batteries and always feel welcome?

Is it the gorgeous location at an idyllic lake in the South Harz Mountains? Our Active & Pampering Programs for the whole family? Or could it be the fantastic SPA & Wellness Paradise? Surely it is also the loving and private atmosphere that surrounds you – come and find out for yourself!

Twice in the past years, our guests have voted us 1st place in the five-star category: "Most Popular Hotel in Germany".

*Feel good
All around*



We will gladly
send you our
detailed brochure.

www.romantischer-winkel.de



**WELLNESS
APHRODITE 2008**

In November 2008 the „Romantischer Winkel“ was elected most innovative SPA in German-speaking Europe with the „Wellness-Aphrodite 2008“.



Innovative Niedersachsen Preview

Next edition to be published in September 2009

- Maritime Clusters: New services, added value, more perspectives
- Health Care: Employment, welfare, innovation for Niedersachsen
- Design: Niedersachsen's „Creative Class“ on the move

Get Innovative Niedersachsen

at hotels and at CeBIT and Hannover Messe at all Niedersachsen pavillons, in Convention Center CC as well as in Pavillon of Hall 11 (Global Business Forum).

Advertise Now!

Advertising, articles: meet the editors at Global Business Forum of Hannover Messe or contact us:

local global GmbH
Phone: +49 711 / 22 55 88-0
marketing@localglobal.de



IMPRINT

Publisher

local global GmbH
Marienstraße 5, 70178 Stuttgart
Phone: +49 711 / 22 55 88-0
redaktion@localglobal.de
www.localglobal.de

Concept

Hans Gäng

Editors

Hans Gäng, Julia Koch,
Inka Ziegenhagen

Translation

Martina Mühlhäuser, Erich Petricevic

Editorial Design, Art Direction

Inka Ziegenhagen

Cover Photo

Stiftung Offshore Windenergie, Flickr

Print

GCC, Calbe

Subscription & Advertisement

Phone +49 711 / 22 55 88-0
marketing@localglobal.de



Flexibility through time-work

KURT Zeitarbeit is a temporary employment company which is founded in 1992 in Germany with a comprehensive service offering that includes:

- ▶ Temporary and contract staffing
- ▶ Outsourcing
- ▶ Interim Management
- ▶ Onsite Management
- ▶ Outplacement

With eight offices in Germany, the company is well positioned to service its client base, be this for large global clients or small local business partners. this motto makes advantages for companies and job applicants possible. Companies can react contemporarily on economic changes so that every job-seeker can correspondent with ever changing in business of today and tomorrow.



Auf den Pohläckern 9 | 31275 Lehrte | Phone +49 5132 88 88 0 |

Fax +49 5132 88 88 44 | info@kurt-zeitarbeit.de |

www.kurt-zeitarbeit.de



Driving ideas.
VOLKSWAGEN
GROUP



Turning volts into miles.

Our electrification strategy for tomorrow's mobility.

Our goal is clear: Cars that drive entirely with electricity from renewable energy sources. However, it's clear that achieving this will take some time. That's why we're working at full speed to make electric motors practical enough for everyday use. The result: Success. Even today, we're testing a drive that can cover large proportions of everyday trips using electricity. The combustion engine is only switched on for driving longer distances. This means, in future, you'll not only reach your destinations in a more environmentally friendly way, but also for less money. You can find out more about tomorrow's mobility at www.driving-ideas.de

Up North, we have more energy.
For finding sustainable solutions.

www.q-gmbh.com

In the future, each generation will be judged in terms of how much foresight it has shown in its consideration of subsequent generations and this is particularly true when it comes to the field of energy. This is why, as early as the beginning of the 1990s, we were quick to make a commitment to sustainability in the energy industry and to financing concepts that support this. Today, such financing amounts to more than three billion euros which we have used to facilitate the construction of wind power and solar energy plants and the generation of energy from biomass.

This commitment now extends right across the world. Our support for projects in Germany, Great Britain, the USA, Ireland or France has been a great success, putting us among the top lead arrangers in these territories. Because what we offer is sustainably funded financing concepts – for sustainable energy.